MID-STATE TECHNICAL COLLEGE

2014-2015 STUDENT CATALOG

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MID-STATE
TECHNICAL COLLEGE

ADAMS COUNTY CENTER
401 North Main
Adams, WI 53910
608.339.3379

MARSHFIELD CAMPUS
2600 West 5th Street
Marshfield, WI 54449
715.387.2538

STEVENS POINT CAMPUS
1001 Centerpoint Drive
Stevens Point, WI 54481
715.344.3063

WISCONSIN RAPIDS CAMPUS
500 32nd Street North
Wisconsin Rapids, WI 54494
715.422.5300

Toll Free: 888.575.MSTC
Website: mstc.edu
Wisconsin Relay Service: 711 or 800.947.3529

2014-2015 Student Catalog Published April 2014

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It is the responsibility of MSTC students to read and be knowledgeable about the contents of this College Catalog. The information found in this publication is accurate at the time of its printing. MSTC reserves the right to make changes without obligations or further notice.

This catalog is not to be considered a binding contract between Mid-State Technical College and any student. College administration reserves the right to change regulations, fees, or course offerings published in this catalog, or any adopted in the future, during the period of any student's attendance. Changes will be made in the interest of the students and according to existing needs in improving course offerings and student accommodations. As education is a continuing and changing process dependent on varying economic, social, cultural, and technological factors, the board of the Mid-State Technical College District, which governs the college, reserves the right to cancel or suspend any of the various cataloged instructional programs because of inadequate enrollment or to restrict further admittance in programs which are filled to capacity without obligation or prior notice.

2014-2015

August 18
First Semester Begins

September 1
Labor Day

September 24
College-wide Inservice (No classes before 5:00 p.m.)

October 9
Advising for Registration (No classes before 4:00 p.m.)

October 16
Spring 2015 Registration Opens

October 21
College Initiative Day (No classes before 5:00 p.m.)

November 27-28
Thanksgiving

December 17
End of First Semester

December 18
Graduation–Marshfield,
Stevens Point, Wisconsin Rapids

December 18 - January 11
Winter Recess

January 12
Second Semester Begins

March 28 - April 5
Spring Recess

April 21
Advising for Registration (No classes before 4:00 p.m.)

April 23
Fall 2015 Registration Opens

May 13
End of Second Semester

May 14
Graduation–Marshfield,
Stevens Point, Wisconsin Rapids

Sue Budjac, Ed.D.
President
Mid-State Technical College

PRESIDENT'S MESSAGE

Welcome to Mid-State Technical College! Our primary focus is your success. Mid-State Technical College (MSTC) prepares our students with the skills and knowledge they need to be successful in our local workforce. We offer more than 100 academic degrees, diplomas, and certificates for people of all walks of life, including recent high school graduates, those wishing to transfer to a four-year college or university, and individuals wanting to change or enhance careers.

MSTC employees are here to ease your transition to higher education and keep you pointed toward achievement and completion. Our student-centered approach is evident in smaller classes, one-on-one assistance, and flexible scheduling. We invest in innovative technologies and state-of-the-art facilities to sustain a welcoming and supportive learning environment.

MSTC partners with local businesses and continuously responds to changing employer needs. We deliver hands-on and cutting edge curriculum essential to business growth. Students dive right into the classes that give them the real-world skills they need to be successful in their chosen career. MSTC's long established reputation for excellent instruction is substantiated by the fact that nearly 9 out of 10 graduates have jobs within six months of graduation.

This catalog is designed to help you choose the classes and programs that are best suited for you. Your options at MSTC are many; think of this catalog as your roadmap to achieving your educational goals. If you are still weighing your higher education options, I invite you to visit any of our MSTC locations to learn more.

I wish you much success as you work toward your future!

weare futuremakers

ABOUT MSTC

The need for "industrial" education was recognized early in central Wisconsin. Even before Wisconsin's Legislature created the system of Public Industrial, Commercial, Continuation, and Evening Schools in 1911, local programs were being offered in Marshfield and Stevens Point. In 1961 the Legislature changed the names of the schools to "Schools of Vocational, Technical, and Adult Education." The Area Vocational, Technical, & Adult Education District 14 (later to become Mid-State Technical College District) was formally organized and incorporated on July 1, 1967.

Today, Mid-State Technical College (MSTC) is a leading provider of technical and higher education offering over 100 career opportunities through associate degrees, technical diplomas, and technical certificates. A leader in the development of the central Wisconsin workforce and economy, MSTC provides a dynamic learning environment that helps students reach their personal and career goals. Thousands of graduates have already turned to MSTC first when it comes to education and jobs.

Graduates from MSTC are in demand. In fact, many employers recruit MSTC students before they graduate. Why? Because MSTC instructors know firsthand what's required on the job, understand employers' needs, and stay current with business and industry standards. Employers trust that MSTC graduates have the education and skills that make them highly desirable, job-ready employees.

- On average 88% of graduates are employed within six months after graduation.
- 98% of graduates are satisfied with their MSTC education & training.

Student-focused and community based, MSTC serves a resident population of 165,000 in central Wisconsin. The college operates campuses in Marshfield, Stevens Point, and Wisconsin Rapids and a learning center in Adams. MSTC serves all or portions of eight counties in central Wisconsin: Adams, Clark, Jackson, Juneau, Marathon, Portage, Waushara, and Wood.

CORE VALUES

The college and all of our employees are guided by a set of core values that have been part of MSTC's past and will continue to be part of its future. We are convinced that the key to creating a truly great organization is an intense focus on the values that guide our actions.

As members of the Mid-State Technical College community, we work diligently to weave our core values into the fabric of everything we do to positively impact those who seek our services. Mid-State Technical College and its employees operate with allegiance to the following core values:

STUDENT CENTEREDNESS
We value and respect all students as unique individuals. We assist students in identifying and realizing their educational goals and work hard to create an accessible and dynamic learning environment. Providing students with a positive educational experience is of vital interest to each of us.

COMMITMENT
Our actions reflect our dedication to the people we serve and to the college. The success of MSTC depends upon our skills and abilities to communicate, promote, and support our educational offerings, and to meet the current and emerging needs of our students and other stakeholders. We invest the time and energy necessary to fulfill the mission of the college and to provide a healthy and safe environment.

ACCOUNTABILITY
We understand and value our individual roles in the college. We take responsibility for processes, decisions, and outcomes within our scope of influence. We work hard to communicate effectively and apply our expertise to continuously improve our systems and strengthen organizational performance.

RESPECT
We embrace individual differences and diverse opinions and work together to create a mutually supportive environment. We treat each other with dignity and appreciate the contributions of all employees.

INTEGRITY
Our actions and words signal the institutional integrity of our college. We embrace honesty and base our decision making on a combination of high ethical standards and practical considerations.

EXCEPTIONAL SERVICE
We create and improve relationships through positive interactions with others. United by a common purpose to support and improve learning, we collaborate to provide lifelong learning opportunities that enhance the well-being of individuals, businesses, and communities.

MISSION

Mid-State Technical College transforms lives through the power of teaching and learning.

VISION

Mid-State Technical College is the educational provider of first choice for its communities.

CORE ABILITIES

In addition to specific job-related training, MSTC has identified a set of core abilities which are transferable and go beyond the content of a specific course. The college supports the following skills for all graduates of MSTC:

- Act with Integrity
- Communicate Effectively
- Demonstrate Effective Critical and Creative Thinking
- Demonstrate Global Social Awareness

ACCREDITATION

Mid-State Technical College is accredited by the North Central Association of the Higher Learning Commission, under the Academic Quality Improvement Program (AQIP). Under AQIP, colleges maintain accreditation by building a culture of continuous improvement. MSTC was accepted into the AQIP process in 2002, and staff have been working diligently on implementing AQIP since.

You may contact our accreditor at the Higher Learning Commission of the North Central Association of Colleges and Schools, 230 South LaSalle Street, Suite 7-500, Chicago, Illinois 60604-1411 (Phone: 800.621.7440 / 312.263.0456, Fax: 312.263.7462, Website: info@hlcommission.org).

Accreditation means that MSTC has been found to meet the Commission's requirements and criteria and that there are reasonable grounds for believing that it will continue to do so. Accreditation provides public certification of acceptable institutional quality and an opportunity and incentive for MSTC to continuously improve.

BOARD OF DIRECTORS

Mid-State Technical College functions within the Wisconsin Technical College System (WTCS). The MSTC District includes all or portions of eight counties in central Wisconsin: Adams, Clark, Jackson, Juneau, Marathon, Portage, Waushara, and Wood counties.

The college is operated under the direction of the MSTC District Board, which includes two employers, two employees, three members-at-large, an elected official, and a school district administrator.

Members of the board are appointed by a board appointment committee composed of the county board chairpersons of the counties included, all or in part, in the MSTC District. The chairperson of the most populous county (Wood County) serves as chairperson of the appointment committee. Representation on the board is apportioned throughout the district as set forth in section 38.108, paragraph 2 of Wisconsin statutes, 1982.

2012-2014 STRATEGIC DIRECTIONS

The Board of Directors ensures decisions are guided through evidence of institutional effectiveness by focusing on the following strategic directions for the next three calendar years.

- MSTC offers high-quality programs and services that are relevant, flexible, and promote student success.
- MSTC supports the dynamic and diverse economic and employment needs of the area.
- MSTC embraces its organizational effectiveness through the pursuit of excellence and continuous improvement.
- MSTC cultivates and engages diversity through the recruitment, retention, and development of students and employees.
- MSTC is a recognized leader and essential educational partner.

BOARD OF DIRECTORS

Lynneia Miller, Marshfield - Chair
Terry Reynolds, Marshfield - Vice Chair
Patrick Costello, Wisconsin Rapids - Treasurer
Betty Bruski Mallek, Junction City - Secretary
Robert Beaver, Friendship
Randall Dhein, Nekoosa
Joseph Kinsella, Stevens Point
Peggy Ose, Wisconsin Rapids

OUR GUARANTEE

Customer satisfaction is important to us. We are proud of the education and training we offer, and we have confidence in our support services and the quality of our programs. If graduates do not find employment in their field within six months of graduation from Mid-State Technical College, or if your employer feels you lack certain skills, we'll retrain you for up to six free credits. To qualify, you have to actively pursue and not turn down employment and job placement assistance or your employer needs to certify that after 90 days of employment you lack entry-level job skills.

EQUAL OPPORTUNITY, HARASSMENT, AND AFFIRMATIVE ACTION

Mid-State Technical College is committed to complying with state and federal equal opportunity laws and regulations and does not discriminate in its services, employment programs, and/or its educational programs and activities. Discrimination and harassment by supervisors, co-workers, students, non-employees on the basis of race, sex, national origin, sexual orientation, age, religion, disability, or other protected class is prohibited by the College. This policy is intended to comply with all applicable state and federal laws, as well as express the College's commitment to the principles of equal opportunity for all.

The College will seek continuous compliance with the following laws: Titles VI and VII of the Civil Rights Act of 1964 as amended; Equal Pay Act of 1963 as amended; Age Discrimination in Employment Act of 1967 and 1975; Title IX of Education Amendments of 1972; Section 504 of the Rehabilitation Act of 1973; the Vocational Education Amendments of 1976; Civil Rights Restoration Act of 1987; Civil Rights Act of 1991; Carl D. Perkins Vocational Career and Technical Education Act; Americans With Disabilities Act of 1990 as amended; Wisconsin Fair Employment Law; Chapter 38.23 of the Wisconsin State Statutes; and the Office for Civil Rights Guidelines for the Elimination of Discrimination and Denial of Services on the Basis of Race, Color, National Origin, Sex and handicap in Vocational Programs (34 CFR, Part 100, Appendix B).

Inquiries regarding this equal opportunity / non-discrimination policy may be directed to:
Richard O'Sullivan, Equal Opportunity Officer
Mid-State Technical College
500 32nd Street North, Wisconsin Rapids, WI 54494
715.422.5325

A copy of this policy is available online at mstc.edu/about/administrative-policies or by contacting Human Resources.

ACADEMIC SUCCESS CENTER (ASC)

We're here to help! The Academic Success Center (ASC), with locations in Adams, Marshfield, Stevens Point, and Wisconsin Rapids, can help you prepare for your future. Each campus offers day and evening hours. Hours of operation vary by campus. ASC services are tuition-free to individuals 18 and over. There are no admission requirements or tuition costs for ASC services. You decide when to begin, develop your own attendance schedule, and work at your own pace to reach your goals.

Pre-Program Preparation
If your goal is to enter a program at a technical college or university, ASC instructors can help you develop your academic skills to meet program and entrance requirements.

- Enroll in preparatory classes to improve math, communication, and reading skills
- Improve study skills, time management, and test taking skills
- Use free materials and resources in the ASC labs
- Continue to receive assistance with coursework in the ASC after you have enrolled in MSTC courses

GED/HSED Preparation
ASC instructors help you prepare for GED/HSED testing.

- Use free study materials and computer resources to prepare for the General Education Development (GED®) Certificate or High School Equivalency Diploma (HSED)
- Instructors guide you through the testing process
- Learn job-seeking skills

English Language Learner Classes
English Language Learner (ELL) classes help individuals learn English and how to navigate in American society.

- Develop reading, writing, speaking, and listening skills
- Gain skills to enter the workforce
- Assistance in preparing for the U.S. citizenship exam
- Help entering college or a program

Program Student Support
Having a problem with a paper for class? Don't understand the assignment? Need some additional help with math? The ASC is here for you.

- Assistance with general academic tasks
- Instruction in note-taking, summarizing, reference skills, and time management
- Help with resumes and job seeking/employability skills
- Build basic computer skills

CAREER AWARENESS AND ASSESSMENT

Career Awareness is a tuition-free, non-credit class that allows adults the chance to explore a wide variety of careers that match their personal and professional skills, interests, and values. This is an active and dynamic opportunity to participate in activities designed to help answer the questions:

- Who Am I?
- Where Am I Going?
- How Do I Get There?

Individual student results are matched with occupations and labor market research to assist student in determining a career path that is right for them. Classes are offered every semester at all college locations and online. You must be 18 years of age or older to participate unless special permission is obtained. Special accommodations can be made for students with disabilities.

LIBRARY

Students are encouraged to investigate and use the many resources and services available in the MSTC library. The library is primarily an educational and informational facility. The varied book, periodical, and audiovisual collections, as well as electronic resources, support program areas and also allow for cultural enrichment.

SKILLS ASSISTANCE

Study Skills (835-103) is a course designed to promote student success at MSTC. Students are introduced to study skills, time management, and health and relationship skills. The instructor shares information about the various resources available at MSTC to assist students in their efforts. Intro to Reading and Study Skills (838-105) is also offered.

TESTING CENTER

The Testing Center, located across from Student Affairs in T113 at Wisconsin Rapids Campus, provides a number of services on all campuses, including Accuplacer testing and General Educational Development (GED®)/High School Equivalency Diploma (HSED) testing.

Accuplacer is offered at each location. To pay for and schedule testing, stop by an MSTC location or call:

Adams County Center 608.339.3379
Marshfield Campus 715.387.2538
Stevens Point Campus..... 715.344.3063
Wisconsin Rapids Campus 715.422.5301

GED/HSED testing is available at each campus for individuals who wish to earn a General Educational Development (GED) certificate or High School Equivalency Diploma (HSED). To learn more about GED and HSED options, visit an Academic Success Center for the mandatory Orientation Session. Once Orientation is complete, testing is scheduled at ged.com.

Free preparation assistance for Accuplacer and GED/HSED testing is available in the Academic Success Center (ASC) on each campus and center.

Testing accommodation services are available on each campus for eligible students with disabilities referred by Disability Services. In Wisconsin Rapids, eligible students referred for testing with accommodations may schedule appointments in the Testing Center by stopping in or calling 715.422.5443 or may work with their instructors to set up testing appointments outside of class. Testing accommodations on campuses without a Testing Center are coordinated by the instructor, student, and Disability Services staff on an individual basis.

Assistive technology services are available on each campus for students with disabilities referred by Disability Services.

ACCOUNTING

Program Code 10-101-1
2014-2015 Estimated Tuition and Fees: $12,358*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

According to the Bureau of Labor Statistics, careers in accounting are expected to grow faster than average through 2018. The Bureau estimates over 275,000 accounting jobs will arise in that period. An increase in the number of businesses, changing financial laws and corporate governance regulations, and increased accountability for protecting an organization's stakeholders will drive growth.

The Accounting program provides the educational background and training required for entry-level positions in business, industry, and public accounting firms. Job experience and continuing education provide the necessary qualifications for advanced positions in the field of accounting.

This program has credit transfer agreements with UW-Platteville, UW-Stevens Point, UW-Stout, Capella University, Franklin University, Lakeland College, Milwaukee School of Engineering, Silver Lake University, and Upper Iowa University.

The Accounting program is offered at the Adams County Center and the Marshfield, Stevens Point, and Wisconsin Rapids campuses.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as an Accounting graduate, to be able to:

- Process financial transactions throughout the accounting cycle
- Analyze financial and business info to support planning and decision-making
- Perform payroll preparation, reporting, and analysis tasks
- Perform cost accounting preparation, reporting, and analysis tasks
- Perform individual tax accounting preparation, reporting, and analysis tasks
- Identify internal controls to reduce risk
- Adapt accounting processes and principles to a government and/or not-for-profit environment
- Design an accounting system for a business

CAREER OPTIONS

Accounting Assistant
Accounts Payable Specialist
Accounts Receivable Specialist
Cost Accountant
Financial Accountant
Information Systems Assistant
Junior Accountant
Payroll Accountant

POTENTIAL FOR ADVANCEMENT

Controller
Department Manager
Entrepreneur
General Accountant
Information Systems Specialist
Internal Auditor
Management Accountant
Office Manager
Payroll Coordinator
Public Accountant
Senior Accountant
Tax Accountant

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Accounting program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

PROGRAM PROGRESSION

In order to maintain a passing status and progress in the program, students must:

- Repeat core Accounting courses not completed with a grade of "C" or better prior to progressing in core course or other courses with co- or prerequisites. Does not include Accounting I,II, and III.
- Receive a grade of "C" or better in all core Accounting courses required for graduation. Does not include Accounting I,II, and III.

PROGRAM COURSE DESCRIPTIONS

10101111 // 4 credits
Accounting I
A beginning course designed especially for majors or those who need a strong foundation in accounting principles. Develops the accounting cycle of journalizing, posting, adjusting, closing, and reporting. It emphasizes service and merchandising sole proprietorships in developing the accounting cycle. Explores issues for accounting for cash, accounts and notes receivable, inventories, and fixed assets.

10101113 // 4 credits
Accounting II
Studies accounting procedures for partnerships and corporations. Issues involving incorporation are reviewed. Accounting procedures for corporate stock, dividends, retained earnings, bonds, and long-term investments are presented. Analysis of financial statements is introduced and statements of cash flows are prepared. *Prerequisite: Accounting I 10101111.*

10101115 // 4 credits
Accounting III
Builds on accounting concepts in Accounting I and II, and details the accounting for assets using generally accepted accounting principles, incorporates the time value of money, and defends the role of the Financial Accounting Standards Board. *Prerequisite: Accounting II 10101113.*

10101117 // 4 credits
Accounting IV
Examines accounting issues and the application of generally accepted accounting principles to those issues. Some issues examined are liabilities, long-term financing, capital stock issues, revenue recognition, capital leases, deferred taxes, earnings per share, and accounting changes. *Prerequisite: Accounting III 10101115.*

10101120 // 3 credits
Payroll Accounting
Develops a working knowledge of payroll legislation, payroll records, and payroll accounting. Payroll accounting is accomplished through manual methods and automated methods. *Corequisites: Accounting I 10101111 and Microsoft Office-Introduction 10103106.*

10101123 // 3 credits
Income Tax Accounting
Applies current tax laws in preparing individual tax returns and supporting forms and schedules.

10101125 // 3 credits
Cost Accounting
Accumulates production costs for materials, labor, and overhead for job order or process costing systems. Determines and records variances from standard. Computes various cost-volume-profit relationships for control and decision-making. *Prerequisite: Accounting II 10101113.*

CURRICULUM

Term		**(16 credits)**
10101111	Accounting I	4
10101123	Income Tax Accounting	3
10102101	Intro to Business	3
10103106	Microsoft Office-Introduction	3
10801136	English Composition I **-or-**	
10801195	Written Communication	3

Term		**(19-20 credits)**
10101113	Accounting II	4
10101120	Payroll Accounting	3
10101129	Accounting: Computerized	3
10102103	Business Law & Ethics **-or-**	
10105160	Business Law	3
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3
10804107	College Mathematics **-or-**	3
10804118	Intermediate Algebra with Applications **-or-**	4
10804189	Introductory Statistics	3

Term		**(16 credits)**
10101115	Accounting III	4
10101128	Managerial Accounting	3
10101131	Governmental Accounting	3
10809144	Macroeconomics	3
10809122	Intro to American Government **-or-**	
10809172	Introduction to Diversity Studies **-or-**	
10809196	Intro to Sociology	3

Term		**(16 credits)**
10101117	Accounting IV	4
10101125	Cost Accounting	3
10101130	Accounting Systems	3
10809143	Microeconomics	3
10809188	Developmental Psychology **-or-**	
10809198	Intro to Psychology	3

Total Credits 67-68

Please Note:
- The Accounting program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10101128 // 3 credits
Managerial Accounting
Develops managerial and finance analytical and decision-making skills. Develops an appreciation of the financial statements as a framework for controlling the activities of a business entity, the ability to do financial statement analysis and forecasting, and make recommendations for appropriate courses of action based on the results. Examines the methodology and develops the skills to manage leverage, working capital, and long-term financing. Examines the American financial system and how the business entity functions within it. Develops an appreciation for the skills needed to determine the time value of money. Prepares cash flow, operating, and capital budgets.
Prerequisite: Accounting II 10101113.

10101129 // 3 credits
Accounting: Computerized
Uses the computer as a tool to reinforce and build on accounting concepts, prepares financial statements and managerial reports, produces business documents, and accounts for service and merchandising business entities. Explores Excel worksheet applications for accountants.
Prerequisites: Accounting I 10101111, and Beginning Excel 10103123 or Microsoft Office-Introduction 10103106.

10101130 // 3 credits
Accounting Systems
Designs management and accounting information systems for service, merchandising, and manufacturing business entities including data collection, data processing, data storage, information distribution, and internal controls; prepares oral and written reports; and produces individual and group projects.
Prerequisite: Accounting II 10101113.

10101131 // 3 credits
Governmental Accounting
The basic concepts, techniques, and terminology of fund accounting as utilized by governmental entities are emphasized. Institutional accounting for educational institutions and hospitals, and the uniqueness of accounting for not-for-profit organizations and agencies are also studied.
Prerequisite: Accounting II 10101113.

10102101 // 3 credits
Intro to Business
An introduction to what a business is, how it operates, and how it is managed. Students will identify forms of ownership and the processes used in production and marketing, finance, personnel, and management in business operations.

10102103 // 3 credits
Business Law & Ethics
This course introduces the student to basic ethical theories and value systems. Students will apply these perspectives to moral issues, problems, and situations which arise within the business environment. Emphasis will be placed on how the applicable laws are being interpreted.

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10105160 // 3 credits
Business Law
Examines the classifications of law, elements of legal contracts, and business applications. Negotiable instruments, sales and bailment contracts, principal-agent relations, and real estate law are also explained. Ethical practices are emphasized rather than narrow, legal definitions.


88% graduates were employed
within six months of graduation.

ADMINISTRATIVE PROFESSIONAL

Program Code: 10-106-6
2014-2015 Estimated Tuition and Fees: $12,499*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

If you are eager to assume a wide range of tasks and responsibilities that require creativity, flexibility, problem-solving, and teamwork, consider a career as an administrative professional!

As an administrative professional, you may not only prepare correspondence and work with customers, but you may also supervise the work of other clerical staff, prepare research reports, assist teammates with fundamental computer knowledge, and handle private or confidential records. The Administrative Professional program develops these abilities while emphasizing software applications, customer service skills, and the expert operation of a variety of office technology and equipment.

Executive assistant, administrative assistant, receptionist, and customer service positions were named in the top 25 best business jobs of 2014 according to U.S. News & World Report.

The Administrative Professional program is offered at the Adams County Center and the Marshfield, Stevens Point, and Wisconsin Rapids campuses.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as an Administrative Professional graduate, to be able to:

- Demonstrate effective workplace communications
- Apply technology skills to business and administrative tasks
- Perform routine administrative procedures
- Manage administrative projects
- Maintain internal and external relationships
- Model professionalism in the workplace

CAREER OPTIONS

Administrative Professional
Customer Service Representative
Legal Secretary
Medical Secretary
Microcomputer Operator
Office Assistant
Program Assistant
Receptionist
Secretary

POTENTIAL FOR ADVANCEMENT

Administrative Services Supervisor
Administrative Support Supervisor
Executive Secretary
Field Office Coordinator
Medical Records Technician
Office Manager
Records Supervisor

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Administrative Professional program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

PROGRAM COURSE DESCRIPTIONS

10102101 // 3 credits
Intro to Business
An introduction to what a business is, how it operates, and how it is managed. Students will identify forms of ownership and the processes used in production and marketing, finance, personnel, and management in business operations.

10102103 // 3 credits
Business Law & Ethics
This course introduces the student to basic ethical theories and value systems. Students will apply these perspectives to moral issues, problems, and situations which arise within the business environment. Emphasis will be placed on how the applicable laws are being interpreted.

10102120 // 3 credits
Customer Service Management
The learner applies the skills and tools necessary to manage and measure the customer service function. Learners practice quality customer service, develop customer service plans, train and develop staff in quality customer service, measure the effectiveness of customer service, and lead continuous improvement of customer service.

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10103114 // 1 credit
Word-Intermediate
Students will create columns, lists, indexes, footnotes, endnotes, and table of contents. Outlines, paragraph numbering, mail merges, sorts, macros, the thesaurus, and graphics are also covered.
Prerequisite: Microsoft Office-Beginning 10103106 or Word-Introduction 10103113.

10103124 // 1 credit
Excel-Intermediate
Develop skill to write and debug macros, create custom menus, perform database functions, and develop graphs.
Prerequisite: Microsoft Office-Introduction 10103106 or Excel-Beginning 10103123.

10103134 // 1 credit
Access-Intermediate
Students develop advanced indexing, logical and decision-making commands, access multiple files, and create menus and command files.
Prerequisite: Microsoft Office-Beginning 10103106 or Access-Introduction 10103133.

10104107 // 3 credits
Social Media Marketing
This course addresses how social media has transformed marketing communications from traditional, mass media to individualized marketing. Using social media tools such as Facebook, YouTube, Twitter, LinkedIn, and more, this class explores the different methodologies for social media marketing. Topics addressed include creating social media, integrating social media as part of a marketing campaign, the concept of viral marketing, the ethical and potential legal concerns that have arisen over these forms of communication, and how organizations and individuals have successfully applied social media marketing.

CURRICULUM

Term		**(18-19 credits)**
10102101	Intro to Business	3
10103106	Microsoft Office-Introduction	3
10106157	Document Formatting	3
10106160	Proofreading & Editing	3
10801136	English Composition I **-or-**	
10801195	Written Communication	3
10804107	College Mathematics	3
	-or-	
10804118	Intermediate Algebra with Applications	4
	-or-	
10804189	Introductory Statistics	3

Term		**(18 credits)**
10102103	Business Law & Ethics **-or-**	
10105160	Business Law	3
10103114	Word-Intermediate	1
10103124	Excel-Intermediate	1
10103134	Access-Intermediate	1
10106140	Business Information Management	3
10106150	Administrative Office Procedures	3
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3
10801199	Employment Strategies	3

Term		**(18 credits)**
10102120	Customer Service Management	3
10106162	Graphics & Print Media	3
10106172	Digital Communication Technology	3
10809122	Intro to American Government **-or-**	
10809196	Intro to Sociology	3
10809188	Developmental Psychology **-or-**	
10809198	Intro to Psychology	3
	Elective	3

Term		**(14 credits)**
10104107	Social Media Marketing	3
10106135	Supervised Field Experience	2
10106180	Advanced Software Applications	3
10809143	Microeconomics **-or-**	
10809144	Macroeconomics	3
10809172	Introduction to Diversity Studies	3

Total Credits 68-69

Please Note:
- The Administrative Professional program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10105160 // 3 credits
Business Law
Examines the classifications of law, elements of legal contracts, and business applications. Negotiable instruments, sales and bailment contracts, principal-agent relations, and real estate law are also explained. Ethical practices are emphasized rather than narrow, legal definitions.

10106135 // 2 credits
Supervised Field Experience
This course integrates Administrative Professional classroom study with specific off-campus occupational experiences at selected training sites. An organized plan of experiences built around office competencies is planned, supervised, and evaluated by the instructor and cooperating business trainer.
Prerequisite: Completion of at least 24 credits including Computer Software courses (103) and/or Administrative Professional courses (106) or approved by program instructor.

10106140 // 3 credits
Business Information Management
Following commonly used ARMA rules, the student will apply basic filing methods to paper and database filing systems. Methods to permanently archive data are also covered.
Corequisite: Microsoft Office-Introduction 10103106.

10106150 // 3 credits
Administrative Office Procedures
Develops professional skills and attitudes needed in a global business environment. Skills include time management, problem solving, and decision making while working independently and as part of a team. Tasks such as electronic mail, calendaring, meeting and event planning, domestic and international travel, and project management and minute-taking are included. Familiarity with office machines is required.
Corequisites: Written Communication 10801195 and Microsoft Office-Introduction 10103106.

10106157 // 3 credits
Document Formatting
The competencies for this course cover formatting styles of business letters, business and academic reports, memos, tables, business meeting documents, itineraries, legal documents, and business forms. The course also includes drill work for improving keying speed and accuracy. Minimum typing speed of 30 wpm required (alphabetic keys only).
Corequisite: Microsoft Office-Introduction 10103106.

10106160 // 3 credits
Proofreading & Editing
This course is designed to sharpen proofreading and editing skills. Competencies cover detecting and editing errors in keying, spelling, capitalization, plurals, possessives, punctuation, numbers, grammar, sentence structure, and formatting. Documents will also be edited for clarity, conciseness, and completeness.
Corequisite: Microsoft Office-Introduction 10103106.

10106162 // 3 credits
Graphics & Print Media
This course develops skill to effectively create graphics and design publications. Students will produce print media, design, and layout print jobs using the most appropriate software package for the job.
Prerequisite: Admission to Administrative Professional 101066 program or instructor consent.

10106172 // 3 credits
Digital Communication Technology
The course introduces the student to digital and communication technology used in the office today, including voice recognition, digital cameras, digital video cameras, video conferencing, web conferencing, and teleconferencing. The content focuses on understanding communication technologies and how they impact employees.
Prerequisite: Admission to Administrative Professional 101066 program or instructor consent.

10106180 // 3 credits
Advanced Software Applications
This course integrates multiple advanced software applications by utilizing concepts such as importing/exporting, linking/embedding, and copying/pasting. Students manage information and apply critical-thinking skills to create professional documents simulating real-world projects.
Prerequisites: Microsoft Office-Introduction 10103106, Word-Intermediate 10103114, Excel-Intermediate 10103124, and Access-Intermediate 10103134.


YOU + MSTC = GREAT

AUTOMOTIVE TECHNICIAN

Program Code 32-404-2
2014-2015 Estimated Tuition and Fees: $9,522*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

If you have good mechanical skills and enjoy working with cars, you may find a career as an automotive technician very rewarding.

Learn to diagnose, service, and repair automobile and light truck mechanical and electrical problems. You will learn to use a variety of hand and power tools as well as complex electrical diagnostic equipment in identifying and performing repair tasks.

Emphasis is on the areas of engine and transmission repair, drive train and axles, suspension and steering systems, brakes, electrical systems, heating and air conditioning, and engine performance.

The Automotive Technician program is offered at Wisconsin Rapids Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as an Automotive Technician graduate, to be able to:

- Diagnose, service, and repair automotive systems
- Proficiently operate tools and equipment common to the industry
- Practice safety procedures
- Apply theoretical concepts to mechanical repair
- Comply with regulations that impact the automotive service industry

CAREER OPTIONS

Automotive Machine Shop Technician
Automotive Parts Salesperson
Automotive and Truck Technician
Maintenance Technician
Service Station Technician
Small Engine Technician
Specialty Shop Technician

POTENTIAL FOR ADVANCEMENT

Automotive Technician (Specialist)
Parts Manager
Service Manager
Service Writer
Shop Owner
Shop Supervisor or Lead Technician

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Automotive Technician program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

Protective Clothing
Students are required to purchase three "MSTC Automotive Student" uniform shirts. These shirts will be available the first week of class for approximately $30 each. Students are also required to wear safety glasses at all times in the lab. Acquisition of safety glasses is the responsibility of the student.

Required Equipment
Students need to purchase a Fluke 177 or Fluke 88V multimeter and test lead set before the start of the second term. They are available for purchase through the campus Bookstore for approximately $270.

PROGRAM COURSE DESCRIPTIONS

10605108 // 2 credits
Intro to Electronics
This course presents a survey of electricity and electronics which includes lab activities and is designed for persons wishing to learn some of the basics of electricity and electronics. It is an excellent refresher course to get back into electronics or improve a skills list. The course is intended for persons where electronics has become a part of their regular occupation and a need exists to identify various electronic components and perform basic tests using test equipment such as multimeters and oscilloscopes. The course covers concepts and applications of DC and AC electricity, semiconductor components, and digital devices using basic math skills.

10462114 // 3 credits
Metals & Machining
A two-part class which introduces the basics of metal science and machine shop practice. Metallurgical concepts of steel and iron production, properties of metals, testing of metals, carbon and its rule, heat-treating, steel designations, and cast iron and non-ferrous metals are introduced. Students will participate in lab exercises examining the properties of metal, an introduction to machine shop practices of safety, measurement, and machining through the use of hand tools, drilling machines, saws, and engine lathes. Students will be introduced to these concepts by both classroom presentation and hands-on shop experiences.
Prerequisite: Admission to Automotive Technician 324042, Diesel & Heavy Equipment Technician 324121, Industrial Mechanical Technician 104621, Instrumentation & Controls Engineering Technology 106054, Solar Electric Technician 104822, or Welding 314421 programs.

10462116 // 3 credits
Metal Fabrication
An introduction to structural steel and plate fabrication, sheet metal fabrication, and basic electric arc and oxyacetylene welding. Fabrication techniques, metal selection, layout, cutting, bending, drilling, threading, and joining will be presented. Information will be presented to the student followed by lab activities to provide a hands-on experience. The emphasis will be placed on developing an understanding of the tools, techniques, safe work habits, and the application of metal fabrication skills.
Prerequisite: Admission to Automotive Technician 324042, Diesel & Heavy Equipment Technician 324121, Industrial Mechanical Technician 104621, Instrumentation & Controls Engineering Technology 106054, Machine Tool Technician 324201, Solar Electric Technician 104822, Sustainable Heating & Cooling Technician 104831, or Welding 314421 programs.

32404307 // 5 credits
Suspension & Steering Systems
Highlighted in this course will be an analysis of construction and working principles of chassis components. Included is frames, suspension systems, steering gears and linkages, wheels and tires, and wheel alignment. Special attention is given to products used in servicing chassis components.
Prerequisite: Admission to Automotive Technician 324042 program.

32404308 // 5 credits
Braking Systems-Automotive
Fundamentals of vehicle braking systems including drum and disc on hydraulic and air systems are studied. Power and anti-skid systems are included with emphasis on troubleshooting and component replacement and reconditioning.
Prerequisite: Admission to Automotive Technician 324042 program.

CURRICULUM

Term		(17 credits)
10605108	Intro to Electronics	2
10804107	College Mathematics	3
32404307	Suspension & Steering Systems	5
32404308	Braking Systems-Automotive	5
32404375	Service Practices in Transportation Industry	2

Term		(15 credits)
10462114	Metals & Machining	3
32404311	Electrical Systems-Auto	5
32404324	Engine Repair	5
32404330	Applied Fluid Power	2

Term		(17 credits)
10462116	Metal Fabrication	3
31809351	Applied Human Relations	2
32404323	Automatic Transmissions	5
32404325	Manual Transmissions	5
32806351	Applied Science	2

Term		(17 credits)
31801351	Occupational Communication	2
32404312	Advanced Electrical Systems-Auto	5
32404320	Hybrid Systems-Auto	1
32404322	Heating/Air Conditioning	3
32404326	Fuel Control System-Auto	5
32404376	Advanced Drivability-Auto	1

Total Credits 66

Please Note:
- The Automotive Technician program has an August start date. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

32404311 // 5 credits
Electrical Systems-Auto
This is the study of construction, function, and principles of operation of starting motors, charging systems, and controls. Basic electronics including capacitance, inductance, series and parallel circuits, magnetism and Ohm's Law, wiring schematics, soldering techniques, and use of diagnostic equipment are covered. Vehicle control and accessory systems are studied.
Corequisite: Intro to Electronics 10605108.

32404312 // 5 credits
Advanced Electrical Systems-Auto
Theory, operational fundamentals, diagnosis, and repair of vehicle electronic/electrical systems including computer self-diagnosis, scanners, analyzers, sensors, actuators, and computerized ignitions are studied in this course. Also covered are diagnostic and repair procedures on major electrical-electronic emission control systems.
Corequisite: Electrical Systems-Auto 32404311.

32404320 // 1 credit
Hybrid Systems-Auto
This course includes a general overview of hybrid vehicle systems including motor, inverter, and CVT operation. Also included is an overview of hybrid safety requirements and demonstration of proper high voltage lockout procedures.
Corequisites: Automatic Transmissions 32404323, Advanced Electricity 32404312, and Fuel Control Systems-Auto 32404326.

32404322 // 3 credits
Heating/Air Conditioning
This course provides an introduction to vehicle air conditioning systems. System components, operating characteristics, component testing, diagnosis, and repair are covered in detail for popular system types. Coverage includes servicing of engine cooling systems as well as diagnosis and servicing of vehicle heating systems.
Prerequisite: Admission to Automotive Technician 324042 or Diesel & Heavy Equipment Technician 324121 programs.

32404323 // 5 credits
Automatic Transmissions
This course provides coverage of vehicle automatic transmission diagnosis and repair. Course emphasis will include gear systems, operating principles, component diagnosis, maintenance and adjustment, and servicing of transaxle system components.
Prerequisites: Electrical Systems-Auto 32404311 and Applied Fluid Power 32404330.

32404324 // 5 credits
Engine Repair
This course provides a general overview of engine types and operating characteristics. Course emphasis includes the diagnosis and repair of cylinder heads, valve train components, and engine blocks and related components. Engine support systems such as the lubrication systems, cooling system, ignition system, fuel, and exhaust systems are also covered.
Prerequisite: Admission to Automotive Technician 324042 program.

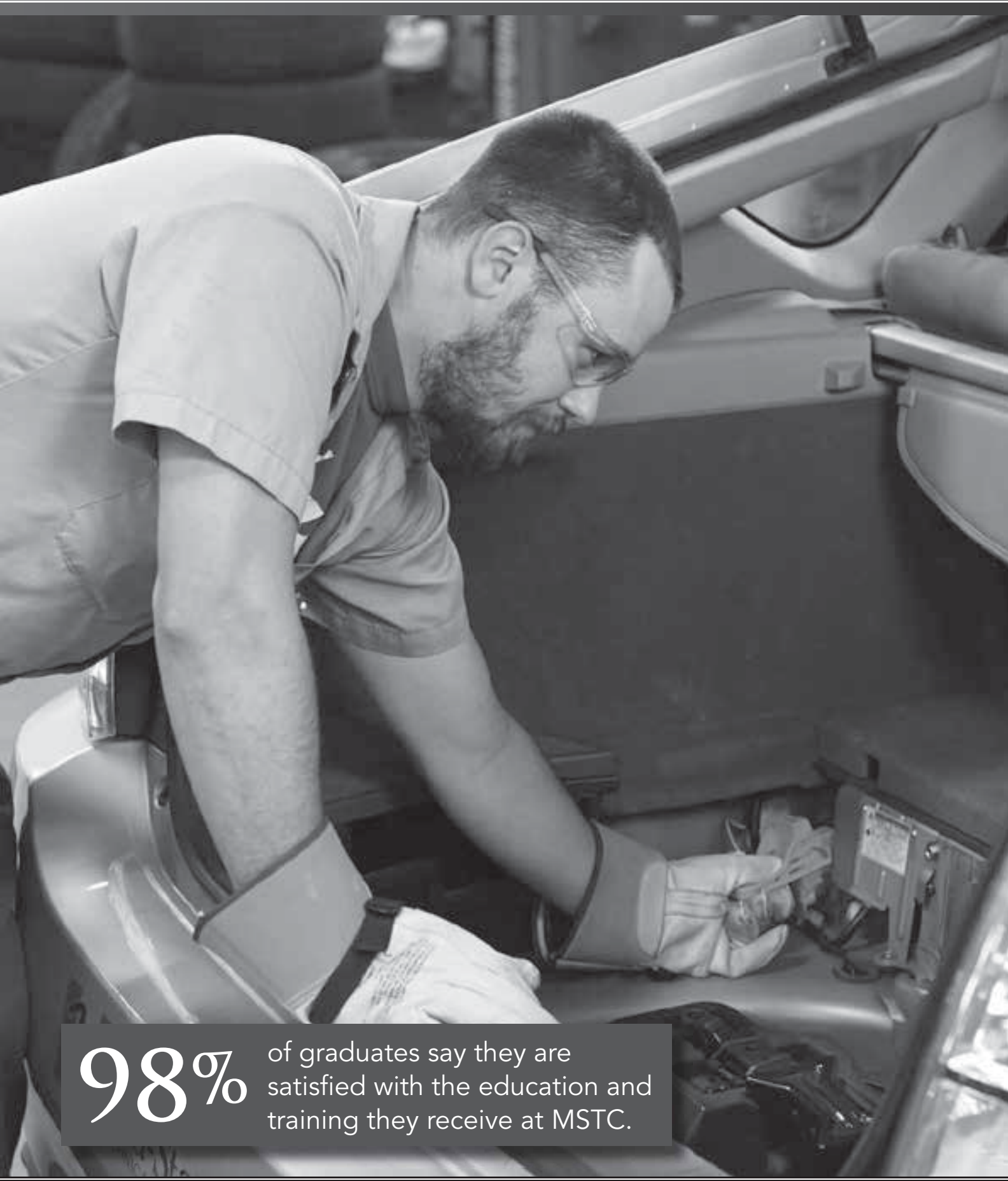
32404325 // 5 credits
Manual Transmissions
This course provides coverage of manual transmission problem diagnosis and repair. Study includes clutch, drive shaft, and universal joint diagnosis and servicing. Additional topics include rear axle servicing as well as four-wheel drive diagnosis and repair.
Corequisite: Automatic Transmissions 32404323.

32404326 // 5 credits
Fuel Control System-Auto
This course provides an introduction to vehicle ignition systems, fuel systems, air induction systems, emission control systems, and engine electrical systems. Course emphasis focuses on problem diagnosis, component testing, and repairs for domestic as well as import vehicles. A review of engine operation and related servicing are also provided.
Prerequisite: Admission to Automotive Technician 324042 program.

32404330 // 2 credits
Applied Fluid Power
Covers basic principles and application of pumps, compressors, motors, valves, seals, packing, and conductors. Students learn the advantage of hydraulic and pneumatic systems, as well as the physical properties of liquids and air. The intent is to identify various parts of a circuit and to illustrate standard liquid power components through laboratory experiments.
Prerequisite: Admission to Automotive Technician 324042, Diesel & Heavy Equipment Technician 324121, or Machine Tool Technician 324201 programs.

32404375 // 2 credits
Service Practices in Transportation Industry
This course introduces the student to common tools, terminology, and service practices in the transportation service field. Safety, environmental concerns, and basic customer relations will also be covered. Service shop management practices and the use of automated work order, parts ordering, and time management concepts are included.
Prerequisite: Admission to Automotive Technician 324042 or Diesel & Heavy Equipment Technician 324121 programs.

32404376 // 1 credit
Advanced Drivability-Auto
This course provides students with hands-on practical experience in powertrain diagnosis. This course builds on basic skills and system theory gained in previous courses.
Prerequisite: Automatic Transmissions 32404323. Corequisites: Advanced Electricity 32404312 and Fuel Control Systems-Auto 32404326.


98% of graduates say they are satisfied with the education and training they receive at MSTC.

BARBER TECHNOLOGIST

Program Code 30-502-5
2014-2015 Estimated Tuition and Fees: $3,542*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The Barber Technologist program is a part-time program with a combination of online classes, face-to-face evening classes, and daytime hours in MSTC's on-campus salon.

This program meets the Wisconsin state barbering requirement of 1,000 hours of training and is regulated by the Wisconsin Department of Safety and Professional Services.

Students must purchase a kit comprised of required tools and supplies. The cost of the kit is approximately $1,600.

The Barber Technologist program is offered at Wisconsin Rapids Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Barber Technologist graduate, to be able to:

- Apply safety and infection control procedures
- Identify hair and scalp disorders
- Perform haircutting services
- Demonstrate shaving and other facial hair removal techniques
- Perform male facial procedures
- Perform texture services
- Perform hair color services
- Demonstrate hairstyling and finishing techniques
- Adhere to the current Wisconsin administrative codes and statutes for barbers
- Demonstrate interpersonal skills for success

CAREER OPTIONS

Barber
Barber Retail/Wholesale Sales

POTENTIAL FOR ADVANCEMENT

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Barber Technologist program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

FUNCTIONAL ABILITIES

Students must have good fine motor skills, especially finger dexterity, as well as good hand/eye coordination and 20/40 vision in best eye with 70 degrees to each side for peripheral vision, as determined by the Department of Transportation.

PROGRAM PROGRESSION AND COMPLETION

In order to progress in and successfully complete the program, students must repeat core courses (courses numbered 31-502-xxx) not completed with a grade of "C" or better prior to progressing in core courses or other courses with co- or prerequistes.

Please note that the ability to repeat courses is dependent upon availability of courses. Students may be required to apply for program re-entry in order to repeat courses.

PROGRAM COURSE DESCRIPTIONS

30502701 // 4 credits
Haircutting for Barbers
This course introduces haircutting theory and terminology and provides students with practice in basic and advanced haircutting techniques as well as trend cuts.
Prerequisite: Admission to Barber Technologist 305025 program.

30502702 // 2 credits
Facial Hair & Skin Care Services for Barbers
This course includes how to apply facial physiology and skin analysis in facial hair design, hair removal, facial massage, and facial treatment.
Prerequisite: Admission to Barber Technologist 305025 program.

30502703 // 2 credits
Introduction to the Barber Profession
This course provides an overview of the barbering profession, safety and decontamination in the barbershop, properties and disorders of the skin and scalp, and related science theory.
Prerequisite: Admission to Barber Technologist 305025 program.

30502704 // 2 credits
Haircoloring for Barbers
This course includes the theory and chemistry of color mixing as well as procedures including lightening, cap, foiling, and corrective color.
Prerequisite: Admission to Barber Technologist 305025 program.

30502705 // 2 credits
Chemical Texturing for Barbers
This course provides an overview of permanent waving, including various wrap techniques, hair relaxing applications, reformation curls, and chemical blow-out services.
Prerequisite: Admission to Barber Technologist 305025 program.

30502706 // 2 credits
Hairstyling for Barbers
This course emphasizes wet and dry hairstyling and includes hair analysis, shampooing, conditioning, reconditioning, scalp and hair treatments, blow drying, fingerwaves, pincurls, roller setting, thermal styling, and hair replacement techniques.
Prerequisite: Admission to Barber Technologist 305025 program.

30502722 // 1credit
Business Management for Barbers
This course includes business and management principles for barbers, barbering rules and regulations, and career strategies.
Prerequisite: Admission to Barber Technologist 305025 program.

30502730 // 2 credits
Barber Client Services 1
This course introduces client services performed by the barber. Emphasis is on hair and scalp analysis, shampooing, haircutting techniques, shaving, and chemical services. Students apply knowledge and skills to provide all barber services on customers in the on-campus salon.
Prerequisites: Haircutting for Barbers 30502701, Facial Hair & Skin Care Services for Barbers 30502702, and Introduction to the Barber Profession 30502703. Corequisites: Haircoloring for Barbers 30502704, Chemical Texturing for Barbers 30502705, and Hairstyling for Barbers 30502706.

30502731 // 2 credits
Barber Client Services 2
Students explore client services performed by the barber. Emphasis is on hair and scalp analysis, shampooing, haircutting techniques, shaving, facial services, and chemical services. Students apply knowledge and skills to provide all barber services on customers in the on-campus salon.
Prerequisite: Barber Client Services 1 30502730.

30502732 // 2 credits
Barber Client Services 3
Students practice building speed and accuracy in client services performed by the barber. Emphasis is on haircutting techniques, shaving, facial services, and chemical services. Students apply knowledge and skills to provide all barber services on customers in the on-campus salon.
Corequisite: Barber Client Services 2 30502731.

CURRICULUM

Term		(8 credits)
30502701	Haircutting for Barbers	4
30502702	Facial Hair & Skin Care Services for Barbers	2
30502703	Introduction to the Barber Profession	2
Term		**(8 credits)**
30502704	Haircoloring for Barbers	2
30502705	Chemical Texturing for Barbers	2
30502706	Hairstyling for Barbers	2
30502730	Barber Client Services 1	2
Term		**(9 credits)**
30502731	Barber Client Services 2	2
30502732	Barber Client Services 3	2
30502733	Barber Client Services 4	2
30502734	Barber Client Services 5	2
30502722	Business Management for Barbers	1

Total Credits 25

Please Note:
- The Barber Technologist program is a part-time and hybrid program.
- Students must purchase a kit of required tools and supplies.
- Degree completion time may vary based on student scheduling and course availability.

30502733 // 2 credits
Barber Client Services 4
Students practice building speed and accuracy in client services performed by the barber. Emphasis is on haircutting techniques, shaving, facial services, and chemical services. Students apply knowledge and skills to provide all barber services on customers in the on-campus salon.
Corequisite: Barber Client Services 3 30502732.

30502734 // 2 credits
Barber Client Services 5
This course provides students with opportunities to acquire barbering skills in preparation for entry-level, licensed employment. Emphasis is on providing services with speed and accuracy, including hair and scalp analysis, shampooing, haircutting, shaving, facial services, and chemical services. Students apply knowledge and skills to provide all barber services on customers in the client lab and complete preparation for the Wisconsin State Barber licensing exam.
Corequisite: Barber Client Services 4 30502733.

BUSINESS MANAGEMENT

Program Code 10-102-3
2014-2015 Estimated Tuition and Fees: $12,863*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The Business Management program provides a broad business background that enables its graduates to work within operational units in a variety of businesses.

The program develops general technical and interpersonal skills related to management, finance, operations, customer service management, ethics, employment law, international business, and software that are required by service, retail, government, and manufacturing organizations. Additionally, students may choose a specialization track for emphasis. Specializations available include entrepreneurship and health care.

The Business Management program is offered at the Adams County Center and the Marshfield, Stevens Point, and Wisconsin Rapids campuses. It is also available online. Courses are offered during both day and evening hours. Program courses are transferable to baccalaureate degree programs through a variety of transfer agreements.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Business Management graduate, to be able to:

- Plan the operations of a business across functional areas
- Organize resources to achieve the goals of the organization
- Direct individuals and/or processes to meet organizational goals
- Control business processes

The Wisconsin Technical College System (WTCS) has implemented a requirement that all technical colleges measure program outcomes attained by students. This requirement is called Technical Skills Attainment (TSA). The main objective of TSA is to ensure graduates have the technical skills needed by employers. Business Management Program Outcomes are measured in the Business Decision Making course.

CAREER OPTIONS

Account Executive
Account Manager
Assistant Manager
Business Entrepreneur
Customer Service Representative
Department Supervisor
Floor Supervisor
Health Care Supervisor
Human Resource Assistant
Inside Sales or Account Representative
Insurance Representative
Lead Worker
Office Manager
Operations Manager
Production Supervisor
Project Manager
Purchasing Assistant
Service Manager
Store Leader
Team Leader
Technical Recruiter

POTENTIAL FOR ADVANCEMENT

Business Manager
Department Manager
General Manager
Health Services Manager
Human Resource Manager
Production Manager
Retail Manager

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Business Management program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

PROGRAM COURSE DESCRIPTIONS

10101111 // 4 credits
Accounting I
A beginning course designed especially for majors or those who need a strong foundation in accounting principles. Develops the accounting cycle of journalizing, posting, adjusting, closing, and reporting. It emphasizes service and merchandising sole proprietorships in developing the accounting cycle. Explores issues for accounting for cash, accounts and notes receivable, inventories, and fixed assets.

10101128 // 3 credits
Managerial Accounting
Develops managerial and finance analytical and decision-making skills. Develops an appreciation of the financial statements as a framework for controlling the activities of a business entity, the ability to do financial statement analysis and forecasting, and make recommendations for appropriate courses of action based on the results. Examines the methodology and develops the skills to manage leverage, working capital, and long-term financing. Examines the American financial system and how the business entity functions within it. Develops an appreciation for the skills needed to determine the time value of money. Prepares cash flow, operating, and capital budgets. *Prerequisite: Accounting II 10101113.*

10102101 // 3 credits
Intro to Business
An introduction to what a business is, how it operates, and how it is managed. Students will identify forms of ownership and the processes used in production and marketing, finance, personnel, and management in business operations.

10102103 // 3 credits
Business Law & Ethics
This course introduces the student to basic ethical theories and value systems. Students will apply these perspectives to moral issues, problems, and situations which arise within the business environment. Emphasis will be placed on how the applicable laws are being interpreted.

10102110 // 3 credits
Employment Law
Introduces a broad scope of employment laws and provides the opportunity to apply these laws to the employment arena. Laws relating to anti-discrimination, including the Civil Rights Act, ADEA, and ADA; wage and hour regulation, including FLSA; employer provided pensions, including ERISA; health insurance, including COBRA; and unemployment and worker's compensation insurance will be covered.

10102117 // 3 credits
Business Finance
This course introduces the basic concepts needed for firms to efficiently control the flow of money within a business to balance profitability with risk. Students will determine the financial impact of quality programs on a company, analyze financial statements using ratio analysis and industry comparison data, determine break-even points and leverage for a company, compare alternatives for short and long-term financing, explore options for global financing, and prepare a cash budget and pro forma financial statements for a firm. *Prerequisite: Accounting I 10101111.*

10102120 // 3 credits
Customer Service Management
The learner applies the skills and tools necessary to manage and measure the customer service function. Learners practice quality customer service, develop customer service plans, train and develop staff in quality customer service, measure the effectiveness of customer service, and lead continuous improvement of customer service.

10102131 // 3 credits
Entrepreneurial Management
This course is designed to introduce students to the concept of entrepreneurship. Students will study entrepreneurial practices primarily by developing a business plan for a venture of their choice. This will include comparing ways of going into business, and developing marketing, legal, financial, products/services, management, and operations plan for a small business of their choice. Entrepreneurial behavior within companies will also be examined. *Prerequisite: Twelve 10-102 Business Management credits or twelve 10-196 Supervisory Management credits or a combination of 10-102 Business Management and 10-196 Supervisory Management credits that total twelve.*

CURRICULUM

Term		(16 credits)
10102101	Intro to Business	3
10102147	Principles of Management	3
10103106	Microsoft Office-Introduction	3
10104102	Marketing Principles	4
10801136	English Composition I **-or-**	
10801195	Written Communication	3

Term		(15 credits)
10102103	Business Law & Ethics **-or-**	
10105160	Business Law	3
10102110	Employment Law	3
10196193	Human Resource Management	3
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3
10804107	College Mathematics **-or-**	
10804189	Introductory Statistics	3

Term		(19 credits)
10101111	Accounting I	4
10102120	Customer Service Management	3
10102180	International Business	3
10196191	Supervision	3
10809144	Macroeconomics	3
10809122	Intro to American Government **-or-**	
10809172	Introduction to Diversity Studies **-or-**	
10809196	Intro to Sociology	3

Term		(18 credits)
10102117	Business Finance **-or-**	
10101128	Managerial Accounting	3
10102131	Entrepreneurial Management	3
10102160	Business Decision Making	3
10809143	Microeconomics	3
10809188	Developmental Psychology **-or-**	
10809198	Intro to Psychology	3
	Elective	3

Total Credits 68

Please Note:
- The Business Management program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10102147 // 3 credits
Principles of Management
This course introduces the student to the job of management in organizations. An understanding of the roles and tasks of all levels of management in the functions of organizational planning, controlling, staffing, leading, and controlling is developed.

10102160 // 3 credits
Business Decision Making
This course develops skill to enable students to make individual decisions and participate in and facilitate group decisions in pursuit of the goals and objectives of an organization. Students will analyze decision making environments; employ a systematic decision making process; use creative and analytic thinking tools for information gathering and analysis; employ ethical and social standards; contribute in group decision making; and facilitate the group decision making process.
Prerequisite: Twelve 10-102 Business Management credits or twelve 10-196 Supervisory Management credits or a combination of 10-102 Business Management and 10-196 Supervisory Management credits that total twelve.

10102180 // 3 credits
International Business
This course introduces topics concerning international business while illustrating its scope and importance. Topics will include the impact of geography, trade protectionism, culture, legal structure, politics, and currency on business dealings. Students will also research a particular country in depth.

10102183 // 3 credits
Global Supply Chain Management
Students explore methods of foreign market entry, international contracts, INCOTERMS 2000, terms of payment, international commercial documents, international insurance, export packaging, customs clearance, and the global supply chain logistics infrastructure.

10102184 // 3 credits
Global Trade Finance
Students will explore the role of finance in global trade. Foreign exchange markets, fluctuations of the market, development of the Euro, role of International Monetary Fund (IMF) in the global capital market, major determinants in country risk, and risks in export financing will be examined.

10102185 // 3 credits
Global Business Culture
The student will examine the cultural frameworks in which global business operates. Students will analyze various cultures, communication strategies, socio-cultural forces, human resource investment and utilization, and management styles.

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

BUSINESS MANAGEMENT SPECIALIZATIONS

Prospective students seeking a Business Management Associate Degree specialization should list it under "Program/Major Choice" on their MSTC Application. Those who wish to declare a specialization after acceptance into the Business Management program should see their counselor. Students pursuing an Entrepreneurship or Healthcare Management specialization will complete courses in the first column in place of the courses in the Business Management program noted in the second column in the charts below. The specialization is indicated as a subplan on your MSTC transcript.

Entrepreneurship Specialization

Complete These Courses		In Place of These Courses	
10145186	Financial Management for Your Small Business	10102117 10101128	Business Finance **-or-** Managerial Accounting
10145188	Entrepreneurial Service Management	10102120	Customer Service Management
10145189	Writing a Business Plan for Your Small Business	10102131	Entrepreneurial Management
10145187	Marketing Your Small Business	10104102	Marketing Principles
10145185	Organizing Your Small Business		Elective

Healthcare Management Specialization

Complete These Courses		In Place of These Courses	
10501109 10530125 10530150	Medical Law, Ethics, and Professionalism Organization of Healthcare Introduction to Health Information Technology	10102103 10102180	Business Law & Ethics International Business
10501101	Medical Terminology		Elective
10102120	Customer Service Management	10102120	Customer Service Management
10102147	Principles of Management	10102147	Principles of Management
10196191	Supervision	10196191	Supervision
10196193	Human Resource Management	10196193	Human Resource Management

10104102 // 4 credits
Marketing Principles
Students study the practices and methods of manufacturers and distributors in the marketing of goods and services. Product planning, pricing strategies, distribution systems, channel activities, and the role of government, as well as other factors influencing marketing today, are emphasized.

10104185 // 3 credits
Global Business Marketing
Students examine marketing theory and methods as they apply to world markets. Topics examined include the importance of linking international marketing with the overall strategy of the business while examining the impact of cultural, political, and legal issues and the economic differences in global strategies. Emphasis is placed on developing the marketing mix appropriate to various international global environments.

10105160 // 3 credits
Business Law
Examines the classifications of law, elements of legal contracts, and business applications. Negotiable instruments, sales and bailment contracts, principal-agent relations, and real estate law are also explained. Ethical practices are emphasized rather than narrow, legal definitions.

10145185 // 3 credits
Organizing Your Small Business
Explores the components of small business ownership by examining a variety of small business startup and operation scenarios. Students will begin to assess their own readiness to begin the entrepreneurial adventure.

10145186 // 3 credits
Financial Management for Your Small Business
Emphasizes the importance of good record keeping systems, reports, and the records necessary for a small business. Financial analysis techniques are explored through hands-on Income Statements and Cash Flow projections for the small business. Financial and other technical support resources are identified throughout the course.

10145187 // 3 credits
Marketing Your Small Business
Enables prospective or existing business owners/managers to implement and evaluate a marketing plan for their small business. Students develop a marketing plan for a selected small business. Components of the plan include market research, customer focus, quality, pricing, and advertising.

10145188 // 3 credits
Entrepreneurial Service Management
Brings together the elements of a successful business with a strategic plan that focuses on servicing customers with a winning attitude, performance, teamwork, and competition.

10145189 // 3 credits
Writing a Business Plan for Your Small Business
Focuses on the business plan as a necessary component to starting and operating a small business. Students prepare a business plan to assist in obtaining financing for a proposed business and/or to guide their strategic business operations.

10196191 // 3 credits
Supervision
The learner applies the skills and tools necessary to perform the functions of a contemporary frontline leader. Students engage in operational planning, analyze organizational structures, review the staffing process, employ techniques to enhance employee personal and group effectiveness, and develop control techniques to measure effectiveness in the above areas.

10196193 // 3 credits
Human Resource Management
The learner applies the skills and tools necessary to perform human resource functions in an organization. Each learner will demonstrate skill in following EEOC laws; writing job descriptions; recruiting, selecting, and orienting employees; developing policies and procedures; developing and conducting training; designing performance appraisal plans; developing employee development plans; and selecting compensation and benefit strategies.

10501101 // 3 credits
Medical Terminology
Students focus on the component parts of medical terms: prefixes, suffixes, and word roots. Students practice formation, analysis, and reconstruction of terms. Emphasis on spelling, definition, and pronunciation. Introduction to operative, diagnostic, therapeutic, and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

10501109 // 2 credits
Medical Law, Ethics, and Professionalism
Prepares students to display professionalism and perform within ethical boundaries in the health care setting. Students maintain confidentiality, examine legal aspects of the medical record, perform risk management procedures, and examine legal and bioethical issues.

10530125 // 2 credits
Organization of Healthcare
This course examines the organization and delivery of health care services, external standards, regulations, initiatives, payment and reimbursement systems, and health care providers and disciplines.

10530150 // 2 credits
Introduction to Health Information Technology
Prepares learners to illustrate the flow of health information in various health care delivery systems and within the health information department and to retrieve data from health records. Professional ethics, confidentiality, and security of information are emphasized. This course also examines the content and structure of an EHR (inpatient and ambulatory patient records), documentation practice guidelines, and the types of user devices utilized in an EHR system. Basic concepts of clinical decision support, standards relating to content of health records, data integrity, and EHR system security are included. Students will have access to an electronic health record to apply concepts learned.

CENTRAL SERVICE TECHNICIAN

Program Code 30-534-1
2014-2015 Estimated Tuition and Fees: $3,246*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

Students are prepared with the knowledge and skills necessary to function as a central service technician. Central service is the hub of all activities involving supplies and equipment for surgery, obstetric, emergency departments, and other patient care areas. Students learn the principles of standard precautions, asepsis, disinfection, and sterilization procedures. Effective communication is vital within this multi-service area. Central service is located in all health care facilities such as nursing homes, clinics, and hospitals. Patient interaction is minimal within this area of specialty.

Online instruction, lab, and clinical experience are part of the curriculum. Upon graduation, students are eligible for certification exams.

Students are responsible for transportation to and from classroom, lab, and clinical sites. A minimum of two clinical sites will be utilized in the clinical portion of the class.

The Central Service Technician core course is offered at Marshfield Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Central Service Technician graduate, to be able to:

- Apply knowledge of the different roles and responsibilities of a Central Service Technician
- Apply principles of standard precautions and asepsis
- Perform disinfection and sterilization procedures
- Perform within legal and ethical boundaries
- Effectively communicate with members of the health care team

CAREER OPTIONS

Central Processing or Instrument Technician
Central Service Aide
Central Service Assistant
Central Service Technician
Central Service Technologist
Materials Management
Processing/Distributions Technician

POTENTIAL FOR ADVANCEMENT

Central Service Supervisor
Surgical Technologist

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Central Service Technician program, please complete the following steps and submit documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.
4. Submit the Criminal Background Statement of Understanding and Release of Information form.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function as a Central Service Technician is available in the online program orientation. It is the student's responsibility to notify the disability services coordinator in the Student Affairs Office to receive assistance.

CLINICAL-RELATED REQUIREMENTS

Prior to placement at a clinical site, students need to pay for a criminal background check and provide documentation of required healthwork to a private vendor.

Students are responsible for ensuring all requirements remain current during program enrollment.

Clinical sites have the right to refuse a student's placement based on inadequate health records, pending charges, or conviction records. Students with a criminal history may not be able to complete clinical courses. MSTC will make two attempts to place a student in an appropriate clinical experience. If MSTC is unable to place the student after two attempts, the student will be withdrawn from the clinical course and will not be able to advance in the program. Contact the program counselor for more details.

PROGRAM COURSE DESCRIPTIONS

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10501101 // 3 credits
Medical Terminology
Students focus on the component parts of medical terms: prefixes, suffixes, and word roots. Students practice formation, analysis, and reconstruction of terms. Emphasis on spelling, definition, and pronunciation. Introduction to operative, diagnostic, therapeutic, and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

10501109 // 2 credits
Medical Law, Ethics, and Professionalism
Prepares students to display professionalism and perform within ethical boundaries in the health care setting. Students maintain confidentiality, examine legal aspects of the medical record, perform risk management procedures, and examine legal and bioethical issues.

10501123 // 1 credit
Student Success in Allied Health
Learners explore success strategies for allied health programs including time management, study skills, test preparation and test taking skills, planning, and stress management.
Prerequisite: Admission to Central Service 305341 or Surgical Technologist 315121 programs.

10509102 // 3 credits
Human Body in Health and Disease
Focuses on diseases that are frequently first diagnosed and treated in the medical office setting. Students learn to recognize the causes, signs, and symptoms of diseases of the major body systems as well as the diagnostic procedures, usual treatment, prognosis, and prevention of common diseases.
Corequisite: Medical Terminology 10501101.

CURRICULUM

Term		(19-22 credits)
10103106	Microsoft Office-Introduction	3
10501101	Medical Terminology	3
10501109	Medical Law, Ethics, and Professionalism	2
10501123	Student Success in Allied Health	1
10509102	Human Body in Health and Disease	3
	-or-	
10806177	General Anatomy & Physiology	4
30534301	Central Service	5
10806197	Microbiology	4
	-or-	
31806311	Applied Microbiology	2

Total Credits 19-22

Please Note:
- The core Central Service course (30-543-301) is offered each spring semester. Other required program courses are available during the fall and spring semesters and some are offered during the summer term. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

30534301 // 5 credits
Central Service
This course guides the student in achieving the knowledge and skills necessary to function as a Central Service Technician. Students learn to clean, sterilize, and assemble equipment, supplies, and instruments, and perform record keeping procedures including orders, charges, and inventory.
Prerequisite: Admission to Central Service Technician 305341 program.

CIVIL ENGINEERING TECHNOLOGY-HIGHWAY TECHNICIAN

Program Code 10-607-4
2014-2015 Estimated Tuition and Fees: $9,576*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The challenging field of engineering is constantly changing and in need of skilled technicians. In this program, you will be trained to work in street and highway construction; sewer and water systems; and railroad, pipeline, powerline, dam, canal, and airport construction.

You will work in support of civil engineers, designers, surveyors, and city planners. Comprehensive training in surveying, soils, and construction material testing will be provided. You will also learn about drafting, computer drafting, estimating, system design, mapping, and inspection procedures. The Civil Engineering Technology-Highway Technician program prepares you for a variety of positions in the municipal and construction field.

The Civil Engineering Technology-Highway Technician program is offered at Wisconsin Rapids Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Civil Engineering-Highway Technician graduate, to be able to:

- Design civil engineering layouts
- Understand safety requirements for the civil engineering field
- Acquire civil engineering technology knowledge to aid in obtaining appropriate certifications
- Exhibit CAD skills
- Apply theoretical and practical concepts to surveying practices
- Work cooperatively in groups
- Acquire working knowledge of instruments used in the civil engineering field
- Understand quantities and materials used in the civil engineering technology area

CAREER OPTIONS

CAD Specialist
Construction Grade Supervisor
Draftsperson
Engineering Specialist
Engineering Technician
Environmental/Water Quality Technician
Estimator
Inspector
Materials Technician
Right-of-Way Technician
Sales-Construction (Equipment-Supplies)
Soils Tester
Solid Waster/Landfill Technician
Structural Technician
Surveyor (Construction-Land)
Treatment Plant Technician
Utility Technician

POTENTIAL FOR ADVANCEMENT

Certified Soil Tester
Civil Project Engineer
Construction Supervisor
Crew Chief (Construction)
Designer
Engineering Specification Writer
Head Estimator
Land Surveyor
Lead Inspector
Senior Draftsperson
Treatment Land Operator

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Civil Engineering Technology-Highway Technician program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 65
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

PROGRAM COURSE DESCRIPTIONS

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10607110 // 4 credits
Cemented Aggregate Mixtures
Inspection/testing concepts, sampling procedures, aggregate properties, PCC mix design methods, HMA design, and field laboratory quality control testing. ACI Grade I and WisDOT PCCTEC certifications are available through this course.
Corequisite: Trigonometry with Applications 10804196.

10607117 // 2 credits
GIS Fundamentals
This course is an introduction to geographic information systems (GIS), and how they are used to document and convey information that has a spacial component. Students use GIS software to create, manipulate, and present geographic information.
Prerequisite: Civil Engineering Drafting I 10607150.

10607118 // 1 credit
Land Records
This course focuses on the interpretation of land documents; this includes property descriptions, the Public Land Survey System, meridians, angle measurements, and line direction formats used by surveyors.
Corequisite: Intro to Surveying 10607155.

10607145 // 3 credits
Soils
This course covers the general classification and properties of soil and subsurface materials. Subsurface exploration soil tests and hydraulic principles are covered as used in the field of civil engineering. Laboratory techniques are developed for testing and classifying soil and aggregate.
Corequisite: Intermediate Algebra with Applications 10804118.

10607149 // 3 credits
Highway Bridges, Medians, & Barriers
The processes, considerations, and safety aspects of constructing and maintaining highway bridges, medians, and barriers are covered. Includes investigation of structural loads, stress factors, and valid design procedures for these critical components of today's modern roads and highways.
Prerequisite: Highway Surveying 10607171. Corequisite: Inspection 10607167.

10607150 // 3 credits
Civil Engineering Drafting I
Provides fundamentals necessary for using Civil Engineering software to create subdivision, property, traverse, topographic, and contour drawings. Information collected in Surveying - Total Station is downloaded onto the computer to create drawings.
Prerequisite: Intro to AutoCAD 10623106. Corequisites: Intermediate Algebra with Applications 10804118 and Intro to Surveying 10607155.

10607155 // 2 credits
Intro to Surveying
Covers fundamental principles of surveying and the use of surveying instruments in the application of these principles. Topics include measurement of horizontal distances, care and use of survey equipment, note keeping, differential leveling, angular measurement, and surveying field procedures. Actual field problems supplement classroom instruction.
Corequisite: Intermediate Algebra with Applications 10804118 and Intro to AutoCAD 10623106.

CURRICULUM

Term		(19 credits)
10103106	Microsoft Office-Introduction	3
10607118	Land Records	1
10607145	Soils	3
10607155	Intro to Surveying	2
10623100	Problem Solving & Critical Thinking	1
10623106	Intro to AutoCAD	2
10801136	English Composition I **-or-**	
10801195	Written Communication	3
10804118	Intermediate Algebra with Applications	4

Term		(17 credits)
10607110	Cemented Aggregate Mixtures	4
10607150	Civil Engineering Drafting I	3
10607156	Surveying–Total Station	3
10804196	Trigonometry with Applications	3
10806154	General Physics 1	4

Term		(17 credits)
10607117	GIS Fundamentals	2
10607160	Civil Engineering Drafting II	2
10607170	Storm Water Management	3
10607171	Highway Surveying	2
10607174	GPS for Surveyors	2
10804195	College Algebra with Applications	3
10809143	Microeconomics **-or-**	
10809144	Macroeconomics	3

Term		(16 credits)
10607149	Highway Bridges, Medians, & Barriers	3
10607166	Construction Estimating & Management	3
10607167	Inspection	2
10607180	Civil Engineering Capstone	2
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3
10809198	Intro to Psychology	3

Total Credits 69

Please Note:
- The Civil Engineering Technology-Highway Technician program has an August start date. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10607156 // 3 credits
Surveying–Total Station
Advanced principles of surveying and use of surveying instruments are covered. Topics include land surveying, calculation and layout of vertical and horizontal curves, and topographic surveys using transits and Total Stations. The data collected is downloaded onto computers for use in Civil Engineering Drafting I. Actual field problems supplement classroom instruction.
Prerequisites: Intro to Surveying 10607155. Corequisite: Trigonometry with Applications 10804196 and Civil Engineering Drafting I 10607150.

10607160 // 2 credits
Civil Engineering Drafting II
Expands on topics learned in Civil Engineering Drafting I. Covers fundamentals necessary for creating a set of highway plans. Drawings include the development and design of alignments, profiles, cross-sections, and earthwork calculations. In addition, design information is downloaded from the computer to the Total Station to be used for staking.
Prerequisites: Civil Engineering Drafting I 10607150 and Intro to Surveying 10607155.

10607166 // 3 credits
Construction Estimating & Management
Goals and performance of quantity takeoff, cost estimation, resource leveling, estimating labor, and contract interpretation are presented. Project bidding, construction techniques, and equipment capabilities are evaluated.
Prerequisites: Microsoft Office-Introduction 10103106, Problem Solving and Critical Thinking 10623100, and Intro to AutoCAD 10623106.

10607167 // 2 credits
Inspection
Concerns construction inspection and its importance, the role of the inspector, requirements for a good inspector, and general duties of the inspector. Emphasis is on concrete and asphalt inspection.
Prerequisite: Intro to Surveying 10607155.

10607170 // 3 credits
Storm Water Management
Emphasis is on stormwater management, calculations, planning, and design. Topics include open channel and pressure flow, storage and treatment facility design concepts, and regulation, permitting, and enforcement for sanitary and stormwater ordinances.
Prerequisite: Civil Engineering Drafting I 10607150.

10607171 // 2 credits
Highway Surveying
Principles of geometric design of highways, including horizontal curves, vertical curves, superelevation, and using station/offset orientation. Also includes basic design principles of airports, railways, and pipeline design. Evaluation of existing traffic and designing for future needs are included.
Prerequisites: Trigonometry with Applications 10804196, Civil Engineering Drafting I 10607150, and Intro to Surveying 10607155.

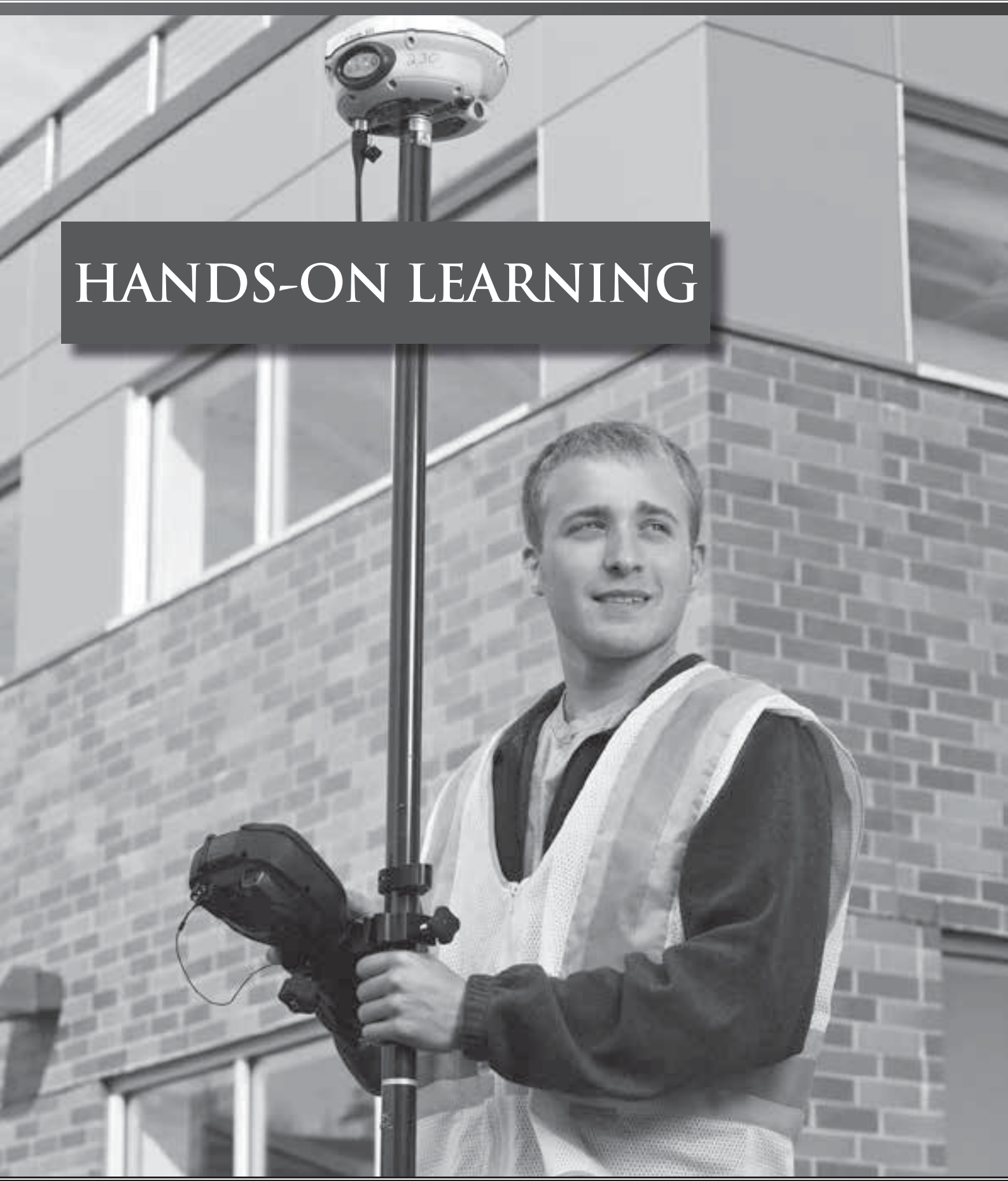
10607174 // 2 credits
GPS for Surveyors
Basic operation of survey-grade GPS equipment and equipment limitations are explored. Emphasis is on data collection, stakeout, and performing calculations with a hand-held data collector. Interaction of design team and surveyors is discussed.
Prerequisite: Intro to Surveying 10607155.

10607180 // 2 credits
Civil Engineering Capstone
The civil engineering capstone class is a project-based learning experience which allows students to integrate and demonstrate their civil engineering drafting, design, and survey skills by applying them to a specific engineering problem. Students collaborate in teams to apply their problem solving and technology skills to a design experience. Working in collaboration with a faculty member, students plan, produce, document, and present quality engineering designs. Students should be in their last semester of the Civil Engineering Technology program to enroll in this class.
Prerequisites: Civil Engineering Drafting II 10607160, Storm Water Management 10607170, and Highway Surveying 10607171.

10623100 // 1 credit
Problem Solving & Critical Thinking
Introductory course in problem setup, organization, and solution. Identification of given and unknown values, equation setup, unit conversions, and use of significant figures. Introduction to physical science; working with units of force, area, volume, time, and distance in metric and imperial systems. This course is designed to help you be successful in technical and engineering classes and should be taken during your first semester of enrollment.

10623106 // 2 credits
Intro to AutoCAD
This is an introductory course in computer aided drafting (CAD) using AutoCAD software. It provides foundation skills in using CAD software to create and print two dimensional technical drawings. This course is available to students in any program. Computer skills and prior knowledge of drawing/drafting techniques is recommended.

HANDS-ON LEARNING



CLINICAL RESEARCH COORDINATOR

Program Code 10-558-1
2014-2015 Estimated Tuition and Fees: $9,406*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The Clinical Research Coordinator (CRC) program prepares individuals who have responsibility for first-level integrity of medical research projects, which includes organization, coordination, data collection, recruiting, screening, enrolling and scheduling participants, and ensuring accuracy of documentation which ensures good clinical practice. Clinical research coordinators work under the direct supervision of principal and co-investigators to implement studies according to protocol and regulatory requirements.

Graduates of the CRC program may be eligible for professional certification after a year of work experience.

The Clinical Research Coordinator program is available primarily online and therefore not location dependent.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Clinical Research Coordinator graduate, to be able to:

- Coordinate research participant activities
- Obtain, document and verify study data, and resolve data discrepancies
- Understand, implement, and document activities related to Good Clinical Practices (GCP), Good Laboratory Practices (GLP), and International Committee on Harmonization Guidelines (ICH)
- Interact with regulatory agencies and sponsors
- Understand research protocol
- Assist in the design and implementation of a research study
- Prepare study documents and trial applications
- Conduct data collection for feasibility studies
- Assist in the development and management of a research study budget
- Prepare documents for quality assurance and other audits
- Gather and prepare preliminary research information for writing teams

CAREER OPTIONS

Clinical Research Coordinator
Clinical Trial Coordinator
Data Coordinator
Medical Research Coordinator
Research Study Coordinator
Research Trial Coordinator

POTENTIAL FOR ADVANCEMENT

Clinical Research Associate
Clinical Research Studies Manager
Senior Clinical Research Coordinator

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Clinical Research Coordinator (CRC) program, please complete the following steps and submit documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.
4. Submit the Criminal Background Statement of Understanding and Release of Information form.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function as a Clinical Research Coordinator is available in the online program orientation. It is the student's responsibility to notify the disability services coordinator in the Student Affairs Office to receive assistance.

CLINICAL-RELATED REQUIREMENTS

Prior to placement at a clinical site, students need to pay for a criminal background check and provide documentation of required healthwork to a private vendor.

Students are responsible for ensuring all requirements remain current during program enrollment.

Clinical sites have the right to refuse a student's placement based on inadequate health records, pending charges, or conviction records. Students with a criminal history may not be able to complete clinical courses. MSTC will make two attempts to place a student in an appropriate clinical experience. If MSTC is unable to place the student after two attempts, the student will be withdrawn from the clinical course and will not be able to advance in the program. Contact the program counselor for more details.

PROGRAM PROGRESSION AND COMPLETION

In order to progress in and successfully complete the program, students must:

- Repeat courses not completed with a "C" or better prior to progressing in core courses or other courses with co- or prerequisites
- Receive a grade of "C" or better in all courses required for graduation.

Please note that the ability to repeat courses is dependent upon availability in courses. Students may be required to apply for program re-entry in order to repeat courses within the program's instructional area.

PROGRAM COURSE DESCRIPTIONS

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10152105 // 3 credits
Database Management
This course uses hands-on exercises and projects to give students experience with using databases for data storage and retrieval. To encourage students to become more sophisticated database users, background information, general relational database design concepts, and a database security overview are included.
Prerequisite: Microsoft Office-Introduction 10103106 or Applied Microsoft Office for Health 10103107.

10196192 // 3 credits
Managing for Quality
The learner applies the skills and tools necessary to implement and maintain a continuous improvement environment. Each learner will demonstrate the application of a personal philosophy of quality, identify stakeholder relationships, identify ways to meet/exceed customer expectations, apply a systems-focused approach, use quality models and tools, manage a quality improvement project, and measure effectiveness of continuous improvement activities.

CURRICULUM

Term		(15 credits)
10103106	Microsoft Office-Introduction	3
10501101	Medical Terminology	3
10530150	Introduction to Health Information Technology	2
10558101	Intro to Clinical Research	3
10806177	General Anatomy & Physiology	4

Term		(15 credits)
10196192	Managing for Quality	3
10558103	Epidemiology	3
10558104	Legal & Regulatory Research Compliance	3
10801136	English Composition I **-or-**	
10801195	Written Communication	3
10804189	Introductory Statistics	3

Term		(18 credits)
10152105	Database Management	3
10501108	Pharmacology for Allied Health	2
10530132	Health Data Analysis	3
10558109	CRC Lab & Clinical Procedures	3
10801197	Technical Reporting	3
10806197	Microbiology	4

Term		(16-18 credits)
10501109	Medical Law, Ethics, and Professionalism	2
	-or-	
10809166	Intro to Ethics: Theory & Application	3
10558105	Clinical Research Management	3
10558106	Genetics	3
10558107	Clinical Research Coordinator Practicum	2
	-or-	
10558110	CRC Clinical Experience	3
10809196	Intro to Sociology	3
10809198	Intro to Psychology	3

Total Credits 64-66

Please Note:
- The Clinical Research Coordinator program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability and term of program entry.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10501101 // 3 credits
Medical Terminology
Students focus on the component parts of medical terms: prefixes, suffixes, and word roots. Students practice formation, analysis, and reconstruction of terms. Emphasis on spelling, definition, and pronunciation. Introduction to operative, diagnostic, therapeutic, and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

10501108 // 2 credits
Pharmacology for Allied Health
Introduces students to classifying medications into correct drug categories and applying basic pharmacology principles. Students apply basic pharmacodynamics to identifying common medications, medication preparation, and administration of medications used by the major body systems.

10501109 // 2 credits
Medical Law, Ethics, and Professionalism
Prepares students to display professionalism and perform within ethical boundaries in the health care setting. Students maintain confidentiality, examine legal aspects of the medical record, perform risk management procedures, and examine legal and bioethical issues.

10530132 // 3 credits
Health Data Analysis
Focuses on the collection, computation, analysis, and presentation of health care statistical data. Data analytics, registries, vital statistics, mandatory reporting, and research are examined.
Prerequisites: Intro Health Records 10530111, Organization of Healthcare 10530125, and Electronic Health Records 10530122.

10530150 // 2 credits
Introduction to Health Information Technology
Prepares learners to illustrate the flow of health information in various health care delivery systems and within the health information department and to retrieve data from health records. Professional ethics, confidentiality, and security of information are emphasized. This course also examines the content and structure of an EHR (inpatient and ambulatory patient records), documentation practice guidelines, and the types of user devices utilized in an EHR system. Basic concepts of clinical decision support, standards relating to content of health records, data integrity, and EHR system security are included. Students will have access to an electronic health record to apply concepts learned.

10558101 // 3 credits
Intro to Clinical Research
This course provides a comprehensive introduction to the clinical research process and its history and evolution. Topics include phases of clinical trials, protection of human subjects, roles of the clinical research teams, and responsibilities of clinical research organizations. Upon completion, students are able to prepare an organizational chart depicting a typical research team, defining the roles or responsibilities of each member. Students are able to describe the product approval process and discuss the general conduct of a typical clinical trial.
Corequisite: Medical Terminology 10501101.

10558103 // 3 credits
Epidemiology
Course introduces students to the basic concepts and principles of the study of the distribution and determinants of health-related states or events in specified populations and the application of this study to the control of health problems. Topics include history of epidemiology, classification of disease, epidemiological measurement, outbreak investigation, study design, bias, and causality. Various epidemiologic study designs for investigating associations between risk factors and disease outcomes are also introduced, culminating with criteria for casual inferences. The application of these disciplines in the areas of health services, screening, genetics, and environmental policy are presented. The influence of epidemiology and biostatistics on legal and ethical issues is also covered.
Prerequisite: Medical Terminology 10501101. Corequisite: Introductory Statistics 10804189.

10558104 // 3 credits
Legal & Regulatory Research Compliance
Course covers the range of national and international regulations and guidelines governing the development of drugs, diagnostics, medical devices, and biologics. Topics include a review of regulatory agencies, guidelines for regulatory application, required documentation, and protection of human subjects. Specific topics include ICH Guidelines; FDA, IND, and IDE regulations; IRB and IEC activities; HIPAA; Human Subject Protection/ Informed consent; and other rules and regulations. Upon completion, students should be able to demonstrate a basic understanding of regulations, guidelines, and legal issues associated with clinical research, and describe effective means of compliance.
Prerequisites: Admission to Clinical Research Coordinator 105581 program, Intro to Clinical Research 10558101, and Medical Terminology 10501101.

10558105 // 3 credits
Clinical Research Management
This course introduces the student to the elements involved in implementing, monitoring, and managing a clinical study from the perspective of the sponsor or contract research organization (CRO). Topics include overall project planning, development of study goals, preparation of budget and contracts, implementation of monitoring visits, and effective management of research sites. Upon completion, student should be able to design and prepare a plan for implementation and management of a sample clinical research project. *Prerequisites: Admission to Clinical Research Coordinator 105581 program, Intro to Clinical Research 10558101, Medical Terminology 10501101, and Technical Reporting 10801197.*

10558106 // 3 credits
Genetics
This course introduces students to the progression of genetic discovery including evolving legal and ethical implications. Topics covered include Mendelian genetics, post-Mendelian genetics, population genetics, molecular genetics, DNA structure, replication, transcription and translation, and current DNA technologies.

10558107 // 2 credits
Clinical Research Coordinator Practicum
The student will have supervised work experience in a clinical setting at various research sites agreed upon by the instructor and student. Emphasis is on the observation, performance and enhancement of professional and management skills, interactive team communication, and the application of research principles, procedures, and regulations in the workplace. *Prerequisite: Admission to Clinical Research Coordinator 105581 program.*

10558109 // 3 credits
CRC Lab & Clinical Procedures
This course prepares the student to perform comprehensive research participant baseline assessments, drug accountability, blood draws, lab preparation, and shipping. *Prerequisites: Admission to Clinical Research Coordinator 105581 program, Intro to Clinical Research 10558101, Epidemiology 10558103, Legal & Regulatory Research Compliance 10558104, and General Anatomy & Physiology 10806177. Corequisite: Microbiology 10806197.*

10558110 // 3 credits
CRC Clinical Experience
Learners have supervised clinical work experience in a research setting. Emphasis is on the observation, performance, and enhancement of professional and management skills, interactive team communication, and the application of research principles, procedures, and regulations.

COSMETOLOGY

Program Code 31-502-1
2014-2015 Estimated Tuition and Fees: $6,706*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The Cosmetology program combines the theoretical concepts and practical instruction you need to work as a cosmetologist upon successful completion of the state practitioner's licensing examination. The Wisconsin Department of Safety & Professional Services licenses this program.

Learn hair cutting, styling, coloring, permanent waving, and chemical hair relaxing. You will also receive instruction in sanitation and safety, facial and scalp treatments, barbering, state law, make-up, pedicuring, manicuring, and caring for wigs and hair pieces.

Most classes are offered in a face-to-face format. Theory of General Sciences, State Law, and Salon Business classes are offered only in an online format. Work on mannequins, other students, and in an on-campus salon completes the practical component of your training.

Students who successfully complete the program will meet the Wisconsin requirement of 1800 hours of theoretical and practical instruction. Federal regulations require programs for licensure must use clock hours in all areas of administering Title IV federal financial aid. Financial aid and scholarships are available to those who qualify.

The Cosmetology program is offered at Wisconsin Rapids Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Cosmetology graduate, to be able to:

- Apply safety and sanitation procedures
- Adhere to the current Wisconsin administrative codes and statutes for cosmetology
- Demonstrate interpersonal skills for success
- Perform haircutting services
- Perform shampoo services
- Perform skin care services
- Perform texture services
- Perform hair color services
- Demonstrate hairstyling and finishing techniques
- Perform nail services
- Develop strategies to market products and services

CAREER OPTIONS

Barber
Competition Stylist
Cosmetic Sales
Cosmetologist
Distribution Sales
Esthetician
Field Technician
Hair Coloring Technician
Hair Design
Make-up Artist
Merchandiser
Nail Technician
Pedicurist
Perm Technician
Receptionist
Salon Coordinator
Salon Stylist
Shipboard Stylist
Skin Specialist

POTENTIAL FOR ADVANCEMENT

Instructor
Motion Picture Make-Up or Hair Designer
Platform Artist
Research Technician
Salon Manager
State Board Examiner

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Cosmetology program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

FUNCTIONAL ABILITIES

Students must have good fine motor skills, especially finger dexterity, as well as good hand/eye coordination and 20/40 vision in best eye with 70 degrees to each side for peripheral vision, as determined by the Department of Transportation.

PROGRAM PROGRESSION AND COMPLETION

In order to progress in and successfully complete the program, students must repeat core courses (courses numbered 31-502-xxx) not completed with a grade of "C" or better prior to progressing in core courses or other courses with co- or prerequistes.

Please note that the ability to repeat courses is dependent upon availability of courses. Students may be required to apply for program re-entry in order to repeat courses.

PROGRAM COURSE DESCRIPTIONS

31502315 // 1credit
Salon Business
This course provides learning experiences for students that focus on the history of cosmetology, career opportunities, personality development, professional image, communicating with clients and colleagues, how to open a salon, preparing for employment, and skills needed on the job. Through a variety of teaching and learning techniques and videos, scenarios are developed in which interaction skills and salon applications are practiced and fine-tuned. All of the skills covered and developed in this course are necessary for success in the workplace. This course is provided online only.
Prerequisite: Admission to Cosmetology 315021 program.

31502316// 1 credit
Theory of General Sciences
This course covers several general science topics integral to the field of barbering/cosmetology: bacteriology, infection control, properties of the hair and scalp, nail structure and growth, skin diseases and disorders, introduction to electrology, the basics of electricity, chemistry, and anatomy and physiology. This course is offered online only.
Prerequisite: Admission to Cosmetology 315021 program.

31502334 // 3 credits
Hairstyling
This course emphasizes wet and dry hairstyling to include rollers, air-forming, thermal styling, hair straightening, finger waving, pin curls, hair analysis, shampooing, scalp treatments, braiding, long hair design, and hair pressing. Fundamentals of thermal styling and comb outs are be performed. Practical aspects of hair enhancements including wigs, hair extensions, and hair pieces will also be performed.
Prerequisite: Admission to Cosmetology 315021 program.

31502335 // 3 credits
Haircutting
This course involves designing haircuts, understanding form, and applying various haircutting techniques. Students perform various haircuts including blunt, uniform, increased, and graduated haircuts. Students also perform men's haircuts including razor cutting, shear over comb, clipper cutting clipper over comb, short tapered, and flattops. Trimming techniques used for men's facial hair including shaving, beards, mustaches, and side burns are also emphasized and practiced.
Prerequisite: Admission to Cosmetology 315021 program.

31502336 // 3 credits
Chemical Texture Services
This course includes the basics of safe and sanitary permanent waving and chemical hair relaxing. History and product knowledge of these chemical services as well as advanced techniques and procedures which define current trends in the salon are included.
Prerequisite: Admission to Cosmetology 315021 program.

31502337 // 1 credit
Nail Technology
Students achieve skills in manicuring, pedicuring, and nail enhancement services which include polish application and massage techniques. Students study nail shape and safe and sanitary use of nail care products. Paraffin hand dips, advanced polish techniques, and various nail art application are practiced.
Prerequisite: Admission to Cosmetology 315021 program.

CURRICULUM

Term		(18 credits)
10801196	Oral/Interpersonal Communication	3
31502316	Theory of General Sciences	1
31502334	Hairstyling	3
31502335	Haircutting	3
31502336	Chemical Texture Services	3
31502337	Nail Technology	1
31502338	Salon Services I	1
31502347	Haircolor	3

Term		(18 credits)
10809172	Introduction to Diversity Studies	**-or-**
10809198	Intro to Psychology	3
31502339	Salon Science & Business Technology	2
31502340	Facials	2
31502341	Wisconsin State Law	1
31502342	Capstone Experience	2
31502343	Salon Services II	3
31502344	Salon Services III	4
31502348	Saturday Salon Services	1

Term		(9 credits)
31502315	Salon Business	1
31502345	Salon Services IV	4
31502346	Salon Services V	4

Total Credits 45

Please Note:
- The Cosmetology program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- Students must purchase a kit of required tools and supplies. The cost of the kit is approximately $1,600 and must be purchased for use on the first day of class.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Courses 31502315, 31502316, and 31502341 are available only online.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

31502338 // 1 credit
Salon Services I
This course promotes beginning level concentrated student development of skills and proficiencies by providing a wide range of client-related services. Emphasis is placed on client consultations, proper business practices, professional attitudes, and refining techniques that ensure entry-level preparedness for the Wisconsin Licensing exam. Students complete this course by working in an on-campus beauty salon environment.
Corequisites: Haircolor 31502347, Hairstyling 31502334, Haircutting 31502335, Chemical Texture Services 31502336, Nail Technology 31502337, and Theory of General Sciences 31502316.

31502339 // 2 credits
Salon Science & Business Technology
This course introduces basic chemistry and its relationship to ingredients in professional products. Students will identify and become familiar with effective merchandising displays, product knowledge, and successful selling methods. They will expand their skills in interpersonal communications to successfully meet the needs of clients. In addition, they will be introduced to computer skills which are needed for successful employability.
Prerequisite: Admission to Cosmetology 315021 program.

31502340 // 2 credits
Facials
Students will learn the different types of skin. Structure and functions of the skin will be studied and basic facial techniques applied. Students will study microdermabrasion, laser hair removal, and chemical peels. They will perform basic skin waxing techniques, removal of superfluous hair, makeup application, false eyelash application, and skin analysis.
Prerequisite: Admission to Cosmetology 315021 program.

31502341 // 1 credit
Wisconsin State Law
This course helps students understand Barber/ Cosmetology rules and statutes for safely performing services in the industry. Students study the Wisconsin Statues and Laws relating to the practice of Barbering and Cosmetology. This course is offered online only.

31502342 // 2 credits
Capstone Experience
Students study all state board required practical and theoretical concepts and discover how to pack their student kit with required practical supplies and materials needed for state board exam submission. Students will be required to complete a mock assessment of all state board practical and written concepts. As a culmination of each student's learning experience, they will demonstrate on a mannequin what they have achieved and receive feedback from MSTC Advisory Committee members.
Corequisites: Salon Science & Business Technology 31502339, Facials 31502340, Salon Services II 31502343, and State Law 31502341.

31502343 // 3 credits
Salon Services II
This course builds on Salon Services I by promoting student development of skills and proficiencies in delivering a wide range of client-related services. Emphasis is placed on client consultations, proper business practices, professional attitudes, and refining techniques that will ensure entry-level preparedness for the Wisconsin Licensing exam. Students complete this course by working in an on-campus beauty salon environment.
Prerequisite: Salon Services I 31502338.

31502344 // 4 credits
Salon Services III
This course builds on techniques practiced in Salon Services I and II, concentrating on student development of skills and proficiencies by providing a wide range of client-related services. Emphasis is placed on client consultations, proper business practices, professional attitudes, and refining techniques that will ensure entry-level preparedness for the Wisconsin Licensing exam. Students complete this course by working in an on-campus beauty salon environment.
Prerequisite: Salon Services I 31502338.

31502345 // 4 credits
Salon Services IV
This course builds on techniques practiced in Salon Services I, II, and III, concentrating on student development of skills and proficiencies by providing a wide range of client-related services. Emphasis is placed on client consultations, proper business practices, professional attitudes, and refining techniques that will ensure entry-level preparedness for the Wisconsin Licensing exam. Students complete this course by working in an on-campus beauty salon environment.
Prerequisite: Salon Services I 31502338.

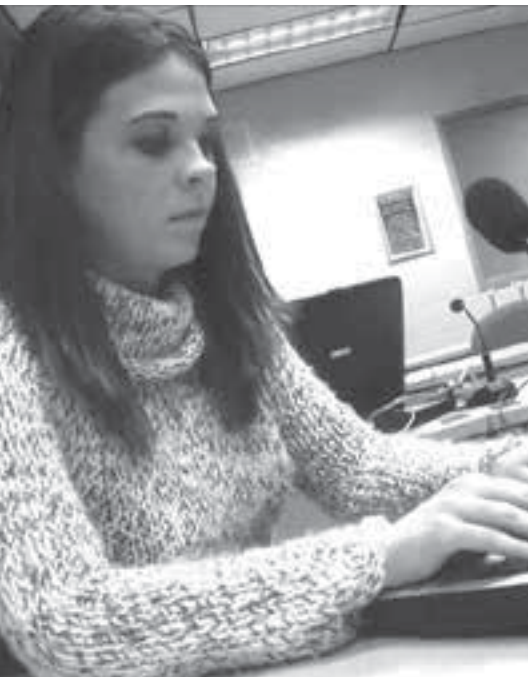
31502346 // 4 credits
Salon Services V
This course builds on techniques practiced in Salon Services I, II, III, and IV, concentrating on student development of skills and proficiencies by providing a wide range of client-related services. Emphasis is placed on client consultations, proper business practices, professional attitudes, and refining techniques that will ensure entry-level preparedness for the Wisconsin Licensing exam. Students complete this course by working in an on-campus beauty salon environment. Basic First Aid is covered in this course.
Prerequisite: Salon Services I 31502338.

31502347 // 3 credits
Haircolor
This course covers haircolor basics which include the law of color, the color wheel, and the theory behind these concepts. Students will identify the chemicals used in haircolor and discover the differences between temporary, semi/demi, and permanent color. Students will mix and apply color while developing skills and building client consultation techniques. Application methods governed by the state board regulations will be studied. The study of bleach theory and complete lightening applications, including foiling, is taught. Students experience advanced color formulations, color placement techniques and color correction procedures.
Prerequisite: Admission to Cosmetology 315021 program.

31502348 // 1 credit
Saturday Salon Services
This course promotes student development of skills and proficiencies in delivering a wide range of client-related services. Emphasis is placed on client consultations, proper business practices, professional attitudes, and refining techniques that will ensure entry-level preparedness for the Wisconsin Licensing exam. Students complete this course by working in an on-campus beauty salon on Saturdays.
Prerequisite: Salon Services I 31502338.

STRONG JOB PLACEMENT

COURT REPORTING



Program Code 10-106-1
2014-2015 Estimated Tuition and Fees: Contact Lakeshore Technical College
Median Salary Six Months After Graduation: mstc.edu/programsalaries

You've seen high-profile trials with a person keying the testimony into a stenograph machine or read the scrolling captions for the hearing impaired on your TV screen. The person recording the spoken words at speeds ranging from 180 to 225 words a minute is a court reporter.

If you're an excellent listener, enjoy keyboarding, have strong language and communications skills, and are committed to accuracy and confidentiality, a career in court reporting may be a perfect fit for you.

You'll need to hear, speak, see, and use both hands to manipulate a computer keyboard and stenograph machine. Students are required to rent a stenograph machine and laptop computer through the rental program available at Lakeshore Technical College (LTC).

The Court Reporting program is certified by the National Court Reporters Association (NCRA).

Core program courses are offered via video conference hosted by Lakeshore Technical College and are supported by select classes available in the MSTC District.

The Court Reporting program is offered at Stevens Point Campus.

PROGRAM OUTCOMES

Employers will expect you, as a Court Reporting graduate, to be able to:

- Develop proficiency in machine shorthand using real-time theory
- Develop a personal dictionary and read, translate, and edit transcripts using CAT (computer-assisted transcription) software
- Produce salable transcripts on a real-time translation system
- Demonstrate knowledge of proper reporting procedures and responsibilities for freelance and official reporting
- Demonstrate knowledge of legal and medical concepts and terminology
- Demonstrate knowledge of the professional reporting organizations and methods of gaining certification as a Registered Professional Reporter

CAREER OPTIONS

Freelance Reporter
Legislative Reporter
Official Court Reporter in the Court System
Scopist

GRADUATION REQUIREMENT

Three, 5-minute timings must be passed in each of the following categories with a minimum of 95 percent accuracy:

- Two-voice testimony @ 225 wpm
- Jury charge @ 200 wpm
- Literary @ 180 wpm

Judicial Reporting Procedures and Judicial Reporting Internship must be taken within 18 months of graduation.

ADMISSIONS PROCEDURES

To apply to the Court Reporting program, please submit the following documents to Lakeshore Technical College:

1. Complete a WTCS application form and return it with the $30 non-refundable application fee. Check is payable to LTC.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 70
   - Math-Accuplacer score of 50
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.
4. Program Advising Session.
5. Notification of Laptop/Steno Rental Requirement form.
6. Authorization to Release Confidential Information for Shared Programs form.
7. Upon receipt of the above materials, you will be accepted to Lakeshore Technical College. LTC will then notify you of additional program requirements.

Lakeshore Technical College
Admissions
1290 North Avenue
Cleveland, WI 53015-1414
888.GO TO LTC • 888.468.6582

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

PROGRAM COURSE DESCRIPTION

10106104 // 5 credits
Realtime Reporting 1
Prepares learners to use machine shorthand to write consonants, vowels, numbers, multi-syllabic words, multi-consonant words, punctuation and special symbols, short forms and phases, words in their singular and plural forms, and prefixes and suffixes. Concurrent registration in Realtime Reporting 1 Lab is required.
Condition: Broadcast Captioning 101071 or Judicial Reporting 101061 or Broadcast Captioning 321071 or Judicial Reporting 321061.

10106105 // 5 credits
Realtime Reporting 2
Prepares the learner to write multi-syllabic words, punctuation and special symbols, short forms and phrases, prefixes and suffixes, numbers, frequently used words and phrases, contractions using the Z-rule, the "Flagged Alphabet," apply realtime conflict elimination principles, apply realtime theory, and write dictation using a realtime theory, at a minimum speed of 110 wpm. Concurrent registration in Realtime Reporting 2 Lab is required.
Prerequisite: Realtime Reporting 1 10106104 and Realtime Reporting 1 Lab 10106804.

10106108 // 2 credits
Realtime Reporting Speed Development
Further develops skills acquired in Realtime Reporting II on literary, jury charge, and testimony material beginning at 120 wpm. Scheduled during the summer term, students must pass two, 3-minute timings at a minimum speed of 110 words per minute.
Prerequisite: Realtime Reporting 2 10106105.

10106109 // 2 credits
Literary 1-Advanced
Prepares the learner to write literary material at 150 words per minute for 3 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy, write and read back current events dictation, and prepare salable transcripts. Concurrent registration in Literary 1 Lab is required.
Prerequisite: Realtime Reporting Speed Development 10106108.

10106111 // 2 credits
Literary 2-Advanced
Expands the student's ability to write literary material at 180 words per minute for 5 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy, write and read back current events dictation, and prepare salable transcripts. Concurrent registration in Literary 2 Lab is required.
Prerequisite: Literary 1-Advanced 10106109.

10106128 // 2 credits
Jury Charge 1-Advanced
Prepares the student to write jury charge material at 160 words per minute for 3 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy and prepare salable transcripts. Concurrent registration in Jury Charge 1 Lab is required.
Prerequisite: Realtime Reporting Speed Development 10106108.

10106129 // 2 credits
Jury Charge 2-Advanced
Expands the student's ability to write jury charge material dictated at a minimum speed of 200 words per minute for 5 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy and prepare salable transcripts. Concurrent registration in Jury Charge 2 Lab is required.
Prerequisite: Jury Charge 1-Advanced 10106128.

CURRICULUM

Term		(15 credits)
10170106	Realtime Reporting 1	5
10170144	Realtime Reporting Orientation	1
10170160	Legal Terminology	1
10170184	English for Realtime Reporters	1
10170804	Realtime Reporting 1 Lab	1
10801195	Written Communication	3
10809198	Intro to Psychology	3

Term		(17 credits)
10170105	Realtime Reporting 2	5
10170159	Realtime Reporting Technology	2
10170805	Realtime Reporting 2 Lab	1
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3
10809122	Intro to American Government **-or-**	
10809172	Introduction to Diversity Studies	3
10809196	Intro to Sociology	3

Term		(2 credits)
10170108	Realtime Reporting Speed Development	2

Term		(16 credits)
10170109	Literary 1-Advanced	2
10170128	Jury Charge 1-Advanced	2
10170156	Testimony 1-Advanced	3
10170809	Literary 1 Lab-Advanced	1
10170828	Jury Charge 1 Lab-Advanced	1
10170859	Testimony 1 Lab-Advanced	1
10804106	Intro to College Math **-or-**	
10804123	Math w/ Business Apps	3
10806112	Principles of Sustainability	3
10809144	Macroeconomics **-or-**	
10809195	Economics	3

Term		(15 credits)
10170111	Literary 2-Advanced	2
10170129	Jury Charge 2-Advanced	2
10170141	Court Reporting Procedures	2
10170145	Court Reporting Internship	1
10170157	Testimony 2-Advanced	3
10170171	Medical Reporting & Terminology	2
10170811	Literary 2 Lab-Advanced	1
10170829	Jury Charge 2 Lab-Advanced	1
10170857	Testimony 2 Lab-Advanced	1

Total Credits 65

Please Note:
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10106142 // 2 credits
Judicial Reporting Procedures
Introduces the student to reporting procedures for which reporters are responsible in the courtroom, deposition, and real-time reporting environments, including preparing salable transcripts, researching legal citations, and developing professional development plans.

10106143 // 1 credit
Judicial Reporting Internship
Prepares the student to write machine shorthand verbatim for a minimum of 40 hours of actual writing time in the courtroom, classroom, and deposition environment under the supervision of a working reporter. Prepare a 40-page transcript, and summarize the internship experience in a narrative report.
Prerequisites: Realtime Reporting Speed Development 10106108, Jury Charge 1-Advanced 10106128, Literary 1-Advanced 10106109, and Testimony 1-Advanced 10106156. Corequisites: Jury Charge 2 10106129, Literary 2 10106111, and Testimony 2 10106157.

10106144 // 1 credit
Realtime Reporting Orientation
Prepares the student to use computer-assisted, real-time transcription software, Windows, e-mail, a steno machine, and a laptop in writing machine shorthand in court reporting and to complete and submit required coursework.
Condition: Broadcast Captioning 101071 or Judicial Reporting 101061 program requirements met.

10106156 // 3 credits
Testimony 1-Advanced
Prepares the student to write 2-voice testimony at 160 words per minute for 3 minutes and transcribe with a minimum of 95 percent accuracy. Concurrent registration in Testimony 1 Lab is required.
Prerequisite: Realtime Reporting Speed Development 10106108.

10106157 // 3 credits
Testimony 2-Advanced
Expands the student's ability to write 2-voice testimony at 225 words per minute and transcribe with 95 percent accuracy a minimum of three 5-minute, 2-voice timings at 225 words per minute. Complete a mock RPR exam. Concurrent registration in Testimony 2 Lab is required.
Prerequisite: Testimony 1-Advanced 10106156.

10106158 // 2 credits
Realtime Reporting Technology
Prepares the student to use CAT (Computer-Assisted Transcription) and real-time software; build personal dictionaries; and read, translate, and edit transcripts. Students are introduced to real-time translation procedures in court, depositions, captioning, and educational environments.

10106159 // 1 credit
Legal Terminology
Provides the student with the ability to spell, pronounce, and define legal terms.

10106171 // 2 credits
Medical Reporting and Terminology
Prepares the student to write medical terminology in machine shorthand using appropriate medical terminology from material dictated at a minimum speed of 150 wpm for 5 minutes with a minimum of 95 percent accuracy. The student will research medical information, prepare salable transcripts, and submit timings.
Prerequisite: Testimony 1-Advanced 10106156.

10106184 // 1 credit
English for Realtime Reporters
Enhances the student's ability to use proper English grammar, spelling, punctuation, capitalization, and vocabulary techniques in the transcription of the spoken word.

10106804 // 1 credit
Realtime Reporting 1 Lab
Prepares the learner to use machine shorthand to write consonants, vowels, numbers, multi-syllabic words, multiconsonant words, punctuation and special symbols, short forms and phrases, words in their singular and plural forms, and prefixes and suffixes. Concurrent registration in Realtime Reporting 1 is required.
Corequisite: Real Time Reporting 1 10106104. Condition: Broadcast Captioning 101701 or Judicial Reporting 101061 or Broadcast Captioning 321701 or Judicial Reporting 321061.

10106805 // 1 credit
Realtime Reporting 2 Lab
Expands the learner's ability to write multi-syllabic words, punctuation and special symbols, short forms and phrases, prefixes and suffices, numbers, frequently used words and phrases, contractions using the Z-rule, the "Flagged Alphabet," apply realtime conflict elimination principles, apply realtime theory, and write dictation using a realtime theory. Concurrent registration in Realtime Reporting 2 is required.
Corequisite: Realtime Reporting 2 10106105.

10106809 // 1 credit
Literary 1 Lab-Advanced
Expands the student's ability to write literary material dictated at a speed of 150 words per minute for 3 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy.
Corequisite: Literary 1-Advanced 10106109.

10106811 // 1 credit
Literary 2 Lab-Advanced
Expands the student's ability to write literary material at 180 words per minute for 5 minutes and transcribe at least three timings with 95 percent accuracy. Concurrent registration in Literary 2 is required.
Corequisite: Literary 2-Advanced 10106111.

10106828 // 1 credit
Jury Charge 1 Lab-Advanced
Prepares the student to write jury charge material dictated at a speed of 160 words per minute for 3 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy.
Corequisite: Jury Charge 1-Advanced 10106128.

10106829 // 1 credit
Jury Charge 2 Lab-Advanced
Expands the student's ability to write jury charge material at 200 words per minute for 5 minutes and transcribe at least three timings with 95 percent accuracy. Concurrent registration in Jury Charge 2 is required.
Corequisite: Jury Charge 2-Advanced 10106129.

10106857 // 1 credit
Testimony 2 Lab-Advanced
Expands the student's ability to write 2-voice testimony at 225 words per minute and transcribe with 95 percent accuracy a minimum of three, 5-minute, 2-voice timings at 225 words per minute. Complete a mock RPR Exam. Concurrent registration in Testimony 2 is required.
Corequisite: Testimony 2-Advanced 10106157.

10106859 // 1 credit
Testimony 1 Lab-Advanced
Expands the student's ability to write 2-voice testimony at 160 words per minute for 3 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy.
Corequisite: Testimony 1-Advanced 10106156.

CRIMINAL JUSTICE-CORRECTIONS

Program Code 10-504-2
2014-2015 Estimated Tuition and Fees: $9,097*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

From correctional institutions to community corrections agencies, trained corrections graduates are in demand in the state and across the country. As a student in the Criminal Justice-Corrections program, you will learn the operations and management of correctional institutions, probation/parole, correctional law, and emergency response. Sociology, psychology, communications, mathematics, and economics combine to provide a solid academic foundation.

You may be eligible to enter the jail officer "Certification Track." Successful completion of the Certification Track provides the education and hands-on training required by the Wisconsin Law Enforcement Standards Board to become certifiable as a jail/co-located officer.

Anyone with a felony conviction cannot become a corrections officer without a governor's pardon. A lengthy criminal history or numerous moving traffic violations may hinder opportunities for employment.

The program includes theory, simulated experience, and occupational observation which are combined to help develop knowledgeable, competent, effective, and efficient graduates. Additional emphasis is placed on professionalism, integrity, and quality work performance. A simulated training facility is at Wisconsin Rapids Campus.

Successful graduates will have completed Department of Justice Law Enforcement Standards Board requirements for both Jail Officer and Juvenile Detention Officer.

The Criminal Justice–Corrections program is offered at Wisconsin Rapids Campus.

Mission: The purpose of the Criminal Justice-Corrections program is to provide education, training, and retraining in the field of corrections. The program is designed to enhance opportunities for securing employment, ensure that labor force skills remain abreast of rapidly changing advancements, and encourage the pursuit of further education.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAMS OUTCOMES

Employers will expect you, as a Criminal Justice-Corrections graduate, to be able to:

- Think critically
- Manage emergencies
- Communicate effectively
- Demonstrate professionalism
- Conduct investigations
- Interact with others
- Demonstrate tactical skills (applies to occupational certifications)

CAREER OPTIONS

Correctional Officer
Home Detention Specialist
Juvenile Detention Officer
Psychiatric Care Technician
Shelter Care Worker

There are continual employment opportunities. Due to retirements and career changes, many agencies hire corrections personnel on a regular basis.

POTENTIAL FOR ADVANCEMENT

Administrator
Juvenile Caseworker
Probation/Parole Agent
Supervisor
Training Officer

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Criminal Justice-Corrections program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function as a Jail Officer is available at mstc.edu/programs/criminal-justice-corrections. It is the student's responsibility to notify the disability services coordinator in the Student Affairs Office to receive assistance.

PROGRAM PROGRESSION AND COMPLETION

In order to progress in and successfully complete the program, students must:

- Receive a grade of "C" or better in all courses required for graduation. Please note that the ability to repeat courses is dependent upon availability in courses.

PROGRAM COURSE DESCRIPTIONS

10504110 // 2 credits
Criminal Justice Service Readiness
This course is intended to assist students in their efforts to secure employment upon graduation. Students complete a basic resume, cover letter, interview thank-you letter, and a standard law enforcement or corrections application. Students also prepare for a criminal justice career interview and participate in a mock interview with current practitioners from law enforcement or corrections agencies.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 or Criminal Justice-Corrections 105042 programs.

10504112 // 3 credits
Court Procedures
This course examines the court system including procedures from incident of arrest to final disposition. The stages of a criminal trial are examined in depth. The authority of law enforcement officials to arrest and/or detain a subject is reviewed. Constitutional, Federal, State, and Civil laws as they apply to this criminal process is presented. Victims' rights are examined.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504116 // 3 credits
Probation & Parole
Analyzes modern probation and parole practices and services; examines current probation procedures and the case law affecting those decisions; and reviews the advantages of community-based treatment, special programs, and the use of non-professionals. Through learning activities, students are exposed to a portion of the "daily life" of a probation & parole agent.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504128 // 3 credits
Telecommunications for Corrections
Prepares learners to embrace emergency communications as a profession; describe legal and ethical issues regarding telecommunicator responsibility and accountability; apply enhanced 911, computer-aided dispatch, and map reading techniques; apply proper call receiving guidelines; demonstrate effective emergency radio communications techniques; interpret police computer information system data; perform telecommunications record-keeping functions; demonstrate effective crisis management skills in techniques to alleviate stress in emergency communications; and perform simulated dispatch functions.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504132 // 3 credits
Advanced Relational Communications Skills
This course uses scenario-based instruction to prepare students in the use of specific techniques and processes that are required for effective communication in today's professional Criminal Justice professions. Emphasis is given to those communication skills that enhance professional interactions within the corrections field.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

CURRICULUM

Term		(18 credits)
10504128	Telecommunications for Corrections	3
10504192	Intro to Corrections	3
10504931	Communication Skills	3
10504932	Adult Supervision	3
10801136	English Composition I **-or-**	
10801195	Written Communication	3
10801198	Speech	3

Term		(18 credits)
10504112	Court Procedures	3
10504904	Juvenile Law	3
10504933	Correctional Report Writing	3
10504936	Emergency Procedures	3
10809143	Microeconomics **-or-**	
10809144	Macroeconomics	3
10809198	Intro to Psychology	3

Term		(17 credits)
10504110	Criminal Justice Service Readiness	2
10504116	Probation & Parole	3
10504144	Wellness in Corrections	3
10504930	Security Procedures	3
10806112	Principles of Sustainability	3
10809159	Abnormal Psychology	3

Term		(15 credits)
10504132	Advanced Relational Communications Skills	3
10504934	Correctional Law & Code	3
10504935	Corrections Summary Assessment	1
10504937	Juvenile Supervision	3
10809196	Intro to Sociology	3
	Elective	2

Total Credits 68

Please Note:

- The Criminal Justice-Corrections program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10504144 // 3 credits
Wellness in Corrections
Learners develop and apply the skills and abilities needed to deal constructively with stressors in the correctional field. Focus is on assessing individual stressors, analyzing the impact of stress, reducing stressors, and developing stress-coping mechanisms. Coping mechanisms include assertion, anger management, conflict resolution, time management, relaxation activities, and exercise and diet planning.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504192 // 3 credits
Intro to Corrections
This course examines the history and current trends of the correctional system in the United States. Students will analyze the changing philosophies of corrections and review the programs available to offenders at various stages of their involvement in the criminal justice system. Chain of command, management practices, personnel needs, types of offenders, organizational theories, policymaking, and the role of correctional personnel are addressed. Additional emphasis is placed on the role of the correctional employee and on effective management techniques to be utilized when working with offenders, including how to avoid manipulation.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504904 // 3 credits
Juvenile Law
Learners describe the juvenile justice system, describe the handling of cases of children in need of protection or services, describe the handling of cases of juveniles in need of protection or services or alleged to be delinquent, identify constitutional law issues that are relevant to juveniles, analyze the role of law enforcement in responding to child maltreatment, explain issues involved in investigating incidents of child victimization, intervene and apply appropriate investigative strategies, describe the roles of other agencies in child maltreatment cases, and recognize the unique investigative issues for missing children. This course consists of competencies and learning objectives from the following blocks of instruction from the Law Enforcement Standards Board 520 hour Law Enforcement Basic Training Curriculum. Juvenile Law - 8 hours and Child Maltreatment - 8 hours.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 or Criminal Justice-Corrections 105042 programs.

10504930 // 3 credits
Security Procedures
Demonstrate the steps involved in receiving and releasing inmates and maintaining security. Develop the skills needed for mitigation of hostage type situations. Topics include admission, release, and search procedures; use of jail locking and surveillance equipment; and inmate health management procedures.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504931 // 3 credits
Communication Skills
Apply correctional professional communication skills including mediation, arbitration, and crisis intervention in a correctional setting.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504932 // 3 credits
Adult Supervision
Practice supervision skills including positive behavior control, dispute resolution, and incident debriefing. Explore belief systems, social pressure, moral problems, decision-making, and the consequences of decisions.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504933 // 3 credits
Correctional Report Writing
Learn basic requirements, guidelines, and skills for proper and professional documentation of activities and incidents in a correctional setting.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504934 // 3 credits
Correctional Law & Code
Learn key concepts and principles underlying legal requirements for jail operations and guidelines for protecting the legal rights of inmates. Key issues covered include introduction to the role of the jail officer, rules and standards governing correctional operations, structure of the court system, overview of civil liability, and key constitutional rights of inmates.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504935// 1 credit
Corrections Summary Assessment
Refine previously learned skills and abilities by applying them to various case studies and simulated situations.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504936 // 3 credits
Emergency Procedures
Implement Principles of Subject Control (POSC) in a correctional environment with an emphasis on team tactics. Learners apply current fire science concepts to jail fire prevention and response, including search and rescue, fire suppression, and use of safety procedures.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504937 // 3 credits
Juvenile Supervision
Apply theories of adolescent development to develop strategies for effective supervision, protection, and discipline of juveniles.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

AFFORDABLE TUITION

CRIMINAL JUSTICE-LAW ENFORCEMENT

Program Code 10-504-1
2014-2015 Estimated Tuition and Fees: $9,903*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

Are you considering a challenging career in law enforcement? This program provides you with the fundamentals needed to enter the field of law enforcement. Prepare to meet the multitude of challenges in the performance of law enforcement duties. Emphasis is placed on professionalism, integrity, and quality work performance, with a significant focus on high ethical and moral standards.

You may be eligible to enter the law enforcement "Certification Track." Successful completion of the Certification Track provides the education and hands-on training required by the Wisconsin Law Enforcement Standards Board to become certifiable as a law enforcement officer.

Professional responsibilities of a Criminal Justice-Law Enforcement graduate may include methodical patrol duties, traffic control and accident investigation, criminal investigations, and crisis intervention. Some graduates choose to become involved in civilian law enforcement duties such as record and document maintenance and dispatch or communications center operations.

Anyone with a felony conviction or a domestic abuse conviction cannot become a law enforcement officer without a governor's pardon. A lengthy criminal history, mental illness, lack of physical fitness that prevents the applicant from performing essential job functions, or numerous moving traffic violations may hinder opportunities for employment.

The Criminal Justice-Law Enforcement program is offered at Wisconsin Rapids Campus.

Mission: The purpose of the Criminal Justice-Law Enforcement program is to provide education, training, and retraining in the field of law enforcement. The program is designed to enhance opportunities for securing employment, ensure that labor force skills remain abreast of rapidly changing advancements, and encourage the pursuit of further education.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Criminal Justice-Law Enforcement graduate, to be able to:

- Communicate effectively
- Conduct investigations
- Demonstrate professionalism
- Demonstrate tactical skills (applies to occupational certifications)
- Interact with others
- Manage emergencies
- Think critically

CAREER OPTIONS

Civilian Law Enforcement Employee
Conservation Enforcement
Correctional Officer
Deputy Sheriff
Homeland Security
Law Enforcement Officer
Park Ranger
Private Security
Public Defender Investigator
State Trooper
Telecommunicator

POTENTIAL FOR ADVANCEMENT

Administration
Drug Officer
Investigator
Safety Officer
Specialty Officer-Crime Prevention
Supervisor
Training Officer

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Criminal Justice-Law Enforcement program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function as a Law Enforcement Officer is available at mstc.edu/programs/criminal-justice-law-enforcement. It is the student's responsibility to notify the disability services coordinator in the Student Affairs Office to receive assistance.

PROGRAM PROGRESSION AND COMPLETION

In order to progress in and successfully complete the program, students must:

- Receive a grade of "C" or better in all courses required for graduation. Please note that the ability to repeat courses is dependent upon availability in courses.

PROGRAM COURSE DESCRIPTIONS

10504108 // 3 credits
Intro to Investigation Support Services
This course focuses on supportive aspects of law enforcement investigations. The course includes instruction in police photography, fingerprinting, latent fingerprint searching, developing, and lifting. Computer based composite sketching and crime scene sketching are introduced.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 program.

10504110 // 2 credits
Criminal Justice Service Readiness
This course is intended to assist students in their efforts to secure employment upon graduation. Students complete a basic resume, cover letter, interview thank-you letter, and a standard law enforcement or corrections application. Students also prepare for a criminal justice career interview and participate in a mock interview with current practitioners from law enforcement or corrections agencies.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 or Criminal Justice-Corrections 105042 programs.

10504125 // 2 credits
Patrol Procedures
Prepares students to demonstrate effective patrol techniques, utilize computer information as well as telecommunication systems available to police agencies. Respond safely and effectively to crime, crime victims, domestic abuse, and other mandatory arrest situations. React appropriately to disasters and hazardous materials situations. Students will be exposed to procedures and strategies used while conducting low and high-risk vehicle contacts.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 program.

10504130 // 3 credits
Traffic Theory II
This course includes basic operator training in RADAR speed measurement and law enforcement use of electronic control devices. National Highway Traffic Safety Administration (NHTSA) RADAR operator certification and Taser Corporation operator certification are optional for students who successfully meet the practical and written assessment requirements.
Prerequisites: Admission to Criminal Justice-Law Enforcement 105041 program and Traffic Theory 10504908.

10504151 // 2 credits
Tactical Application of Skills & Knowledge-Beginning
This course provides the opportunity for students to apply the beginning skills and knowledge learned in foundational criminal justice courses through reality-based training.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 program.

10504152 // 2 credits
Tactical Application of Skills & Knowledge-Intermediate
This course provides the opportunity for students to apply intermediate skills and knowledge learned in first and second semester criminal justice courses through reality-based training.
Prerequisites: Admission to Criminal Justice-Law Enforcement 105041 program and TASK & Knowledge-Beginning 10504151.

CURRICULUM

Term		(17 credits)
10504151	Tactical Application of Skills & Knowledge-Beginning	2
10504900	Introduction to Criminal Justice	3
10504902	Criminal Law	3
10504903	Professional Communications	3
10504905	Report Writing	3
10801136	English Composition I **-or-**	
10801195	Written Communication	3

Term		(16 credits)
10504108	Intro to Investigation Support Services	3
10504125	Patrol Procedures	2
10504152	Tactical Application of Skills & Knowledge-Intermediate	2
10504904	Juvenile Law	3
10801198	Speech	3
10809172	Introduction to Diversity Studies	3

Term		(18 credits)
10504110	Criminal Justice Service Readiness	2
10504153	Tactical Application of Skills & Knowledge-Advanced	2
10504906	Criminal Investigation Theory	3
10504907	Community Policing Strategies	3
10504908	Traffic Theory	3
10806112	Principles of Sustainability	3
	Elective	2

Term		(17 credits)
10504130	Traffic Theory II	3
10504154	Tactical Application of Skills & Knowledge-Capstone	2
10504901	Constitutional Law	3
10809143	Microeconomics **-or-**	
10809144	Macroeconomics	3
10809196	Intro to Sociology	3
10809198	Intro to Psychology	3

Total Credits 68

Please Note:

- The Criminal Justice-Law Enforcement program has an August start date. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10504153 // 2 credits
Tactical Application of Skills & Knowledge-Advanced
This course provides the opportunity for students to apply the advanced skills and knowledge learned in the first three semesters of the criminal justice program through reality-based training.
Prerequisites: Admission to Criminal Justice-Law Enforcement 105041 program and TASK-Intermediate 10504152.

10504154 // 2 credits
Tactical Application of Skills & Knowledge-Capstone
This course provides the opportunity for students to apply all the skills and knowledge learned throughout the four semesters of the criminal justice-law enforcement program through reality-based training.
Prerequisites: Admission to Criminal Justice-Law Enforcement 105041 program and TASK-Advanced 10504153.

10504900 // 3 credits
Introduction to Criminal Justice
Learners distinguish between the roles between the roles and functions of courts with jurisdiction in Wisconsin; differentiate between the roles and functions of federal, state, and local law enforcement agencies; apply professional principles as a law enforcement officer; determine modern police functions and policies from an historical perspective; identify the role of law enforcement officers in American society; utilize a decision-making model; identify the characteristics of a good decision maker; describe how professionalism, ethics, and moral standards relate to a law enforcement career; practice a code of behavior; incorporate ethical decision-making strategies; describe how decisions are made; enhance an officer's critical thinking and police problem solving skills; apply principles of critical thinking, decision-making, and problem solving; identify required law enforcement policies; defend the importance of written agency policies; and distinguish between "ministerial" and "discretionary" duties. This course consists of competencies and learning objectives from the following blocks of instruction from the Law Enforcement Standards Board 520 hour Law Enforcement Basic Training Curriculum: Professional Orientation - 4 hours; Policing in a Free Society - 4 hours; Ethics - 10 hours; Critical Thinking and Problem Solving - 10 hours; and Agency Policy - 2 hours.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 program.

10504901 // 3 credits
Constitutional Law
Learners diagram the structure of structure of the criminal justice system, identify situations where constitutional rules are applicable, identify situations where an officer may use reasonable suspicion to contact a subject, identify the elements of a lawful arrest, identify search-related activities where the 4th amendment is not applicable, identify the requirements that pertain to search warrants, analyze situations where an officer may conduct a search without a warrant, compare the requirements for conducting routine searches with those for searching disabled persons and strip searches, identify the requirements of the laws governing confessions and statements, and analyze the various requirements that evidence must meet before it can be admitted in court. This course consists of competencies and learning objectives from the following blocks of instruction from the Law Enforcement Standards Board 520 hour Law Enforcement Basic Training Curriculum: Constitutional Law - 30 hours.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 program.

10504902 // 3 credits
Criminal Law
Learners identify basic concepts of criminal law; analyze facts, circumstances, and situations to determine which crimes against persons and property have been committed; and determine which crimes involving drugs, alcohol, or other criminal activity have been committed. This course consists of competencies and learning objectives from the following block of instruction from the Law Enforcement Standards Board 520 hour Law Enforcement Basic Training Curriculum: Crimes - 12 hours.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 or Criminal Justice-Corrections 105042 programs.

10504903 // 3 credits
Professional Communications
Learners apply knowledge of the communication process, apply communication techniques, integrate verbal and physical intervention skills, develop strategies to obtain information in a variety of situations, differentiate between interview and interrogation, and analyze information for consideration as corroborative evidence. This course consists of competencies and learning objectives from the following blocks of instruction from the Law Enforcement Standards Board 520 hour Law Enforcement Basic Training Curriculum. Professional Communication - 24 hours and Interview and Interrogation - 6 hours.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 program.

10504904 // 3 credits
Juvenile Law
Learners describe the juvenile justice system, describe the handling of cases of children in need of protection or services, describe the handling of cases of juveniles in need of protection or services or alleged to be delinquent, identify constitutional law issues that are relevant to juveniles, analyze the role of law enforcement in responding to child maltreatment, explain issues involved in investigating incidents of child victimization, intervene and apply appropriate investigative strategies, describe the roles of other agencies in child maltreatment cases, and recognize the unique investigative issues for missing children. This course consists of competencies and learning objectives from the following blocks of instruction from the Law Enforcement Standards Board 520 hour Law Enforcement Basic Training Curriculum. Juvenile Law - 8 hours and Child Maltreatment - 8 hours.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 or Criminal Justice-Corrections 105042 programs.

10504905 // 3 credits
Report Writing
Learners explain the context of report the context of report writing, take effective field notes, organize information in reports, write narratives, describe what information should be included in certain types of reports, prepare for court, describe how to be an effective witness, and testify as a witness in court. This course consists of competencies and learning objectives from the following blocks of instruction from the Law Enforcement Standards Board 520 hour Law Enforcement Basic Training Curriculum. Report Writing - 22 hours and Testifying in Court - 8 hours.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 program.

10504906 // 3 credits
Criminal Investigation Theory
Learners describe the role evidence plays in criminal investigations and prosecutions; apply the steps for processing crime scenes; apply appropriate strategies to locate, handle, and package evidentiary items; document the crime scene; recognize the unique investigative issues for crimes against life; apply appropriate strategies to secure the scene, collect and preserve evidence, and investigate a death; recognize the dynamics of victimization; apply knowledge of the definitions and responsibilities for law enforcement; apply appropriate interview techniques with adult or child victims; analyze the role of law enforcement in responding to domestic abuse; intervene and apply appropriate investigative strategies; respond to an officer-involved domestic violence incident; analyze the role of law enforcement in responding to sexual abuse; demonstrate investigative techniques in a simulated sexual assault case; and identify other resources that can assist in sexual assault cases. This course consists of competencies and learning objectives from the following blocks of instruction from the Law Enforcement Standards Board 520 hour Law Enforcement Basic Training Curriculum. Physical Evidence Collection - 8 hours; Victims - 8 hours; Domestics - 12 hours; and Sexual Assault - 12 hours.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 program.

10504907 // 3 credits
Community Policing Strategies
Learners identify local community resources, describe the role of an advocacy group in the criminal justice community, demonstrate cultural self-awareness, interpret state and federal laws related to discrimination and diversity, utilize appropriate skills for interacting effectively and professionally with persons from culturally diverse backgrounds and lifestyles, identify and implement personal strategies that take into account cultural differences, identify the types of situations and the characteristics of individuals that are likely to be encountered in crisis management situations, apply Wisconsin statutory requirements and general guidelines regarding emergency detentions and emergency protective placements of persons, identify key concepts and elements associated with law enforcement response to people in crisis, apply crisis intervention principles and techniques, articulate the decision-making process taken to manage persons in crisis, incorporate community policing strategies into the community, illustrate problem-oriented policing strategies, evaluate other policing strategies, and apply principles of crime analysis and prevention. This course consists of competencies and learning objectives from the following blocks of instruction from the Law Enforcement Standards Board 520 hour Law Enforcement Basic Training Curriculum. Community Resources - 2 hours, Cultural Competence - 8 hours, Crisis Management - 16 hours, and Policing Strategies - 16 hours.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 program.

10504908 // 3 credits
Traffic Theory
Learners identify local community resources, describe the role of an advocacy group in the criminal justice community, demonstrate cultural self-awareness, interpret state and federal laws related to discrimination and diversity, utilize appropriate skills for interacting effectively and professionally with persons from culturally diverse backgrounds and lifestyles, identify and implement personal strategies that take into account cultural differences, identify the types of situations and the characteristics of individuals that are likely to be encountered in crisis management situations, apply Wisconsin statutory requirements and general guidelines regarding emergency detentions and emergency protective placements of persons, identify key concepts and elements associated with law enforcement response to people in crisis, apply crisis intervention principles and techniques, articulate the decision-making process taken to manage persons in crisis, incorporate community policing strategies into the community, illustrate problem-oriented policing strategies, evaluate other policing strategies, and apply principles of crime analysis and prevention. This course consists of competencies and learning objectives from the following blocks of instruction from the Law Enforcement Standards Board 520 hour Law Enforcement Basic Training Curriculum. Community Resources - 2 hours, Cultural Competence - 8 hours, Crisis Management - 16 hours, and Policing Strategies - 16 hours.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 program.

DIESEL & HEAVY EQUIPMENT TECHNICIAN

Program Code 32-412-1
2014-2015 Estimated Tuition and Fees: $10,166*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The Diesel & Heavy Equipment Technician program helps you develop the skills you need to be successful in the on- and off-road service industry. Learn to locate and repair mechanical and electrical problems in trucks, buses, construction equipment, farm equipment, and industrial machinery.

Training emphasis is in diesel engine rebuilding, fuel injection systems, chassis and suspension systems, brakes, and electrical systems. You will learn to perform preventive maintenance and troubleshooting procedures, rebuild components, and respond to field service calls.

The Diesel & Heavy Equipment Technician program is offered at Wisconsin Rapids Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Diesel & Heavy Equipment Technician graduate, to be able to:

- Practice safe working procedures
- Diagnose, service, and repair diesel powered equipment
- Comply with federal, state, and local regulations
- Proficiently operate tools and equipment common to the industry
- Diagnose, service, and repair electrical systems
- Apply theoretical concepts to mechanical, electrical, and hydraulic repair

CAREER OPTIONS

Agricultural Machinery Technician
Auto Technician
Chassis Repair Technician
Construction and Heavy Equipment Technician
Diesel or Heavy Equipment Technician
Engine Repair Technician
Fleet Maintenance Technician
Heavy Equipment Parts Salesperson
Industrial Equipment Technician

POTENTIAL FOR ADVANCEMENT

Diesel Equipment Superintendent
Equipment Sales and Repair
Field Service Representative
Sales Representative
Shop Supervisor
Specialist-Electrical and Hydraulic
Specialist-Engines, Transmissions-Differentials, Brakes-Alignment
Truck/Auto Dealer
Truck Fleet Supervisor

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Diesel & Heavy Equipment Technician program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

Protective Clothing
Students are required to wear school uniform shirts while working in the Diesel Shop. Uniform shirts can be purchased from the Wisconsin Rapids Campus Bookstore. Students are also required to provide and wear leather work shoes with oil-resistant soles.

PROGRAM COURSE DESCRIPTIONS

10605108 // 2 credits
Intro to Electronics
This course presents a survey of electricity and electronics which includes lab activities and is designed for persons wishing to learn some of the basics of electricity and electronics. It is an excellent refresher course to get back into electronics or improve a skills list. The course is intended for persons where electronics has become a part of their regular occupation and a need exists to identify various electronic components and perform basic tests using test equipment such as multimeters and oscilloscopes. The course covers concepts and applications of DC and AC electricity, semiconductor components, and digital devices using basic math skills.

10462114 // 3 credits
Metals & Machining
A two-part class which introduces the basics of metal science and machine shop practice. Metallurgical concepts of steel and iron production, properties of metals, testing of metals, carbon and its rule, heat-treating, steel designations, and cast iron and non-ferrous metals are introduced. Students will participate in lab exercises examining the properties of metal, an introduction to machine shop practices of safety, measurement, and machining through the use of hand tools, drilling machines, saws, and engine lathes. Students will be introduced to these concepts by both classroom presentation and hands-on shop experiences.
Prerequisite: Admission to Automotive Technician 324042, Diesel & Heavy Equipment Technician 324121, Industrial Mechanical Technician 104621, Instrumentation & Controls Engineering Technology 106054, Solar Electric Technician 104822, or Welding 314421 programs.

10462116 // 3 credits
Metal Fabrication
An introduction to structural steel and plate fabrication, sheet metal fabrication, and basic electric arc and oxyacetylene welding. Fabrication techniques, metal selection, layout, cutting, bending, drilling, threading, and joining will be presented. Information will be presented to the student followed by lab activities to provide a hands-on experience. The emphasis will be placed on developing an understanding of the tools, techniques, safe work habits, and the application of metal fabrication skills.
Prerequisite: Admission to Automotive Technician 324042, Diesel & Heavy Equipment Technician 324121, Industrial Mechanical Technician 104621, Instrumentation & Controls Engineering Technology 106054, Machine Tool Technician 324201, Solar Electric Technician 104822, Sustainable Heating & Cooling Technician 104831, or Welding 314421 programs.

10462121 // 3 credits
Mobile Hydraulics Repair
Designed for students required to take a course on hydraulics found in diesel technology and heavy equipment programs. This class takes a practical approach to the understanding of fluid power / hydraulic systems. Instead of concentrating on the design issues of fluid power systems this class approaches hydraulics more like a technician would approach a system that requires maintenance or troubleshooting. Nearly all aspiring technicians receive training in this subject, which is one of seven areas of study recognized by NATEF in diesel technology. Coverage includes a study of terminology, industrial standards, symbols, and basic circuitry design as related to fluid power. Examples are drawn from actual equipment that is relevant to the program of study, whether it be heavy truck, earth-moving, or agricultural equipment.

CURRICULUM

Term		(17 credits)
10605108	Intro to Electronics	2
10804107	College Mathematics	3
32404375	Service Practices in Transportation Industry	2
32412308	Braking Systems-Diesel	5
32412309	Suspension & Steering Systems	5

Term		(15 credits)
10462114	Metals & Machining	3
32412305	Preventive Maintenance-Diesel	1
32412311	Advanced Electricity-Diesel	5
32412313	Electrical Systems	5
32412320	Hybrid Systems-Diesel	1

Term		(18 credits)
10462116	Metal Fabrication	3
10462121	Mobile Hydraulics Repair	3
31809351	Applied Human Relations	2
32412310	Engine Performance-Diesel	5
32412327	Fuel Systems & Emissions	5

Term		(17 credits)
31801351	Occupational Communication	2
32412303	Heating / AC - Diesel	3
32412312	Drive Trains	5
32412324	Engine Repair	5
32806351	Applied Science	2

Total Credits 67

Please Note:
- The Diesel & Heavy Equipment Technician program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

32404375 // 2 credits
Service Practices in Transportation Industry
This course introduces the student to common tools, terminology, and service practices in the transportation service field. Safety, environmental concerns, and basic customer relations will also be covered. Service shop management practices and the use of automated work order, parts ordering, and time management concepts are included.
Prerequisite: Admission to Automotive Technician 324042 or Diesel & Heavy Equipment Technician 324121 programs.

32412303 // 3 credits
Heating / AC – Diesel
This course introduces students to the theory and operation of the heating and air conditioning systems found in the transportation, farm, and heavy equipment industries. Students learn how to inspect, diagnose, and repair heat and air conditioning systems found in their field. Students have the opportunity to acquire their state of Wisconsin HVAC certification through a written test and hands on evaluation. This class offers experience in installation, operation, and repair of auxiliary power units found on today's modern trucks. Not only will students learn about heating and air conditioning for operator comfort, they also have the opportunity to learn how to inspect, service, and repair refrigerated units found on today's semi trailers and shipping containers.
Prerequisite: Admission to Diesel & Heavy Equipment Technician 324121 program.

32412305 // 1 credit
Preventive Maintenance-Diesel
This course provides an introduction to vehicle preventive maintenance and inspection. The focus will be on maintaining and inspecting the engine system, cab and hood, electrical and electronics, and frame and chassis components. Students learn how to properly service vehicle systems and perform a visual inspection of all vehicle components. Students also learn how to properly document all maintenance and inspection findings.

32412308 // 5 credits
Braking Systems-Diesel
Fundamentals of vehicle braking systems including drum and disc on hydraulic and air systems are studied. Power and anti-skid systems are included with emphasis on troubleshooting and component replacement and reconditioning.
Prerequisite: Admission to Diesel & Heavy Equipment Technician 324121 program.

32412309 // 5 credits
Suspension & Steering Systems
Highlighted in this course will be an analysis of construction and working principles of chassis components. Included is frames, suspension systems, steering gears and linkages, wheels and tires, and wheel alignment. Special attention is given to products used in servicing chassis components.
Prerequisite: Admission to Diesel & Heavy Equipment Technician 324121 program.

32412310 // 5 credits
Engine Performance-Diesel
This course provides an introduction to ignition systems, fuel systems, air induction systems, exhaust systems, emission control systems, and engine electrical systems. Course emphasis includes the proper diagnosis and repair of system components as related to the truck, construction, and heavy equipment industry. A review of engine operation and related servicing are also provided.
Prerequisite: Admission to Diesel & Heavy Equipment Technician 324121 program.

32412311 // 5 credits
Advanced Electricity-Diesel
This course provides advanced training in the theory, operating principles, diagnosis, and repair of vehicle electronic/electrical systems. Emphasis includes vehicle ignition, starting, charging, and lighting system problem diagnosis and repair as related to the truck, construction, and heavy equipment industries.
Prerequisite: Admission to Diesel & Heavy Equipment Technician 324121 program.

32412312 // 5 credits
Drive Trains
The course provides training in the proper diagnosis and repair of clutches, manual transmissions, drive shafts and universal joints, and drive axles. Coverage of track-type vehicle service will also be included. Diagnostic and service procedures will apply to the truck, construction, and heavy equipment industries.
Prerequisite: Admission to Diesel & Heavy Equipment Technician 324121 program.

32412313 // 5 credits
Electrical Systems
This is the study of construction, function, and principles of operation of starting motors, charging systems, and controls. Basic electronics including capacitance, inductance, series and parallel circuits, magnetism and Ohm's Law, wiring schematics, soldering techniques, and use of diagnostic equipment are covered. Vehicle control and accessory systems are studied.
Prerequisite: Admission to Diesel & Heavy Equipment Technician 324121 program.

32412320 // 1 credit
Hybrid Systems-Diesel
This course covers basic vehicle propulsion systems within hybrid electric vehicle (HEV) context with a focus on application, integration, testing, and development of battery systems. Course topics include the following: vehicle and powertrain systems requirements, regulations, design, energy storage, model based design, and control. HEV high voltage sub-systems are reviewed including electrical drive systems, electric machines, batteries, and their safety aspects.

32412324 // 5 credits
Engine Repair
This course provides a general overview of engine types and operating characteristics. Course emphasis includes the diagnosis and repair of cylinder heads, valve train components, and engine blocks and related components. Engine support systems such as the lubrication systems, cooling system, ignition system, fuel, and exhaust systems are also covered. *Prerequisite: Admission to Diesel & Heavy Equipment Technician 324121 program.*

32412327 // 5 credits
Fuel Systems & Emissions
This course provides a detailed coverage of the principles of operation, the components, and diagnostic procedures for modern diesel engines. Emission control systems is included. Course emphasis includes fuel injection and pump timing procedures. *Prerequisite: Admission to Diesel & Heavy Equipment Technician 324121 program.*

EARLY CHILDHOOD EDUCATION

Program Code 10-307-1
2014-2015 Estimated Tuition and Fees: $9,647*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

As the demand for well-trained, early childhood professionals grows, the need for qualified teachers becomes more important. In the Early Childhood Education program, you will learn of the physical, emotional, intellectual, and social development of children. You will work with teachers in early childhood educational settings. This program helps you learn to recognize typical and exceptional patterns of growth through observation, screening, and assessment for infants, toddlers, preschoolers, and school age children. Additionally, the teaching cycle is used to develop creative and educational activities. The Wisconsin Model Early Learning Standards and the Wisconsin Pyramid Model certificates are embedded in coursework.

You will learn and practice skills that will help you become employable as a child care teacher in group and family child care centers and preschools, or as a teacher aide in public or private kindergartens, special education classes, and primary classrooms. You may also find opportunities as an Early Head Start teacher.

Students enrolling in the Early Childhood Education program will have the opportunity to complete coursework towards specific registry credentials. Classes are offered for those students working towards their credential in Preschool, Infant/Toddler, Inclusion, and Administration. Other credential courses will be offered on a rotating basis.

Students enrolled in practicum courses will combine classroom learning experiences with eight or more hours per week of practical experience in local early childhood centers working with children from infancy through school age.

The Early Childhood Education daytime program is offered at Stevens Point Campus. Evening program courses are available on a rotating basis in Marshfield, Stevens Point, and Wisconsin Rapids for the employed early childhood professional.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as an Early Childhood Education graduate, to be able to:

- Apply child development theory to practice
- Cultivate relationships with children, family, and the community
- Assess child growth and development
- Use best practices in teaching and learning
- Demonstrate professionalism
- Integrate health, safety, and nutrition practices

CAREER OPTIONS

Child Care Center Teacher
Early Head Start Teacher
Family Day Care Provider
Teacher Aide-Elementary School
(4 and 5 year old Kindergarten)
Teacher Aide-Exceptional Education Program
Teacher Aide-Head Start
Teacher or Teacher Aide in a
Pre-School Program

POTENTIAL FOR ADVANCEMENT

Child Care Center Administrator
Child Care Center Owner
Enroll in a bachelor's degree program to become a DPI Certified Teacher

Potential advancement generally requires further education.

ADMISSIONS REQUIREMENTS

To apply to the Early Childhood Education program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options.

   To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.
4. Submit the Criminal Background Statement of Understanding and Release of Information form.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function as an Early Childhood Education provider is available by contacting the program associate dean. It is the student's responsibility to notify the disability services coordinator in the Student Affairs Office to receive assistance.

PROGRAM PROGRESSION AND COMPLETION

The following requirement must be met in order to progress in the Early Childhood Education program:

A Criminal Background Check (CBC) through the Wisconsin Department of Justice and Wisconsin Department of Health Services/Department of Children and Families/Bureau of Regulation and Licensing must show no record of crimes that would prevent persons from being employed in an early childhood setting licensed by the Department of Health Services/Department of Children and Families/Bureau of Regulation and Licensing. A current list of crimes prohibiting one from being licensed to care for children in Wisconsin can be found at http://dcf.wisconsin.gov/childcare/licensed/pdf/2010_02_crimes_list.pdf.

In order to progress in and successfully complete the program, students must:

- Repeat courses not completed with a "C" or better prior to progressing in course courses or other courses with co- or prerequisites.
- Receive a grade of "C" or better in all courses required for graduation.

Please note that the ability to repeat course is dependent upon availability in all courses. Students may be required to apply for program re-entry in order to repeat course within the program's instructional area.

PRACTICUM RELATED REQUIREMENT

Prior to placement at a practicum site, students need to pay for a criminal background check and provide documentation of required health work to the Mid-State Technical College Early Childhood Education program coordinator.

Practicum sites have the right to refuse a student's placement based on inadequate health records, pending charges, or conviction records. Students with a criminal history may not be able to complete practicum courses. MSTC will make two attempts to place a student in an appropriate practicum experience. If MSTC is unable to place the student after two attempts, the student will be withdrawn from the practicum course and will not be able to advance in the program. Contact the program counselor for more details.
Prior to beginning a practicum experience students must:

a. Provide evidence of current CPR, including infant and toddler.
b. Complete Shaken Baby Syndrome, SIDS, and Child Abuse and Prevention Training.
c. Complete form DCF/F(CFS/0054) Staff Health Report-Child Care Provider (revision date R02/2009).
d. Successfully complete Wisconsin Model Early Learning Standards (WMELS) prior to enrollment in Practicums 2, 3, and 4.
e. Meet the identified Functional Abilities necessary to be successful in practicum placement.

PROGRAM COURSE DESCRIPTIONS

10307148 // 3 credits
Foundations of Early Childhood Education
This three-credit course introduces you to the early childhood profession. Course competencies include: integrate strategies that support diversity and anti-bias perspectives, investigate the history of early childhood education, examine regulatory requirements for early childhood education programs in WI, summarize types of early childhood education settings, identify the components of a quality early childhood education program, summarize responsibilities of early childhood education professionals, and explore early childhood curriculum models.

CURRICULUM

Term		(21 credits)
10307148	Foundations of Early Childhood Education	3
10307151	Infant & Toddler Development	3
10307167	Health, Safety, & Nutrition	3
10307174	Practicum 1	3
10801136	English Composition I **-or-**	
10801195	Written Communication	3
10801198	Speech	3
10809172	Introduction to Diversity Studies	3

Term		(15 credits)
10307178	Art, Music, & Language Arts	3
10307188	Guiding Children's Behavior	3
10307192	Practicum 2	3
10804107	College Mathematics	3
10809196	Intro to Sociology	3

Term		(18 credits)
10307179	Child Development	3
10307187	Children with Differing Abilities	3
10307194	Math, Science, & Social Studies	3
10307197	Practicum 3	3
10809198	Intro to Psychology	3
	Elective	3

Term		(15 credits)
10307166	Curriculum Planning	3
10307195	Family & Community Relationships	3
10307198	Administering an Early Childhood Education Program	3
10307199	Practicum 4	3
10809144	Macroeconomics	3

Total Credits 69

Please Note:
- The Early Childhood Education program has an August start date. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10307151 // 3 credits
Infant & Toddler Development
In this three-credit course you will study infant and toddler development as it applies to an early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives, analyze development of infants and toddlers (conception to three years), correlate prenatal and postnatal conditions with development, summarize child development theories, analyze the role of heredity and the environment, examine culturally and developmentally appropriate environments for infants and toddlers, examine the role of brain development in early learning (conception through age three), and examine caregiving routines as curriculum.

10307166 // 3 credits
Curriculum Planning
This three-credit course examines the components of curriculum planning in early childhood education. Course competencies include: integrate strategies that support diversity and anti-bias perspectives, examine the critical role of play as it relates to curriculum planning, establish a developmentally appropriate environment, integrate Developmentally Appropriate Practice (DAP) into curriculum, develop activity plans that promote child development and learning, develop curriculum plans that promote child development and learning across all content areas, and analyze early childhood curriculum models.
Prerequisite: Art, Music, & Language Arts 10307178 or Math, Science, & Social Studies 10307194.

10307167 // 3 credits
Health, Safety, & Nutrition
This three-credit course examines the topics of health, safety, and nutrition within the context of the early childhood educational setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; follow governmental regulations and professional standards as they apply to health, safety, and nutrition; provide a safe early childhood program; provide a healthy early childhood program; provide a nutritionally sound early childhood program; adhere to child abuse and neglect mandates; apply Sudden Infant Death Syndrome (SIDS) risk reduction strategies; apply strategies to prevent Shaken Baby Syndrome (SBS); and incorporate health, safety, and nutrition concepts into the children's curriculum.

10307174 // 3 credits
Practicum 1
In this three-credit practicum course you will learn about and apply the course competencies in an actual child care setting. The course competencies include: document children's behavior; explore the standards for quality early childhood education; explore strategies that support diversity and anti-bias perspectives; implement activities developed by the co-op teacher/instructor/student; demonstrate professional behaviors; practice caregiving routines as curriculum; practice positive interpersonal skills with children and adults; analyze how WI Early Learning Standards provide a framework of guiding principles, developmental expectations, and program and performance standards to delineate the five developmental domains that embody delivery of quality education and care to young children; incorporate WI Early Learning Standards with the principles of developmentally appropriate practice, intentionality, and the teaching cycle to examine child development; evaluate program integration of WI Early Learning Standards into the teaching cycle of ongoing assessment, planning and curriculum goals, and implementation; identify specific goals and learning and assessment activities to promote the development of a focus child utilizing the WI Early Learning Standards; and develop a plan for child learning utilizing the performance standards, developmental continuum, and developmental domains from the WI Model Early Learning Standards that is based on experiential learning.
Prerequisite: Admission to Early Childhood Education 103071 program. Students must meet the state administrative code requirements to be in an Early Childhood Education setting (including both prior coursework and Caregiver Background Check). The CBC will be processed by the Early Childhood Education program coordinator prior to the student being eligible to participate in the Practicum 1 field experience.

10307178 // 3 credits
Art, Music, & Language Arts
This three-credit course focuses on beginning level curriculum development in the specific content areas of art, music, and language arts. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; examine the critical role of play as it relates to art, music, and language arts; establish a developmentally appropriate environment for art, music, and language arts; develop activity plans that promote child development and learning; analyze caregiving routines as curriculum; create developmentally appropriate language, literature, and literacy activities; create developmentally appropriate art activities; and create developmentally appropriate music and movement activities.

10307179 // 3 credits
Child Development
This three-credit course examines child development within the context of the early childhood education setting. Course competencies include: analyze social, cultural, and economic influences on child development; summarize child development theories; analyze development of children age three through age eight; summarize the methods and designs of child development research; analyze the role of heredity and the environment; and examine the role of brain development in early learning (ages 3-8).

10307187 // 3 credits
Children with Differing Abilities
This three-credit course focuses on the child with differing abilities in an early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; provide inclusive programs for young children; apply legal and ethical requirements including, but not limited to, ADA and IDEA; work collaboratively through the consultation process to embed intervention in natural based settings; differentiate between typical and exceptional development; analyze the differing abilities of children with physical, cognitive, health/medical, communication, and/or behavioral/emotional disorders; work collaboratively with community

and professional resources; utilize an individual educational plan (IEP/IFSP) for children with developmental differences; adapt curriculum to meet the needs of children with developmental differences; and cultivate partnerships with families who have children with developmental differences.

10307188 // 3 credits
Guiding Children's Behavior
This three-credit course examines positive strategies to guide children's behavior in the early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives, summarize early childhood guidance principles, analyze factors that affect the behavior of children, practice positive guidance strategies, develop guidance strategies to meet individual needs, and create a guidance philosophy. This course meets the requirements for the Pyramid Model training.
Prerequisite: Child Development 10307179 or consent of instructor or associate dean.

10307192 // 3 credits
Practicum 2
In this three-credit practicum course you will learn about and apply the course competencies in an actual child care setting. The course competencies include: identify children's growth and development; maintain the standards for quality early childhood education; practice strategies that support diversity and anti-bias perspectives; implement student teacher-developed activity plans; identify the elements of a developmentally appropriate environment; implement positive guidance strategies; demonstrate professional behaviors; utilize caregiving routines as curriculum; utilize positive interpersonal skills with children; and utilize positive interpersonal skills with adults.
Prerequisites: Admission to Early Childhood Education 103071 program and Practicum 1 10307174.

10307194 // 3 credits
Math, Science, & Social Studies
This three-credit course focuses on beginning level curriculum development in the specific content areas of math, science, and social studies. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; examine the critical role of play as it relates to math, science, and social studies; establish a developmentally appropriate environment for math, science, and social studies; develop activity plans that promote child development and learning; create developmentally appropriate science activities; create developmentally appropriate math activities; and create developmentally appropriate social studies activities.
Prerequisite: Art, Music, & Language Arts 10307178 or Child Development 10307179.

10307195 // 3 credits
Family & Community Relationships
In this three-credit course you will examine the role of relationships with family and community in early childhood education. Course competencies include: implement strategies that support diversity and anti-bias perspectives when working with families and community; analyze contemporary family patterns, trends, and relationships; utilize effective communication strategies; establish ongoing relationships with families; advocate for children and families; and work collaboratively with community resources.

10307197 // 3 credits
Practicum 3
In this three-credit practicum course you will learn about and apply the course competencies in an actual child care setting. Course competencies include: assess children's growth and development; implement the standards for quality early childhood education; integrate strategies that support diversity and anti-bias perspectives; build meaningful curriculum; provide a developmentally appropriate environment; facilitate positive guidance strategies; evaluate one's own professional behaviors and practices; lead caregiving routines as curriculum; utilize positive interpersonal skills with children; and utilize positive interpersonal skills with adults.
Prerequisites: Admission to Early Childhood Education 103071 program and Practicum 2 10307192. Students must meet the state administrative code requirements to be in an Early Childhood Education setting (including both prior coursework and Caregiver Background Check). The CBC will be processed by the Early Childhood Education program coordinator prior to the student being eligible to participate in the Practicum 3 field experience. See additional information outlined in the MSTC Student Catalog regarding Practicum requirements.

10307198 // 3 credits
Administering an Early Childhood Education Program
This three-credit course focuses on the administration of an early childhood education program. Course competencies include: integrate strategies that support diversity and anti-bias perspectives, analyze the components of an ECE facility, design an ECE program, analyze the aspects of personnel supervision, outline financial components of an ECE program, apply laws and regulations related to an ECE facility, and advocate for the early childhood profession.
Prerequisite: Completion of 12 Early Childhood (307) credits.

10307199 // 3 credits
Practicum 4
In this three-credit practicum course you will learn about and apply the course competencies in an actual child care setting. Course competencies include: analyze children's growth and development based on assessment; integrate strategies that support diversity and anti-bias perspectives; promote professional behaviors and practices; implement meaningful curriculum; create respectful, reciprocal relationships; evaluate early childhood education programs for quality; and explore professional options in early childhood education.
Prerequisite: Practicum 3 10307197.

ELECTRICAL POWER ENGINEERING TECHNICIAN

Program Code 10-605-5
2014-2015 Estimated Tuition and Fees: $10,510*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

Electrical power engineering is critical to maintaining the infrastructure and health of the nation. Students review fossil, hydro, and nuclear energy sources that supply energy to prime movers and generators. Prime movers are commonly combustion, steam, or hydroelectric turbines. Learn the principles of high voltage energy transmission and how to analyze instrument readings and maintain energy distribution systems.

You will learn how to determine the location of equipment, design wiring layouts, establish the routing of new power lines, and specify materials. You will also learn about wire capacity and sag, guying, support structures, insulators, lightning arresters, switches, circuit breakers, and troubleshooting procedures. Plant loads, lighting, above and below ground systems, transformers, grounding practices, relaying, and protection will also be covered.

The Electrical Power Engineering Technician program is offered at Wisconsin Rapids Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as an Electrical Power Engineering Technician graduate, to be able to:

- Demonstrate safe work practices around electrical power systems, whether self-directed or operating as part of a team
- Interpret and comply with relevant codes, regulations, and standards
- Identify various electrical power sources and differentiate operational characteristics
- Assess and describe operation of integrated electrical power delivery systems
- Apply power measurement, monitoring, and recording techniques, and explain output

CAREER OPTIONS

Distribution Estimator
Engineering Technician
First Class Meter Person
Instrument Technician
Nuclear Equipment Attendant
Power Plant Operator
Research Lab Technician
Transmission Design Technician

POTENTIAL FOR ADVANCEMENT

Distribution System Designer
District Manager
Electrical Maintenance Supervisor
Engineer Assistant

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Electrical Power Engineering Technician program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 65
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, colleges or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

PROGRAM COURSE DESCRIPTIONS

10480100 // 2 credits
Alternative Energy Overview
In this course, students investigate the need for renewable energy systems and emerging careers in renewable energy. Students examine the basic design, function, cost, and other considerations associated with various "green" energy systems, including solar photovoltaic, solar thermal, wind, geothermal, and biomass. Students also explore the production and use of alternative transportation fuels.

10605105 // 3 credits
Electrical Circuits I
An introduction to AC/DC electricity and the physical laws that apply to electronic circuits. Direct Current (DC) covers basic definitions of voltage, current, and resistance and analysis of series and parallel resistive circuits. Alternating Current (AC) includes an introduction to AC generation, capacitors, inductors, and transformers and their applications in electronic circuits. Approximately 50% of the course is spent in the laboratory applying the principles and theory presented in the classroom.
Corequisite: Intermediate Algebra with Applications 10804118.

10605108 // 2 credits
Intro to Electronics
This course presents a survey of electricity and electronics which includes lab activities and is designed for persons wishing to learn some of the basics of electricity and electronics. It is an excellent refresher course to get back into electronics or improve a skills list. The course is intended for persons where electronics has become a part of their regular occupation and a need exists to identify various electronic components and perform basic tests using test equipment such as multimeters and oscilloscopes. The course covers concepts and applications of DC and AC electricity, semiconductor components, and digital devices using basic math skills.

10605110 // 3 credits
Electrical Circuits II
This course continues the study of AC/DC circuits started in Electrical Circuits I. Advanced DC circuit analysis techniques such as Thevenin's Theorem and Node analysis are introduced. AC circuit analysis includes discussion on voltage and power theorems used in the analysis of circuits consisting of both resistance and reactance. The complex plane and construction of phase diagrams are also discussed. The course concludes with an introduction to electronic filter circuits used in transmission and communication equipment. Approximately 50% of the course is spent in the laboratory applying the principles and theory presented in the classroom.
Prerequisite: Electrical Circuits I 10605105 with a grade of "C" or better. Corequisite: Trigonometry with Applications 10804196.

10605115 // 3 credits
Basic Electronics
Presents semi-conductor principles with emphasis on practical applications. After reviewing diode and transistor characteristics, bias stabilizing techniques are studied, followed by an introduction to transistor amplifiers.
Corequisite: Electrical Circuits II 10605110.

10605117 // 3 credits
Programmable Logic Controllers-Beginning
An overview of programmable logic controllers (PLCs) which provides a foundation of knowledge of the programming techniques, operation, and maintenance of PLCs used in typical industrial automation.

CURRICULUM

Term		(17 credits)
10605105	Electrical Circuits I	3
10605108	Intro to Electronics	2
10605120	Electrical Power Science	3
10623106	Intro to AutoCAD	2
10801136	English Composition I **-or-**	
10801195	Written Communication	3
10804118	Intermediate Algebra with Applications	4

Term		(17 credits)
10605110	Electrical Circuits II	3
10605115	Basic Electronics	3
10605122	Electrical Power Generation	4
10623100	Problem Solving & Critical Thinking	1
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3
10804196	Trigonometry with Applications	3

Term		(17 credits)
10605117	Programmable Logic Controllers - Beginning	3
10605125	Electrical Power Distribution	4
10605127	Electrical Machines	3
10804195	College Algebra with Applications	3
10806154	General Physics 1	4

Term		(17 credits)
10480100	Alternative Energy Overview	2
10605124	Electrical Power Transmission	3
10605170	Electrical Power System Protective Relaying	4
10809143	Microeconomics **-or-**	
10809144	Macroeconomics	3
10809198	Intro to Psychology	3
	Elective	2

Total Credits 68

Please Note:
- The Electrical Power Engineering Technician program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10605120 // 3 credits
Electrical Power Science
An introduction to the field of electrical power technology. Covers the power generation process, transmission techniques, and networks. Topics include prime energy sources, converting raw energy into electrical energy, metering electricity, and disbursing electrical energy from generation plant to consumer.

10605122 // 4 credits
Electrical Power Generation
A study of equipment and facilities utilized in the production of electricity. Topics include fuels, prime mover turbines, and generators. Emphasis is on safety controls, efficient production, and operational procedures. The course concludes with computer-simulated operation of a large power station boiler.
Prerequisite: Electrical Power Science 10605120.

10605124 // 3 credits
Electrical Power Transmission
This course covers the basic principles of high-voltage transmission of electrical energy. Students are introduced to the concepts of active, reactive, and apparent power in electric power technology. Basic properties of single- and three-phase transformers and their importance to power transmission are discussed. The behavior of ideal and practical (or non-ideal) transformers are used as a building block to explain the electrical function of a transformer in many transmission circuits.
Basic mechanical (e.g., supporting structures, line sag, galloping, the effect of weather) and electrical (e.g., corona, pollution, insulation, lightning) requirements that must be met for successful power transmission over large distances are discussed. Approximately 50% of the course is spent in the laboratory working with equipment that simulates power transmission.
Prerequisites: Electrical Machines 10605127 and Electrical Power Distribution 10605125.

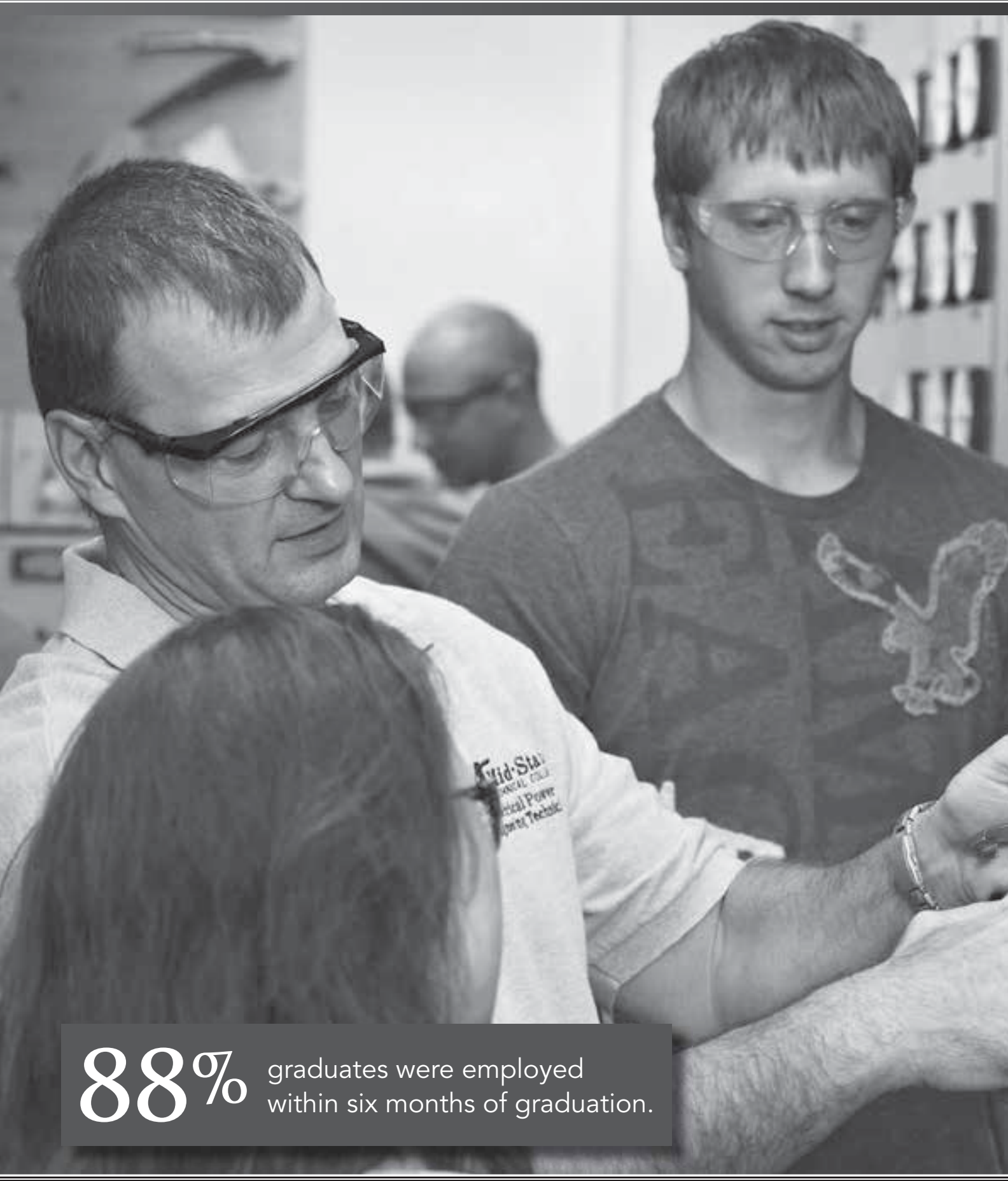
10605125 // 4 credits
Electrical Power Distribution
Designed to teach the principles of distribution systems and substations. Covers wire capacity, sag, guying, supporting structures, troubleshooting, insulators, lightning arresters, switches, recloser and power circuit breakers. Students also do an exercise applying distribution standards of an actual utility to the building and design of a power line on paper.
Prerequisites: Electrical Circuits I 10605105 and Electrical Power Generation 10605122.

10605127 // 3 credits
Electrical Machines
Designed to teach fundamentals of generators and motors. Covers DC and AC generators and motors.
Prerequisite: Electrical Circuits I 10605105 or Intro to Electronics 10605108.

10605170 // 4 credits
Electrical Power System Protective Relaying
A study of controlling devices and systems utilized in generation, distribution, and transmission of electricity. Students study instrument transformers, protective relays, protective systems, power system standards, drawing conventions, equipment rating terminology, insulation, circuit interrupting devices, grounding, and power system faults.
Prerequisite: Electrical Machines 10605127.

10623100 // 1 credit
Problem Solving & Critical Thinking
Introductory course in problem setup, organization, and solution. Identification of given and unknown values, equation setup, unit conversions, and use of significant figures. Introduction to physical science; working with units of force, area, volume, time, and distance in metric and imperial systems. This course is designed to help you be successful in technical and engineering classes and should be taken during your first semester of enrollment.

10623106 // 2 credits
Intro to AutoCAD
This is an introductory course in computer aided drafting (CAD) using AutoCAD software. It provides foundation skills in using CAD software to create and print two dimensional technical drawings. This course is available to students in any program. Computer skills and prior knowledge of drawing/drafting techniques is recommended.



88% graduates were employed within six months of graduation.

EMERGENCY MEDICAL TECHNICIAN

Program Code 30-531-3
2014-2015 Estimated Tuition and Fees: $751*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

This course is a 185-hour program based upon the U.S. Department of Transportation Administration/Wisconsin Bureau Local Health Support and EMS curriculum. The Emergency Medical Technician (EMT) program prepares the student with the knowledge and skills to work competently as an entry-level EMT. The program consists of classroom lectures, practical skill labs, laboratory simulations, and pre-hospital clinical experiences.

Upon successful completion of the program the student will be eligible to take the National Registry of EMT's Certification exam.

After successful completion of the National Registry Certification examination, students will be eligible to apply to the State of Wisconsin Department of Health Services for licensure as a Wisconsin EMT.

The Emergency Medical Technician program is offered at Marshfield, Stevens Point, and Wisconsin Rapids campuses. Check each campus for availability and potential starting dates.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as an Emergency Medical Technician graduate, to be able to:

- Demonstrate entry-level knowledge and skills required for State of Wisconsin EMT-Basic licensure
- Accurately assess and provide appropriate pre-hospital basic life support treatment to ill and injured patients in a professional and competent manner

CAREER OPTIONS

Ambulance Services
Dispatch Centers
First Responder Units
Hospitals/Emergency Departments
Industry Safety Departments
Rescue Squads
Urgent Care Facilities

POTENTIAL FOR ADVANCEMENT

Ambulance Service Director
Ambulance Service Training Coordinator
EMT-Basic/Intermediate Technician
EMT-Instructor
EMT-Intermediate/Coordinator
EMT-Paramedic
EMT-Shift Supervisor

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Emergency Medical Technician program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with a $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.
3. Submit the Criminal Background Statement of Understanding and Release of Information form.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function as an Emergency Medical Technician is available at mstc.edu/programs/emergency-medical-technician. It is the student's responsibility to notify the disabilities services coordinator in the Student Affairs Office to receive assistance.

CLINICAL-RELATED REQUIREMENTS

Prior to placement at a clinical site, students need to pay for a criminal background check and provide documentation of required healthwork and current health care provider level CPR certification to a private vendor. Students are responsible for ensuring all requirements remain current during program enrollment.

Clinical sites have the right to refuse a student's placement based on inadequate health records, pending charges, or conviction records. Students with a criminal history may not be able to complete clinical courses. MSTC will make two attempts to place a student in an appropriate clinical experience. If MSTC is unable to place the student after two attempts, the student will be withdrawn from the course and will not be able to advance in the program. Contact the program counselor for more details.
in an appropriate clinical experience. You may contact the program counselor for more details.

Prior to beginning a clinical experience in a health care agency or ambulance service, students must:

a. Hold, or be eligible to hold, a current Department of Health Services EMS Training Center Training Permit.
b. Provide evidence of current CPR at the health care professional level by a CPR organization specified under s. DHS 110.17(1).
c. Obtain the required uniform for clinical experiences.
d. Assume responsibility for clinical assignment(s) regardless of time and location, including transportation and other personal arrangements.
e. Provide evidence of completion of the required health work within three months prior to starting their clinical experience.

PROGRAM PROGRESSION

In order to be eligible to take the National Registry of Emergency Medical Technician's examination, students must receive a minimum grade of "C" in the Emergency Medical Technician program.

PROGRAM COURSE DESCRIPTIONS

10531168 // 5 credits
EMT Basic
Based upon the State of Wisconsin/ U.S. Department of Transportation/ National Highway Transportation Safety Administration curriculum, this 185 hour program includes classroom instruction—lectures, discussion, demonstrations, skill practice—and an additional patient care experience, which requires a minimum of ten patient care contacts.
Prerequisite: Admission to Emergency Medical Technician 305313 program.

CURRICULUM		
10531168	EMT Basic	5

EMT-PARAMEDIC

Program Code 31-531-1
Estimated Program Costs: $5,513
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The EMT-Paramedic program contains the same core courses (10-531) as the Associate Degree Paramedic Technician program. Completion of the Emergency Medical Technician program is required prior to beginning the Paramedic Technician core courses.

Students learn advanced prehospital skills in the classroom, simulated skills laboratory, hospital, and prehospital clinical settings.

EMT-Paramedic is an 1150-hour program based upon the U.S. Department of Transportation Administration/Wisconsin Bureau Local Health Support and EMS curriculum. The EMT-Paramedic curriculum prepares the student with the knowledge and skills to work competently as an entry-level EMT-Paramedic. The program consists of classroom lectures, practical skills lab, laboratory simulations, and hospital and pre-hospital clinical experiences. The program offers additional certifications in Advanced Cardiac Life Support, Trauma Life Support, and Pediatric Advanced Life Support.

Students who successfully complete the program are eligible to take the National Registry written and practical examinations.

The EMT-Paramedic program is offered at Wisconsin Rapids Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as an EMT-Paramedic graduate, to be able to:

- Prepare for incident response and EMS operations
- Integrate pathophysiological principles and assessment findings for a variety of patient encounters
- Demonstrate paramedic skills associated with established standards and procedures for a variety of patient encounters
- Communicate effectively with others
- Demonstrate professional behavior
- Meet state and national competency requirements for paramedic credentialing

CAREER OPTIONS

Ambulance Services
Dispatch Centers
First Responder Units
Hospitals/Emergency Departments
Industry Safety Departments
Rescue Squads
Urgent Care Facilities

POTENTIAL FOR ADVANCEMENT

Ambulance Service Manager
EMT-Instructor/Coordinator
EMT-Shift Supervisor
Service Training Coordinator

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

The admission requirements are identical for the EMT-Paramedic (one-year technical diploma) and the Paramedic Technician (associate degree) program to support articulation between programs.

To apply to the EMT-Paramedic program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.
4. Submit the Criminal Background Statement of Understanding and Release of Information form.
4. Submit a current Wisconsin EMT license.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function as an EMT-Paramedic is available at mstc.edu. It is the student's responsibility to notify the disability services coordinator in the Student Affairs Office to receive assistance.

CLINICAL-RELATED REQUIREMENTS

Prior to placement at a clinical site, students need to pay for a criminal background check and provide documentation of required healthwork and current health care provider level CPR certification to a private vendor. Students are responsible for ensuring all requirements remain current during program enrollment.

Clinical sites have the right to refuse a student's placement based on inadequate health records, pending charges, or conviction records. Students with a criminal history may not be able to complete clinical courses. MSTC will make two attempts to place a student in an appropriate clinical experience. If MSTC is unable to place the student after two attempts, the student will be withdrawn from the clinical course and will not be able to advance in the program. Contact the program counselor for more details.

Prior to beginning a clinical experience in a health care agency or ambulance service, students must:

a. Provide evidence of completion of the required health work within one month following the start of EMS Fundamentals (10531911).
b. Hold a current State of Wisconsin EMT license.
c. Hold, or be eligible to hold, a Department of Health Services EMT-Paramedic Training permit.
d. Provide evidence of current CPR at the health care professional level by a CPR organization specified under s. DHS 110.17(1).
e. Obtain the required uniform for clinical experiences.
f. Assume responsibility for clinical assignment(s) regardless of time and location, including transportation and other personal arrangements.

PROGRAM PROGRESSION

In order to maintain a passing status and progress in the EMT-Paramedic program, students must receive a grade of "C" or better in each of the paramedic core courses.

Failure to obtain a grade of "C" in any core course will prevent a student from progressing onto the next course in the sequence until they have retaken the course and achieved a grade of "C" or better.

This requirement also applies to the last class in the sequence, as a grade of "C" or better is required in all courses in order to retain eligibility to take the National Registry exam.

CURRICULUM

Term		(20 credits)
10531911	EMS Fundamental	2
10531912	Paramedic Medical Principles	4
10531913	Patient Assessment Principles	3
10531914	Prehospital Pharmacology	3
10531916	Paramedic Cardiology	4
10531917	Paramedic Clinical/Field 1	3
10531918	Advanced Resuscitation	1

Term		(18 credits)
10531915	Paramedic Respiratory Management	2
10531919	Paramedic Medical Emergencies	4
10531920	Paramedic Trauma	3
10531921	Special Patient Populations	3
10531922	EMS Operations	1
10531923	Paramedic Capstone	1
10531924	Paramedic Clinical/Field 2	4

Total Credits 38

Please Note:

- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.

PROGRAM COURSE DESCRIPTIONS

10531911 // 2 credits
EMS Fundamental
This course provides the paramedic student with comprehensive knowledge of EMS systems, safety, well-being, legal issues, and ethical issues, with the intended outcome of improving the health of EMS personnel, patients, and the community. The students obtain fundamental knowledge of public health principles and epidemiology as related to public health emergencies, health promotion, and illness/injury prevention. Introducing students to comprehensive anatomical and medical terminology and abbreviations fosters the development of effective written and oral communications with colleagues and other health care professionals.
Prerequisites: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs and Wisconsin Emergency Medical Technician (or higher) license or a current National Registry of EMTs certification at the Emergency Medical Technician level or higher.

10531912 // 4 credits
Paramedic Medical Principles
This course addresses the complex depth of anatomy, physiology, and pathophysiology of major human systems while also introducing paramedic students to the topics of shock, immunology, and bleeding.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531913 // 3 credits
Patient Assessment Principles
This course teaches the paramedic student to integrate scene and patient assessment findings with knowledge of epidemiology and pathophysiology to form a field impression. By utilizing a structured and organized assessment process with knowledge of anatomy, physiology, pathophysiology, life span development, and changes that occur to the human body with time, students will learn to develop a list of differential diagnoses through clinical reasoning, along with the ability to modify the assessment as necessary to formulate a treatment plan for their patients.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531914 // 3 credits
Prehospital Pharmacology
This course provides the paramedic student with the comprehensive knowledge of pharmacology required to formulate and administer a pharmacological treatment plan intended to mitigate emergencies and improve the overall health of the patient.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531915 // 2 credits
Paramedic Respiratory Management
This course teaches the paramedic student to integrate complex knowledge of anatomy, physiology, and pathophysiology into the assessment to develop and implement a treatment plan with the goal of assuring a patient airway, adequate mechanical ventilation, and respiration for patients of all ages. Specific knowledge pertaining to the respiratory system is also provided to ensure the student is prepared to formulate a field impression and implement a comprehensive treatment plan for a patient with a respiratory complaint.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531916 // 4 credits
Paramedic Cardiology
This course teaches the paramedic student to integrate assessment findings with principles of cardiovascular anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for a patient with a cardiovascular complaint.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531917 // 3 credits
Paramedic Clinical/Field 1
This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in field and health care environment experiences with actual patients under the supervision of instructors or approved preceptors. Students may also have the opportunity to participate in formal high-fidelity human patient simulator experiences as a part of this course.
Prerequisites: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs, Advanced Prehosital Pharmacology 10531914, and a current Wisconsin license at the Emergency Medical Technician (or higher) level.

10531918 // 1 credit
Advanced Resuscitation
By teaching Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS) methodologies and protocols, this course prepares the paramedic student in the integration of comprehensive knowledge of causes and pathophysiology into the management of shock, respiratory failure, respiratory arrest, cardiac arrest, and peri-arrest states with an emphasis on early intervention to prevent respiratory and/or cardiac arrest if possible.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531919 // 4 credits
Paramedic Medical Emergencies
This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for a patient with a medical complaint.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531920 // 3 credits
Paramedic Trauma
This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for an acutely injured patient.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531921 // 3 credits
Special Patient Populations
This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for patients with special needs. Gynecological emergencies, along with special considerations in trauma, are also included within this course.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531922 // 1 credit
EMS Operations
This course provides the paramedic student with the knowledge of operational roles and responsibilities to ensure patient, public, and EMS personnel safety.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531923 // 1 credit
Paramedic Capstone
This course provides the student with a final opportunity to incorporate their cognitive knowledge and psychomotor skills through labs and scenario-based practice and evaluations prior to taking the National Registry written and practical examinations. Technical Skills Attainment (TSA) for each student will be compiled and/or documented within this course as required by the DHS-approved paramedic curriculum.
Prerequisite: EMS Operations 10531922.

10531924 // 4 credits
Paramedic Clinical/Field 2
This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in field and health care environment experiences with actual patients under the supervision of instructors or approved preceptors. Students may also have the opportunity to participate in formal high-fidelity human patient simulator experiences as a part of this course. Successful completion of this course requires the student to meet all clinical and field competency requirements at the paramedic level as defined by WI DHS EMS.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

FARM BUSINESS & PRODUCTION MANAGEMENT

Program Code 30-090-1
2014-2015 Estimated Tuition and Fees: $2,406*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

Designed for those already operating a farm, this program focuses on ways to maximize your profits. Learn management techniques to identify your farm's strengths and weaknesses, how to effectively analyze farm records to uncover hidden opportunities for operation improvements, how to take maximum advantage of farm credit and income tax structures, proven marketing techniques for crops and livestock, and legal procedures for farm acquisition and transfer.

Instruction takes place during the fall and winter months. Topics covered include livestock feeding (emphasis on dairy cattle), breeding, and management, and crop production of alfalfa, soybeans, corn, and small grains, including fertilizers and soil conservation. Individualized attention provides for discussion of specific problems. This program has a six-year period for completion.

Today's successful farmer must keep up with changes and improvements in the farming industry to remain competitive. The Farm Business & Production Management program includes classroom and on-the-farm instruction as well as group tours to give the producer-student a comprehensive, affordable education in production agriculture.

Courses in the program are offered at MSTC's outreach centers, including Adams-Friendship, Almond, Amherst, Auburndale, Chili, and Vesper.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

As a Farm Business & Production Management graduate, you will be able to:

- Develop a land and nutrient use plan
- Develop a crop management plan
- Identify economic principles and family/business goals
- Identify and plan for emerging farm and agricultural issues and practices
- Implement appropriate farm safety practices
- Develop a farm marketing plan
- Balance rations for farm livestock
- Develop a livestock breeding health and management plan
- Prepare and analyze farm business records

CAREER OPTIONS

Agricultural Manager
Dairy Equipment Service Technician
Farming
Farm Hand
Farm Manager
Feed Sales
Grain Operations
Mill Production Operator
Plant Manager

Careers generally available to students who complete all program requirements.

ADMISSIONS PROCEDURES

To apply to the Farm Business & Production Management program, please submit the following document to the MSTC Admissions Office:

- Complete an MSTC application form and return it with the $30 non-refundable application fee.

The program will deal with materials requiring average to high reading skills.

Students should be able to operate a calculator and understand basic math skills which deal with percentage, addition, subtraction, multiplication, and division. Students will be asked to draft budgets and calculate costs and returns on different farming enterprises.

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function in Farm Business & Production Management is available in the Student Affairs Office. It is the student's responsibility to notify the disability services coordinator in the Student Affairs Office to receive assistance.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

PROGRAM COURSE DESCRIPTIONS

30090381 // 3 credits
Operating the Farm Business
Emphasizes the management skills and concepts necessary for the first year student to continue farming in today's changing technology and farm business financing. It builds the foundation for the other courses. Special emphasis is given to establishing and recording farm business and family goals. The student will organize and maintain farm business records, and interpret and analyze the records to assist in making sound farm management decisions. All competencies will be assessed using the student's farm or with simulations established by the instructor.

30090382 // 3 credits
Soils Management
Instruction is provided on how to prepare and implement a land use plan, and take and understand soil testing procedures and reports. Students receive instruction to implement fertilizer recommendation and establish budgets. Included is instruction on the application of farm manure, chemicals, soil conservation practices, and the management and safe use of farm machinery and equipment.

30090383 // 3 credits
Crop Management
Instruction is provided on all phases of crop production, management, and economics. Specific topics relate to variety, selection, planning, pest control, harvesting, storage, safety, and marketing. Crop management emphasizes the analysis of the farm business and planning of cropping practices and strategies.

30090384 // 3 credits
Livestock Nutrition
Emphasizes the skills, techniques, and concepts necessary for sound feeding management; determining feed values; economics of feed; nutritional terminology and requirements; feed consumption of livestock, understanding feed tag labels, and feed analysis reports for protein, energy, minerals, and vitamins.

30090385 // 3 credits
Livestock Management
Instruction is provided on the various phases of selection, breeding, herd health, raising of replacement stock, and marketing livestock and livestock products. It includes the selection, operation, and maintenance of milking, feed, ventilation, manure handling, equipment, and farm buildings. In addition, the livestock program is related to the total farm enterprise in a business analysis.

30090386 // 3 credits
Farm Records & Business Analysis
Emphasizes the practical use of a farm record system in managing the farm through farm and financial analysis. Includes the establishment of farm business goals, selection and use of farm credit, farm business arrangements, farm estate planning, and farm income taxes. Instruction is provided on the use of computers and/or computer records and financial analysis of the farm business and finance strategy to meet the students' needs.

30090387 // 1 credit
Farm Business & Production Management Update
Available to students who have completed the course offerings in the Farm Training program. Topics include crop production, dairy management, and financial management issues.

CURRICULUM

Term		(18 credits)
30090381	Operating the Farm Business	3
30090382	Soils Management	3
30090383	Crop Management	3
30090384	Livestock Nutrition	3
30090385	Livestock Management	3
30090386	Farm Records & Business Analysis	3

Total Credits 18

Please Note:
- The Farm Business & Production Management program starts from July through November annually. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.

FARM OPERATION

Program Code 31-080-4
2014-2015 Estimated Tuition and Fees: $4,077*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

This program is designed for individuals who are farming or planning to farm as well as those involved in other areas of agriculture. Focusing on day-to-day farm operations, with a special emphasis on dairy farms in central Wisconsin, you'll learn about livestock and their products, including livestock diseases and prevention and quality milk and meat production.

Additional topics include soils, crop production and farm chemicals, farmstead and building planning (including electrical systems), and farm maintenance. You'll also learn the latest "best business practices" for farming including how to manage farm records for valuable information; farm computerization; and critical need-to-know facts about financial credit, income tax law, and marketing.

Farm Operation is a 36-week program and takes a minimum of two years to complete. The program is offered in two 18-week segments. Each segment is broken into three six-week terms, running from November to April every school year. Classes are scheduled from 10:00 a.m. - 3:30 p.m., allowing time to complete morning and evening farm work at home.

Farm Operation is offered at Marshfield Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

As a Farm Operation graduate, you will be able to:

- Balance rations for farm livestock
- Create and/or revise a business plan
- Implement appropriate farm safety practices
- Evaluate environmental and economic impacts of farm practices
- Discuss implications of farm practices on food safety
- Determine proper procedures used in the establishment, growing, harvesting, and storage of crops
- Plan for operation and maintenance of facilities and equipment
- Set up or modify a livestock management plan
- Identify credit needs and develop a plan for financing the operation

CAREER OPTIONS

Agricultural Manager
Dairy Equipment Service Technician
Farming
Farm Hand
Farm Manager

Careers generally available to students who complete all program requirements.

ADMISSIONS PROCEDURES

To apply to the Farm Operation program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

This program will deal with materials requiring average to high reading skills.

Students should be able to operate a calculator and understand basic math skills which deal with percentage, addition, subtraction, multiplication, and division.

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function in Farm Operations is available in the Student Affairs Office. It is the student's responsibility to notify the disability services coordinator in the Student Affairs Office to receive assistance.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

PROGRAM COURSE DESCRIPTIONS

10080101 // 1 credit
Soils
Soil formation and how it is managed is the basis of farming. This course deals with the development of soil, the major types of soil in Wisconsin, the role of organic matter, the effect of proper tillage, and water and soil conservation practices and their role in economic crop production. USDA soil survey maps are used to look at capabilities of different soils.

10080102 // 2 credits
Soil Fertility & Nutrient Management
Soil is the foundation on which farming is based. Studying soil testing, fertility, fertilizers, and their economical use in crop production are a major portion of this course. Nutrient Management Plans are explored along with how they are used to record and help determine fertility and conservation needs for a farm.

10080110 // 1 credit
Animal Health
The student will learn basic knowledge about disease identification, prevention, and treatment. Other topics include understanding animal health terminology, digestive, and nutritional disorders; cow/calf management systems; bio-security; and best management practices of animal health.

10080111 // 2 credits
Animal Reproduction
The student will learn and explain the proper management and care for a dairy herd to maximize profits and production. Emphasis is on the breeding of dairy cattle, with both genetic improvement and conception considered. Methods to prevent and treat reproductive diseases are discussed.

10080120 // 2 credits
Ruminant Animal Nutrition
This course deals with the practical day to day feeding of dry and lactating dairy cows, dairy heifers, and dairy steers. The development of the digestion system and its function in nutrient metabolism and ration formulation is examined. Emphasis is placed on the role of quality forages in these rations.

10080140 // 3 credits
Farm Financial Analysis
This course identifies farm record keeping skills and provides the student opportunities to develop these necessary business skills for operating a successful farm business. These skills include recording livestock and crop information, calculating depreciation and capital gains, gathering federal and state tax form information, calculating inventories, developing budgets, formulating yearly credit needs, and conducting a financial farm business analysis.

31080309 // 1 credit
Milk & Milk Products
Quality milk production, means of producing quality milk, and methods of determining quality are considered. Utilizing milk in various dairy products and consumer demands and choices are studied.

31080310 // 2 credits
Raising Dairy Replacements & Dairy Beef
Selection, feeding, housing, disease control, and other recommended practices in raising dairy replacements are studied. Stresses the economics of dairy beef production, and how feeding and management of dairy beef differs from raising dairy replacements.

CURRICULUM

Term		(5 credits)
10080101	Soils	1
31080316	Livestock Production	1
31080353	Forage Crops	2
31080390	Communications	1

Term		(5 credits)
31080309	Milk & Milk Products	1
31080318	Farm Accounting	1
31080347	Farm Chemicals	1
31080320	Farm Maintenance	2

Term		(5 credits)
10080120	Ruminant Animal Nutrition	2
31080322	Farm Business Planning	1
31080365	Farm Law	1
31080380	Farm Buildings & Dairy Cattle Housing	1

Term		(5 credits)
10080110	Animal Health	1
31080352	Corn, Grain, & Seed Production	2
31080367	Marketing (Including Co-Ops)	1
31080372	Farm Computers	1

Term		(5 credits)
10080102	Soil Fertility & Nutrient Management	2
10080140	Farm Financial Analysis	3

Term		(5 credits)
10080111	Animal Reproduction	2
31080310	Raising Dairy Replacements & Dairy Beef	2
31080376	Economics of Farm Equipment	1

Total Credits 30

Please Note:
- The Farm Operation program has November, January, and February start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.

31080316 // 1 credit
Livestock Production
Swine feeding, breeding, housing, and management are studied. The breeding herd, feeder pigs, and market hogs are considered for each of the above. The beef enterprise is studied from selection and breeding of the cow herd to marketing the finished animal.

31080318 // 1 credit
Farm Accounting
Introduces students to computerized accounting methods for effective farm operation.

31080320 // 2 credits
Farm Maintenance
Troubleshooting and problem solving the various maintenance issues that arise in farming operations, to include electrical, plumbing, fencing, machinery, and building maintenance and repair.

31080322 // 1 credit
Farm Business Planning
Students develop a comprehensive business plan for a farm operation. To include labor plan, job descriptions, financial plan, and insurance requirements.

31080347 // 1 credit
Farm Chemicals
Pest identification (e.g., weeds, insects, plant diseases) and their control both by cultural means and chemical application are considered. Safety in the use of chemicals from a personal view and from an environmental aspect is emphasized.

31080352 // 2 credits
Corn, Grain, & Seed Production
Deals with the production of corn and small grains adapted to the area. Varieties and seed selection, planting and harvesting practices, fertilization, grain storage, and economical marketing of the crop are covered in detail.

31080353 // 2 credits
Forage Crops
Attention to the adaptation, management, and utilization of recommended varieties of grasses, and legumes, the establishment of both temporary and permanent pastures, the value of these crops as soil builders, and their use for feeding various classes of livestock.

31080365 // 1 credit
Farm Law
Procedures and practices to be followed in leasing and purchasing farms, methods of family farm transfer, and common legal problems that concern farmers. Emphasis is on preventing disputes and developing an awareness of when legal assistance is needed.

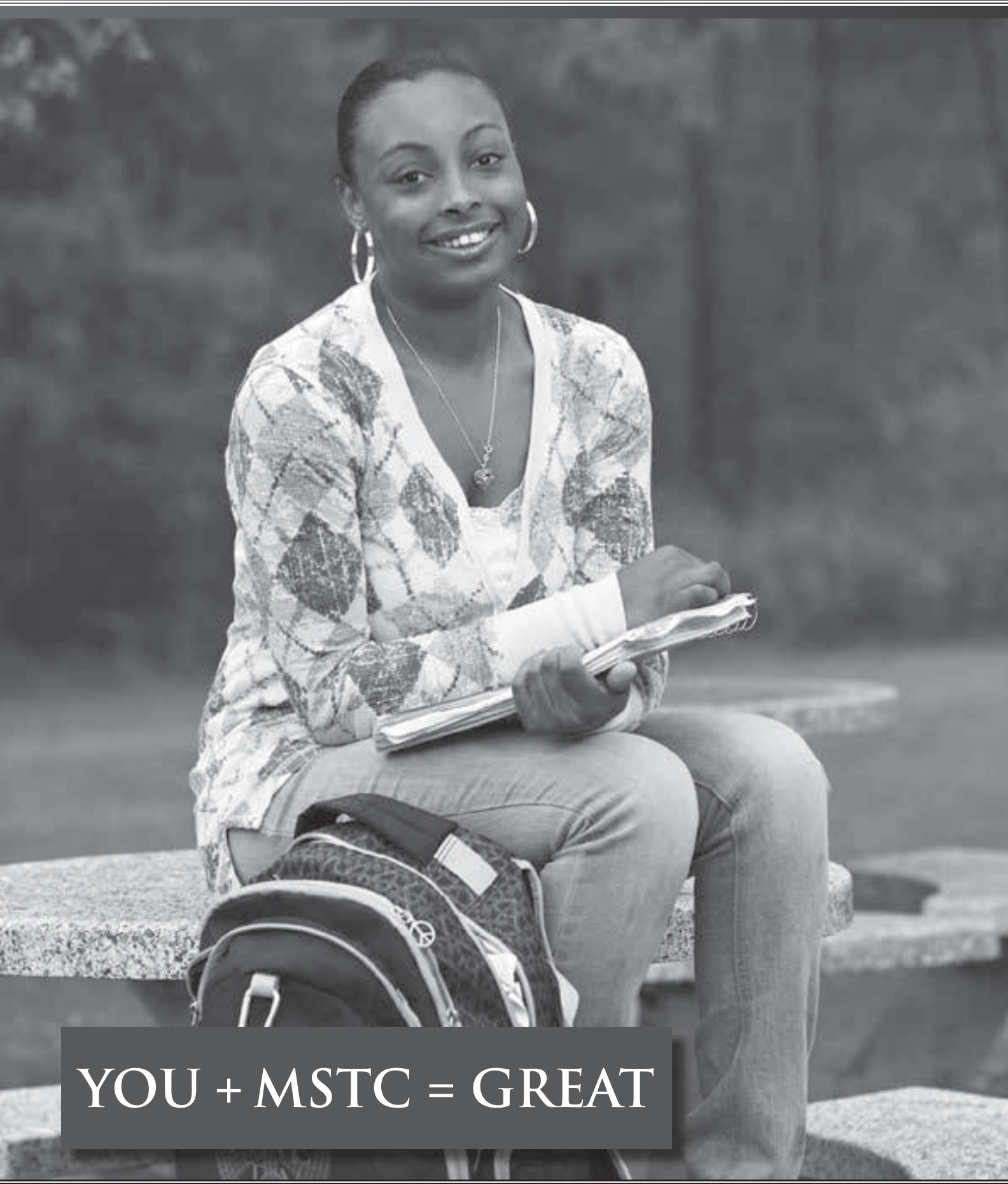
31080367 // 1 credit
Marketing (Including Co-Ops)
Designed to provide authoritative information on basic principles of marketing for products generally common to members of the class. When, where, and how to market products and related information such as regulation and supervision of marketing specific products, understanding market news, price cycles, and the use of cooperatives for marketing purposes are included.

31080372 // 1 credit
Farm Computers
Introduces the use of computers on the farm utilizing prepared farm programs on management. Identifies considerations as to need for a computer on the home farm and how to select the software and hardware.

31080376 // 1 credit
Economics of Farm Equipment
Machinery selection, needs, and maintenance are discussed. Ownership and operating costs are calculated. Alternatives to ownership such as leasing and custom hire are compared. Includes a unit on safety.

31080380 // 1 credit
Farm Buildings & Dairy Cattle Housing
Arrangements and design of efficient farm buildings, as well as construction requirements. Farmstead planning includes mapping of present facilities as they exist, evaluating how useful they are, and planning long- and short-range goals for changes in the farmstead arrangement to improve economic, labor, and aesthetic values. Environmental needs of dairy cattle are identified. This includes space, ventilation, and insulation needs. Planning the dairy facilities to improve the labor efficiency and the opportunity for future expansion.

31080390 // 1 credit
Communications
Designed to teach or improve students' use of correct principles of writing, speaking, reading, and listening.


YOU + MSTC = GREAT

GERONTOLOGY

Program Code 10-544-1
2014-2015 Estimated Tuition and Fees: $8,605*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The Gerontology program prepares you to work in service delivery roles as well as leadership roles in a field which is rapidly growing as the population ages.

The curriculum focuses on the multidisciplinary nature of gerontology, which includes psychological, sociological, and physiological changes that occur during late adulthood, and provides opportunities for practical experience in a broad range of settings.

The Gerontology program is offered at Stevens Point Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Gerontology graduate, to be able to:

- Identify and refer older adults to needed services
- Understand complex service and community systems that provide services to older adults
- Integrate knowledge of physical, social, psychological, and spiritual aspects of aging into provision of services
- Demonstrate behaviors and conduct that honor safe, legal, and ethical gerontological practices
- Advocate in the area of aging public policy
- Develop ethical and cultural awareness related to aging
- Communicate effectively

CAREER OPTIONS

Activity/Recreation Coordinator
Advocacy Specialist
Aging Services Provider
Benefits Coordinator
Client Navigation Specialist
Housing/Transportation Specialist
Private Service Provider/Small Business Owner
Program Planner

POTENTIAL FOR ADVANCEMENT

Advocacy/Support Services Organization Specialist
Educator/Trainer
Manager/Administrator
Marketing and Product Development

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Gerontology program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options.

   To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function as a Gerontology graduate is available from the associate dean responsible for the program. It is the student's responsibility to notify the disability services coordinator in the Student Affairs Office to receive assistance.

PROGRAM PROGRESSION AND COMPLETION

In order to progress in and successfully complete the program, students must:

- Repeat courses not completed with a "C" or better prior to progressing in core courses or other courses with co- or prerequisites.
- Receive a grade of "C" or better in all courses required for graduation.

Please note that the ability to repeat courses is dependent upon availability in courses. Students may be required to apply for program re-entry in order to repeat courses within the program's instructional area.

PROGRAM COURSE DESCRIPTIONS

10102101 // 3 credits
Intro to Business
An introduction to what a business is, how it operates, and how it is managed. Students will identify forms of ownership and the processes used in production and marketing, finance, personnel, and management in business operations.

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10501110 // 2 credits
Healthcare Communication Strategies
Develop communication skills used in a variety of settings with diverse populations. Students understand and practice skills to enhance communication as service providers and team members. Develop ability to understand and empathize given new approaches to patient care and evolving technology.

CURRICULUM

Term		(15 credits)
10103106	Microsoft Office-Introduction	3
10801136	English Composition I **-or-**	
10801195	Written Communication	3
10809130	Intro to Social Gerontology	3
10809166	Intro to Ethics: Theory & Application	3
10809198	Intro to Psychology	3

Term		(17 credits)
10543139	Introduction to Dementia	2
10544102	Physical Aspects of Aging	3
10544103	Healthy Aging	3
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3
10804107	College Mathematics **-or-**	
10804189	Introductory Statistics	3
10809188	Developmental Psychology	3

Term		(17 credits)
10501110	Healthcare Communication Strategies	2
10544107	Legal & Financial Issues of Aging	3
10544108	Developing the Gerontology Professional	3
10809131	Death and Dying	3
10809172	Introduction to Diversity Studies	3
	Elective	3

Term		(15 credits)
10102101	Intro to Business	3
10544109	Programs & Services in Aging	3
10544111	Gerontology Internship	3
10809132	Generations & Diversity in Aging	3
	Elective	3

Total Credits 64

Please Note:
- The Gerontology program has an August start date. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10543139 // 2 credits
Introduction to Dementia
This course introduces the student to the different types of dementia, the changes in physiology, and the signs and symptoms associated with the onset of dementia. This course focuses on the principles of communicating and providing care to individuals with memory loss and confusion while learning the best practices for dealing with behavior changes, challenges with the activities of daily living, and strategies to assist caregivers.

10544102 // 3 credits
Physical Aspects of Aging
Study of normal and pathological changes occurring in the aging human body with special emphasis on age-related chronic disease. Includes analysis of biological theories of aging and cultural and ethnic influence on aging pathologies.

10544103 // 3 credits
Healthy Aging
Overview of practices to promote healthy aging. This course addresses nutrition, physical activity, and prevention practices as well as medications commonly prescribed for the older adult. Emphasis is on practices to address current aging trends.

10544107 // 3 credits
Legal & Financial Issues of Aging
Covers concepts and structures involved in the legal and financial realm of gerontology including Power of Attorney for Health Care/Finance, guardianships, trusts, reallocation of assets, spending down, Medicare/ Medicaid benefits, supplemental insurance, Social Security, financial exploitation, and relevant governmental policy. Learners are able to apply knowledge by learning advocacy techniques to benefit senior populations on a community, local, and federal level.

10544108 // 3 credits
Developing the Gerontology Professional
Exploration of effective communication styles and interview techniques for developing rapport and relationships with aging populations. Other topics included ethics and boundaries, self-determination, case management, documentation skills, research, and grant funding.

10544109 // 3 credits
Programs & Services in Aging
Students learn resources available in the community, eligibility criteria, and how to access and coordinate services for seniors. Supplementing social networking and enhancing mental health functioning for the aging population are also discussed. Students will explore different career fields within gerontology.

10544111 // 3 credits
Gerontology Internship
Students will integrate concepts from completed coursework through supervised work experiences in appropriate settings.
Prerequisites: Intro to Social Gerontology 10809130, Healthy Aging 10544103, Physical Aspects of Aging 10544102, Intro to Dementia 10543139, Legal and Financial Issues of Aging 10544107, and Developing the Gerontology Professional 10544108. Corequisites: Programs & Services in Aging 10544109 and Generations & Diversity in Aging 10809132.

10809130 // 3 credits
Intro to Social Gerontology
Review of aging in respect to social roles and processes. Topics include history of aging, demographics, family relationships, social supports, economics, retirement, widowhood, poverty, and politics of aging.

10809131 // 3 credits
Death and Dying
Study of losses during the aging process beyond the physical and emotional process of death and dying. Societal and personal views of death, dying, and cultural practices will be explored. Stages of bereavement and recommendations for healthy transitions in coping with loss will be integrated into practical applications. Discussion of various topics related to death and dying will include treatment for terminally ill people, euthanasia, and suicide.

10809132 // 3 credits
Generations & Diversity in Aging
Generational study of experience and history on the value and societal expectations of each generation. Also covered will be diversity trends among older adults including but not limited to race, ethnicity, culture, sexual orientation, and physical, cognitive, and developmental disabilities.


98% of graduates say they are satisfied with the education and training they receive at MSTC.

HEALTH AND WELLNESS PROMOTION

Program Code 10-546-2
2014-2015 Estimated Tuition and Fees: $6,725*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The Health and Wellness Promotion program prepares graduates with foundational knowledge of health and wellness concepts across the lifespan as well as health and wellness program development and promotion skills.

Graduates are prepared to support individuals, organizations, and communities with health and wellness initiatives. They are prepared to design, develop, and implement health and wellness promotion activities with the goal of maximizing quality of life and reducing or preventing the occurrence and recidivism of illness and injury. Graduates are equipped to support the implementation and maintenance of lifestyle change through educational campaigns incorporating health and wellness promotion concepts and behavior modification interventions.

The Health and Wellness Promotion program is available primarily online and therefore not location dependent.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Health and Wellness Promotion graduate, to be able to:

- Provide evidenced based health and wellness direction to individuals and organizations
- Design, develop, and implement health and wellness promotion activities and campaigns
- Champion behavior modification interventions to promote sustainable health and wellness
- Support the maintenance of health and wellness promotion for individuals and organizations

CAREER OPTIONS

Behavior Modification Specialist
Community Engagement Specialist
Community Health Worker
Fitness Manager
Health Guide
Health Promoter
Health Promotion Coordinator
Prevention Specialist
Well-Being Specialist
Wellness Coach

POTENTIAL FOR ADVANCEMENT

Health Educator
Wellness Supervisor

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Health and Wellness Promotion program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.
4. Submit the Criminal Background Statement of Understanding and Release of Information form.

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Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function as a Health and Wellness Promotion graduate is available in the online program orientation. It is the student's responsibility to notify the disability services coordinator in the Student Affairs Office to receive assistance.

CLINICAL-RELATED REQUIREMENTS

Prior to placement at a clinical site, students need to pay for a criminal background check and provide documentation of required healthwork to a private vendor.

Students are responsible for ensuring all requirements remain current during program enrollment.

Clinical sites have the right to refuse a student's placement based on inadequate health records, pending charges, or conviction records. Students with a criminal history may not be able to complete clinical courses. MSTC will make two attempts to place a student in an appropriate clinical experience. If MSTC is unable to place the student after two attempts, the student will be withdrawn from the clinical course and will not be able to advance in the program. Contact the program counselor for more details.

PROGRAM PROGRESSION AND COMPLETION

In order to progress in and successfully complete the program, students must:

- Repeat courses not completed with a "C" or better prior to progressing in core courses or other courses with co- or prerequisites.
- Receive a grade of "C" or better in all courses required for graduation.

Please note that the ability to repeat courses is dependent upon availability in courses. Students may be required to apply for program re-entry in order to repeat courses within the program's instructional area.

PROGRAM COURSE DESCRIPTIONS

10102101 // 3 credits
Intro to Business
An introduction to what a business is, how it operates, and how it is managed. Students will identify forms of ownership and the processes used in production and marketing, finance, personnel, and management in business operations.

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10104102 // 4 credits
Marketing Principles
Students study the practices and methods of manufacturers and distributors in the marketing of goods and services. Product planning, pricing strategies, distribution systems, channel activities, and the role of government, as well as other factors influencing marketing today, are emphasized.

10544102 // 3 credits
Physical Aspects of Aging
Study of normal and pathological changes occurring in the aging human body with special emphasis on age-related chronic disease. Includes analysis of biological theories of aging and cultural and ethnic influence on aging pathologies.

CURRICULUM

Term		(15 credits)
10103106	Microsoft Office-Introduction	3
10544103	Healthy Aging	3
10546100	Essential Concepts for Health and Wellness	3
10801136	English Composition I **-or-**	
10801195	Written Communication	3
10809172	Introduction to Diversity Studies **-or-**	
10809196	Intro to Sociology	3

Term		(16 credits)
10546101	Nutrition for Healthy Living	3
10546102	Behavior Change for Wellness	3
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3
10806177	General Anatomy & Physiology	4
10809198	Intro to Psychology	3

Term		(15 credits)
10102101	Intro to Business	3
10544102	Physical Aspects of Aging	3
10546103	Principles of Physical Conditioning	3
10809166	Intro to Ethics: Theory & Application	3
10809188	Developmental Psychology	3

Term		(15 credits)
10104102	Marketing Principles	4
10546104	Population Health & Wellness	3
10546105	Program Development, Implementation, & Evaluation	3
10546106	Health & Wellness Practicum	2
	Elective	3

Total Credits 61

Please Note:
- The Health and Wellness Promotion program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10544103 // 3 credits
Healthy Aging
Overview of practices to promote healthy aging. This course addresses nutrition, physical activity, and prevention practices as well as medications commonly prescribed for the older adult. Emphasis is on practices to address current aging trends.

10546100 // 3 credits
Essential Concepts for Health and Wellness
An introductory course including basic health and wellness promotion principles at the individual level; basic principles include physical, mental, and spiritual. Students explore a holistic view of health and wellness concepts covering healthy lifestyle choices, managing stress, individual wellness perspective, and how economics can positively and negatively impact the health and wellness of an individual.

10546101 // 3 credits
Nutrition for Healthy Living
Students learn concepts of healthy eating to facilitate the journey of good health across the lifespan. Healthy eating concepts focus on individual decision making and behavior change with sustainable interventions rooted in evidenced based practice. Students investigate nutrition myth versus fact and explore how policy and environment impact nutritional choice.

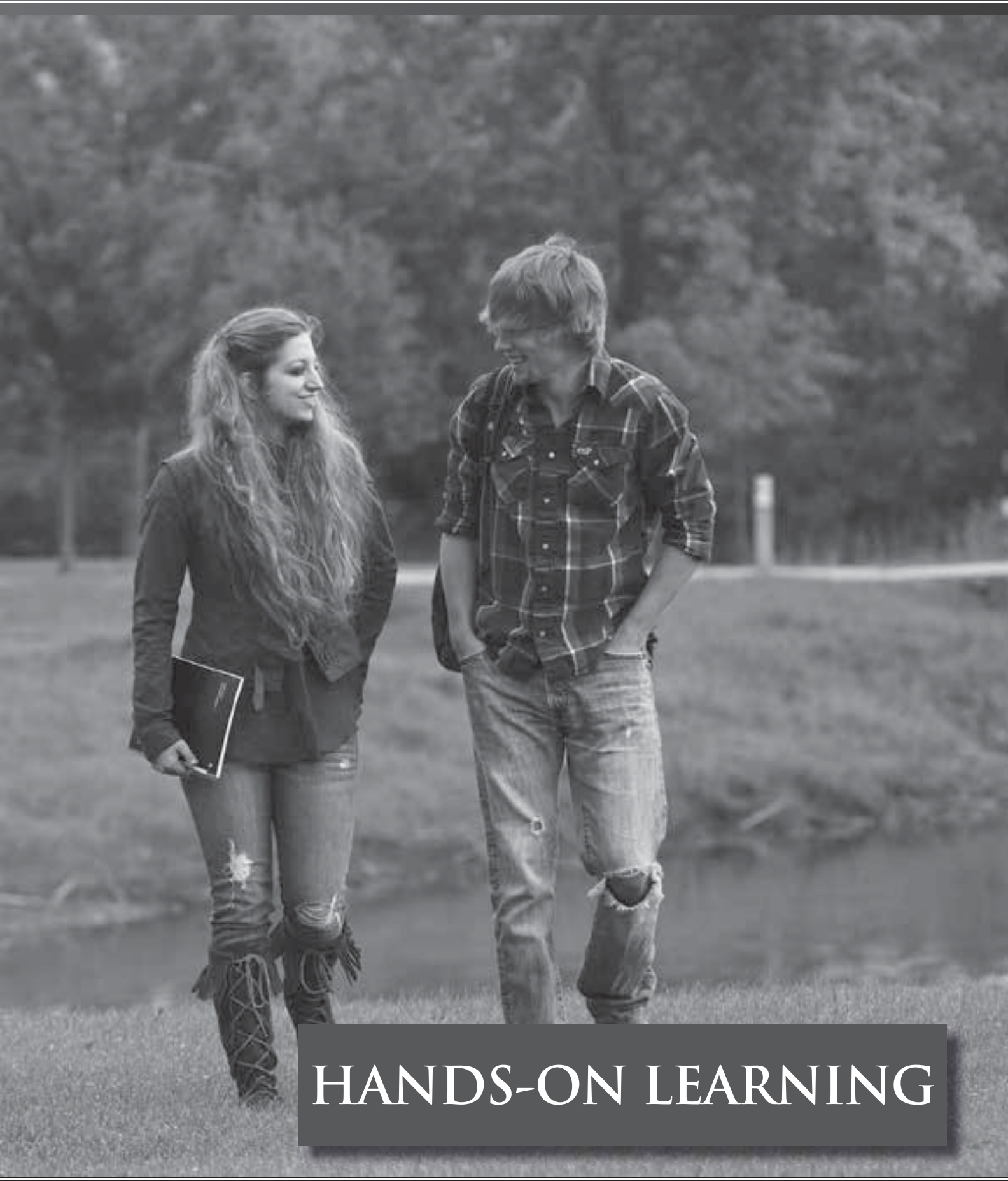
10546102 // 3 credits
Behavior Change for Wellness
This course examines the importance of understanding the theory of behavior change to assist others in overcoming barriers so they may achieve sustainable behavior change. A beginning skill set including how to advise individuals on goal setting, strategy planning, and encouraging maintenance of health and wellness goals will be refined.

10546103 // 3 credits
Principles of Physical Conditioning
Quality of life improvement and encouraging others to maximize health and wellness potential through physical conditioning are emphasized. The effects of physical exercise on body systems and functioning are explored including specific exercises for balance, endurance, strength, and weight loss. Special populations and considerations are highlighted throughout the course.
Prerequisite: General Anatomy & Physiology 10806177.

10546104 // 3 credits
Population Health & Wellness
The components and attributes of population health are examined including economic and policy implications for population-based health promotion activities. The student will take a closer look at measures including interventions and programming that support the health of the community.

10546105 // 3 credits
Program Development, Implementation, & Evaluation
The student will acquire the skill set to develop, implement, and evaluate a health and wellness promotion project at the individual or community level. Components of health and wellness promotion program building include the needs assessment, marketing principles, the role of leadership, continuous quality improvement, economics, and collaborations to ensure a successful program.
Prerequisites: Essential Concepts for Health & Wellness 10546100, Behavior Change for Wellness 10546102, Principles of Physical Conditioning 10546103, and Nutrition for Healthy Living 10546101. Corequisite: Population Health & Wellness 10546104.

10546106 // 2 credits
Health & Wellness Practicum
Practical experience empowers the student to apply concepts from previous coursework to assist in the transition to the role of community health promoter. The practicum location is chosen in collaboration with faculty based on student interest and site availability. The student works closely with an approved preceptor and faculty to accomplish individualized learning goals.
Prerequisites: Essential Concepts for Health & Wellness 10546100, Behavior Change for Wellness 10546102, Principles of Physical Conditioning 10546103, and Nutrition for Healthy Living 10546101. Corequisites: Population Health & Wellness 10546104 and Program Development, Implementation, & Evaluation 10546105.



HANDS-ON LEARNING

HEALTH INFORMATICS AND INFORMATION MANAGEMENT

Program Code 10-530-2
2014-2015 Estimated Tuition and Fees: $8,335*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The Health Informatics and Information Management (HIIM) program prepares individuals to be job-ready for the emerging world of electronic, comprehensive health record management, and application.

Students use computer programs and established methods to securely process, compile, maintain, and report electronic health information data for patient care, reimbursement, facility planning, marketing, risk management, utilization management, quality assessment, and research.

Learn to abstract and code clinical data using proper classifications systems and analyze health records according to established protocols and standards. HIIM graduates may also be responsible for supervision of the various components of the health information system.

The HIIM program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) under the Associate Degree HIM standards. Graduates are eligible to take the national certification exam offered by the American Health Information Management Association (AHIMA) for the Registered Health Information Technician (RHIT) credential.

The Health Informatics and Information Management program is available primarily online and therefore not location dependent.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Health Informatics and Information Management graduate, to be able to:

- Demonstrate principles of integrity, ethics, and respect
- Use information technology to securely process, compile, maintain, and report electronic health information data
- Plan for the exchange of health care information by assisting providers in the utilization of portable and other devices for data entry/retrieval or medical decision-making
- Abstract and code clinical data using proper classification systems
- Analyze health records according to established protocols and standards
- Supervise various components of the health information system
- Support data collection and reimbursement systems

CAREER OPTIONS

Data Quality Analyst
Diagnosis Related Group (DRG) Coordinator
Health Information Supervisor
Health Information Technician
Medical Records Analyst
Patient Account Representative
Patient Financial Services Specialist
Quality Improvement Analyst

POTENTIAL FOR ADVANCEMENT

Health Information Manager/Director

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Health Informatics and Information Management (HIIM) program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options.

   To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.
4. Submit the Criminal Background Statement of Understanding and Release of Information form.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

Graduates of the Medical Coder technical diploma may advance into the Health Informatics and Information Management program.

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function as a Health Informatics and Information Management graduate is available in the online program orientation. It is the student's responsibility to notify the disability services coordinator in the Student Affairs Office to receive assistance.

CLINICAL-RELATED REQUIREMENTS

Prior to placement at a clinical site, students need to pay for a criminal background check and provide documentation of required healthwork to a private vendor.

Students are responsible for ensuring all requirements remain current during program enrollment.

Clinical sites have the right to refuse a student's placement based on inadequate health records, pending charges, or conviction records. Students with a criminal history may not be able to complete clinical courses. MSTC will make two attempts to place a student in an appropriate clinical experience. If MSTC is unable to place the student after two attempts, the student will be withdrawn from the clinical course and will not be able to advance in the program. Contact the program counselor for more details.

PROGRAM PROGRESSION AND COMPLETION

In order to progress in and successfully complete the program, students must:

- Repeat courses not completed with a "C" or better prior to progressing in core courses or other courses with co- or prerequisites.
- Receive a grade of "C" or better in all courses required for graduation.

Please note that the ability to repeat courses is dependent upon availability in courses. Students may be required to apply for program re-entry in order to repeat courses within the program's instructional area.

PROGRAM COURSE DESCRIPTIONS

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10152105 // 3 credits
Database Management
This course uses hands-on exercises and projects to give students experience with using databases for data storage and retrieval. To encourage students to become more sophisticated database users, background information, general relational database design concepts, and a database security overview are included.
Prerequisite: Microsoft Office-Introduction 10103106 or Applied Microsoft Office for Health 10103107.

10196191 // 3 credits
Supervision
The learner applies the skills and tools necessary to perform the functions of a contemporary frontline leader. Students engage in operational planning, analyze organizational structures, review the staffing process, employ techniques to enhance employee personal and group effectiveness, and develop control techniques to measure effectiveness in the above areas.

CURRICULUM

Term		(18 credits)
10103106	Microsoft Office-Introduction	3
10501101	Medical Terminology	3
10530111	Introduction to Health Records	3
10530125	Organization of Healthcare	2
10801136	English Composition I **-or-**	
10801195	Written Communication	3
10806177	General Anatomy & Physiology	4

Term		(18 credits)
10530122	Electronic Health Records	3
10530144	CPT Coding	3
10530182	Human Disease for the Health Professions	3
10530195	Legal Aspects of HIIM	2
10530197	ICD Diagnosis Coding	3
10806179	Advanced Anatomy & Physiology	4

Term		(17 credits)
10152105	Database Management	3
10530132	Health Data Analysis	3
10530196	Performance Improvement for Health Professions	3
10530199	ICD Procedure Coding	2
10801197	Technical Reporting	3
10809198	Intro to Psychology	3

Term		(17 credits)
10196191	Supervision	3
10530146	Private and Government Reimbursement	3
10530148	Advanced Coding	2
10530198	HIIM Clinical Experience	3
10809166	Intro to Ethics: Theory & Application	3
10809196	Intro to Sociology	3

Total Credits 70

Please Note:
- The Health Informatics and Information Management program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10501101 // 3 credits
Medical Terminology
Students focus on the component parts of medical terms: prefixes, suffixes, and word roots. Students practice formation, analysis, and reconstruction of terms. Emphasis on spelling, definition, and pronunciation. Introduction to operative, diagnostic, therapeutic, and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

10530111 // 3 credits
Introduction to Health Records
Focuses on the purpose, format, content, use, confidentiality, and administrative issues of a patient's medical history and care. Students study the use of the patient's medical record as a basis for planning patient care, documenting communication between the health care provider and any other health professional contributing to the patient's care, assisting in protecting the legal interest of the patient and the health care providers responsible for the patient's care, and documenting the care and services provided to the patient. Emphasis is placed on accuracy, organization, and confidentiality. Students will be introduced to EMR concepts.
Corequisite: Medical Terminology 10501101.

10530122 // 3 credits
Electronic Health Records
Course introduces students to the electronic health record (EHR) as a technology-based representation of health care data integration from a participating collection of varied systems for a single patient. Course covers emerging use of the electronic health record, an overview of EHR, applications, benefits and barriers to its use, vocabularies, principles of implementation, health information exchange, standards, privacy, security, information retrieval, digital libraries, and image management.
Prerequisites: Medical Terminology 10501101, General Anatomy & Physiology 10806177, and Intro to Health Records 10530111.

10530125 // 2 credits
Organization of Healthcare
This course examines the organization and delivery of health care services, external standards, regulations, initiatives, payment and reimbursement systems, and health care providers and disciplines.

10530132 // 3 credits
Health Data Analysis
Focuses on the collection, computation, analysis, and presentation of health care statistical data. Data analytics, registries, vital statistics, mandatory reporting, and research are examined.
Prerequisites: Intro Health Records 10530111, Organization of Healthcare 10530125, and Electronic Health Records 10530122.

10530144 // 3 credits
CPT Coding
Prepares learners to assign current procedural terminology (CPT) codes supported by medical documentation with entry-level proficiency. Students are familiar with and use standard coding references. Emphasis is placed on accuracy, CPT instructional notations, conventions, rules, and official coding guidelines when assigning CPT codes to case studies and actual medical record documentation. Application of modifiers to services and relationship to financial impact is also covered.
Prerequisites: Medical Terminology 10501101, General Anatomy & Physiology 10806177, Human Diseases for Health Professions 10530182, and Intro to Health Records 10530111.

10530146 // 3 credits
Private and Government Reimbursement
Introduces students to the vocabulary of private or voluntary-based health care reimbursement. Students identify and compare the varieties of private health care insurance including the advantages and disadvantages of each for the provider and for the policyholder. Learners assign Diagnosis Related Groups (DRGs), Ambulatory Payment Classifications (APCs), and Resource Utilization (RUGs) with entry-level proficiency using computerized encoding and grouping software. HIPAA guidelines are utilized throughout.
Prerequisites: ICD Diagnosis Coding 10530197, ICD Procedure Coding 10530199, and CPT Coding 10530144.

10530148 // 2 credits
Advanced Coding
This course builds on basic coding knowledge and skills by providing the student with coding of clinical case studies and actual medical records. Students access, review, and code electronic medical records from the Academic EHR System. Students perform data quality reviews to validate code assignment and compliance with reporting requirements.
Prerequisites: ICD Diagnosis Coding 10530197, ICD Procedure Coding 10530199, and CPT Coding 10530144. Corequisite: Private and Government Reimbursement 10530146.

10530182 // 3 credits
Human Disease for the Health Professions
This course focuses on the common diseases of each body system as encountered in all types of health care settings by health information professionals. Emphasis is placed on understanding the etiology (causes), signs and symptoms, diagnostic tests, and treatment (including pharmacologic) of each disease.
Prerequisites: Medical Terminology 10501101 and General Anatomy & Physiology 10806177.

10530195 // 2 credits
Legal Aspects of HIIM
Focuses on regulations for the content, access, disclosure, privacy, confidentiality, security, retention, and destruction of health information. Includes an overview of the U.S. legal system.
Corequisite: Intro to Health Records 10530111.

10530196 // 3 credits
Performance Improvement for Health Professions
Examines health care performance improvement systems. Includes performance assessment, measurement, and improvement as well as patient safety, risk management, utilization management, and medical staff credentialing.
Prerequisites: Intro to Health Records 10530111, Organization of Healthcare 10530125, and Electronic Health Records 10530122.

10530197 // 3 credits
ICD Diagnosis Coding
Prepares students to assign ICD diagnosis codes supported by medical documentation with entry-level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD diagnosis codes to case studies and actual medical record documentation.
Prerequisites: Medical Terminology 10501101, Intro to Health Records 10530111, and General Anatomy & Physiology 10806177. Corequisite: Human Disease for the Health Professions 10530182.

10530198 // 3 credits
HIIM Clinical Experience
This course provides a blend of supervised clinical experience in health care facilities with some online work. Students will apply skills and knowledge gained from previous courses.
Prerequisites Organization of Healthcare 10530125, Intro to Health Records 10530111, Electronic Health Record 10530122, CPT Coding 10530144, ICD Diagnosis Coding 10530197, and ICD Procedure Coding 10530199. Corequisites: Private & Government Reimbursement 10530146 and Advanced Coding 10530148.

10530199 // 2 credits
ICD Procedure Coding
Prepares students to assign ICD procedure codes supported by medical documentation with entry-level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD procedure codes to case studies and actual medical record documentation.
Prerequisites: Medical Terminology 10501101, Intro to Health Records 10530111, General Anatomy & Physiology 10806177, and Human Disease for the Health Professions 10530182.

INDUSTRIAL MECHANICAL TECHNICIAN

Program Code 10-462-1
2014-2015 Estimated Tuition and Fees: $11,105*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

Always in demand, industrial mechanical technicians maintain, repair, and operate machinery and equipment in an industrial environment. You will be introduced to industrial mechanical maintenance utilizing both classroom and lab experiences. These include power transmission components and their applications, rigging and material handling techniques, hydraulics/pneumatics, bearings and their uses in industry, welding, machining, lubrication, pipefitting, fluid process pumps, electrical motor controls, and programmable logic controls. You will learn to align, maintain, repair, and replace machine components as well as gain understanding of predictive and preventive maintenance, all with a focus on safety in the workplace.

The Industrial Mechanical Technician program is offered at Wisconsin Rapids Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as an Industrial Mechanical Technician graduate, to be able to:

- Execute the services of an effective preventative maintenance program for complex manufacturing processes and industrial machinery
- Use industry accepted and standardized terminology and methods to communicate effectively with co-workers, supervisors, subordinates, engineers, and vendors
- Diagnose, service, and repair industrial machinery and manufacturing equipment using appropriate tools, materials, and methods
- Select appropriate mathematic and scientific principles to solve complex problems
- Display an ability to work safely and effectively as individuals and as members of cooperative teams
- Plan, specify, and execute the proper installation of new mechanical, hydraulic, and pneumatic equipment into an industrial system
- Choose suitable methods and proper technology to move and position industrial equipment and materials in a safe and effective manner

CAREER OPTIONS

Industrial and Construction Apprenticeships
Machine Operator
Maintenance Technician
Predictive Maintenance Technician
Service Technician

POTENTIAL FOR ADVANCEMENT

Field Service Technician
Industrial Sales Representative
Journeyperson: Millwright, Pipefitter, Sheet Metal
Machine Assembler/Installer
Maintenance Machinist
Maintenance Scheduler
Maintenance Supervisor
Service Technician Specialist

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Industrial Mechanical Technician program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math–Accuplacer score of 65
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

Protective Clothing
Students are required to wear safety glasses at all times in the lab. Acquiring safety glasses is the responsibility of the student.

PROGRAM COURSE DESCRIPTIONS

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10462102 // 2 credits
Bearings & Lubrication Systems
Students are presented with information pertaining to the basic functions of bearing surfaces, bearing inspections, analysis of bearing failures, and the importance of preventative maintenance.

10462103 // 2 credits
Intro to Mechanical Technology
This course provides a basic introduction to the mechanical principles and components used in industrial machinery and equipment. Learners gain knowledge in safety, mechanical drive components, bearings, hydraulics, and elementary maintenance concepts. Students will demonstrate competence in these areas through the performance of various laboratory and shop activities.

10462104 // 3 credits
Fluid Process Systems
Course provides a "hands-on" approach to the study of fluid handling systems. A wide variety of system components including pumps, piping, seals and packing, flow control devices, flow measuring devices, and pressure vessels will be studied. System design considerations for fluid media temperature, pressure, specific gravity, viscosity, solids concentrations, and volume requirements will be analyzed. An introduction to refrigeration and air conditioning will provide the student with a basic understanding of these systems.

10462106 // 4 credits
Mechanical Power Transmission
A study of the systems and components that transmit power from the prime mover through the system. Gear trains, linkages, clutches, couplings, and flexible drives are evaluated mathematically in lab situations. *Prerequisite: Admission to Industrial Mechanical Technician 104621 program.*

10462107 // 2 credits
Industrial Safety
This course provides an overview of safety, health, and environmental issues as they relate to industry. Various types of hazards and the controls and equipment used to reduce risks from hazards will be discussed. Focus will be placed on understanding the Occupational Safety and Health Administration (OSHA) and its function as well as other regulatory and enforcement agencies associated with industrial safety, health, and the environment.

10462108 // 3 credits
Industrial Automation
This course introduces the fundamentals of industrial motor controls, relay logic, ladder diagrams, industrial automation, and integrated manufacturing systems. The purpose of the course is to familiarize students with the terminology, capabilities, applications, and limitations of automated industrial equipment and systems.

CURRICULUM

Term		(17 credits)
10103106	Microsoft Office-Introduction	3
10462102	Bearings & Lubrication Systems	2
10462103	Intro to Mechanical Technology	2
10605105	Electrical Circuits I	3
10801136	English Composition I **-or-**	
10801195	Written Communication	3
10804118	Intermediate Algebra with Applications	4

Term		(16 credits)
10462107	Industrial Safety	2
10462110	Material Handling	2
10605117	Programmable Logic Controllers-Beginning	3
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3
10804196	Trigonometry with Applications	3
10809198	Intro to Psychology	3

Term		(18 credits)
10462104	Fluid Process Systems	3
10462106	Mechanical Power Transmission	4
10462114	Metals & Machining	3
10605127	Electrical Machines	3
10623104	Mechanical Drafting Concepts	3
10623106	Intro to AutoCAD	2

Term		(17 credits)
10462108	Industrial Automation	3
10462116	Metal Fabrication	3
10462120	Industrial Hydraulics & Pneumatics	3
10806154	General Physics 1	4
10809143	Microeconomics **-or-**	
10809144	Macroeconomics	3
	Elective	1

Total Credits 68

Please Note:
- The Industrial Mechanical Technician program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10462110 // 2 credits
Material Handling
This course introduces the concepts and equipment that transport solid materials in the industrial production process. Various types of equipment including rigging, cranes, mechanical conveyors, pneumatic conveyors, elevators, and lift trucks will be discussed. Practical applications and use guidelines will be presented to promote the safe and efficient utilization of this type of material handling equipment.

10462114 // 3 credits
Metals & Machining
A two-part class which introduces the basics of metal science and machine shop practice. Metallurgical concepts of steel and iron production, properties of metals, testing of metals, carbon and its rule, heat-treating, steel designations, and cast iron and non-ferrous metals are introduced. Students will participate in lab exercises examining the properties of metal, an introduction to machine shop practices of safety, measurement, and machining through the use of hand tools, drilling machines, saws, and engine lathes. Students will be introduced to these concepts by both classroom presentation and hands-on shop experiences.
Prerequisite: Admission to Automotive Technician 324042, Diesel & Heavy Equipment Technician 324121, Industrial Mechanical Technician 104621, Instrumentation & Controls Engineering Technology 106054, Solar Electric Technician 104822, or Welding 314421 programs.

10462116 // 3 credits
Metal Fabrication
An introduction to structural steel and plate fabrication, sheet metal fabrication, and basic electric arc and oxyacetylene welding. Fabrication techniques, metal selection, layout, cutting, bending, drilling, threading, and joining will be presented. Information will be presented to the student followed by lab activities to provide a hands-on experience. The emphasis will be placed on developing an understanding of the tools, techniques, safe work habits, and the application of metal fabrication skills.
Prerequisite: Admission to Automotive Technician 324042, Diesel & Heavy Equipment Technician 324121, Industrial Mechanical Technician 104621, Instrumentation & Controls Engineering Technology 106054, Machine Tool Technician 324201, Solar Electric Technician 104822, Sustainable Heating & Cooling Technician 104831, or Welding 314421 programs.

10462120 // 3 credits
Industrial Hydraulics & Pneumatics
Basic principles of hydraulics and pneumatics are studied. Covers the advantages, disadvantages, and inherent problems with these systems. The principles of operation and the constructional features of pumps, motors, valves, seals, packing, and conductors as well as the physical properties of liquids are also covered. Students learn to identify various parts of a circuit and to analyze them for their use.
Prerequisite: Intermediate Algebra with Applications 10804118.

10605105 // 3 credits
Electrical Circuits I
An introduction to AC/DC electricity and the physical laws that apply to electronic circuits. Direct Current (DC) covers basic definitions of voltage, current, and resistance and analysis of series and parallel resistive circuits. Alternating Current (AC) includes an introduction to AC generation, capacitors, inductors, and transformers and their applications in electronic circuits. Approximately 50% of the course is spent in the laboratory applying the principles and theory presented in the classroom.
Corequisite: Intermediate Algebra with Applications 10804118.

10605117 // 3 credits
Programmable Logic Controllers-Beginning
An overview of programmable logic controllers (PLCs) which provides a foundation of knowledge of the programming techniques, operation, and maintenance of PLCs used in typical industrial automation.

10605127 // 3 credits
Electrical Machines
Designed to teach fundamentals of generators and motors. Covers DC and AC generators and motors.
Prerequisite: Electrical Circuits I 10605105 or Intro to Electronics 10605108.

10623106 // 2 credits
Intro to AutoCAD
This is an introductory course in computer aided drafting (CAD) using AutoCAD software. It provides foundation skills in using CAD software to create and print two dimensional technical drawings. This course is available to students in any program. Computer skills and prior knowledge of drawing/drafting techniques is recommended.

STRONG JOB PLACEMENT

INSTRUMENTATION & CONTROLS ENGINEERING TECHNOLOGY

Program Code 10-605-4
2014-2015 Estimated Tuition and Fees: $11,067*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

An indispensable asset in todays high tech manufacturing environments is a person that can measure and control industrial processes. This program trains you to understand and operate instrumentation that monitors and directs these processes, including pressure, flow, temperature, level, and material composition. Learn to use a variety of different forms of instrumentation such as electrical, electronic, pneumatic, hydraulic, mechanical, and computerized control devices.

This program teaches you to design, install, calibrate, maintain, troubleshoot, and repair these control systems. You must learn to understand the basic laws of physical sciences and have the mathematical expertise to apply those laws to practical situations.

The Instrumentation & Controls Engineering Technology program is offered at Wisconsin Rapids Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as an Instrumentation & Controls Engineering Technology graduate, to be able to:

- Troubleshoot, repair, and calibrate pneumatic/electronic and analog/digital instruments used to measure and control pressure, level, flow, temperature, and pH
- Effectively interpret technical manuals, P + ID's, loopsheets, and cross reference data books to analyze, troubleshoot, and tune automatic process control loops
- Configure digital communication devices
- Solve problems using verbal and written communication skills as an individual or part of a team in supervised and unsupervised conditions
- Operate oscilloscopes, multimeters, manometers, and other related measuring devices
- Calculate values of inputs, setpoints, and outputs of open and closed loops with various values and combinations of proportional, integral, and derivative
- Create two dimensional drawings using AutoCAD
- Design, program, and troubleshoot programmable logic control (PLC) programs

CAREER OPTIONS

Apprenticeship Programs:
Instrumentation, Electrician, Pipefitter
Controls Technician
Instrument Technician
Plant Maintenance Technician

POTENTIAL FOR ADVANCEMENT

Control Systems Technician
Instrumentation Design Engineer
Instrumentation Sales and Management
Instrumentation Start-Up Engineer
Instrumentation Supervisor
Journeyperson: Instrument Technician, Electrician, Pipefitter

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Instrumentation & Controls Engineering Technology program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading–Accuplacer score of 55
   - Sentence Skills–Accuplacer score of 60
   - Math–Accuplacer score of 65
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
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PROGRAM COURSE DESCRIPTIONS

10462114 // 3 credits
Metals & Machining
A two-part class which introduces the basics of metal science and machine shop practice. Metallurgical concepts of steel and iron production, properties of metals, testing of metals, carbon and its rule, heat-treating, steel designations, and cast iron and non-ferrous metals are introduced. Students will participate in lab exercises examining the properties of metal, an introduction to machine shop practices of safety, measurement, and machining through the use of hand tools, drilling machines, saws, and engine lathes. Students will be introduced to these concepts by both classroom presentation and hands-on shop experiences.
Prerequisite: Admission to Automotive Technician 324042, Diesel & Heavy Equipment Technician 324121, Industrial Mechanical Technician 104621, Instrumentation & Controls Engineering Technology 106054, Solar Electric Technician 104822, or Welding 314421 programs.

10462116 // 3 credits
Metal Fabrication
An introduction to structural steel and plate fabrication, sheet metal fabrication, and basic electric arc and oxyacetylene welding. Fabrication techniques, metal selection, layout, cutting, bending, drilling, threading, and joining will be presented. Information will be presented to the student followed by lab activities to provide a hands-on experience. The emphasis will be placed on developing an understanding of the tools, techniques, safe work habits, and the application of metal fabrication skills.
Prerequisite: Admission to Automotive Technician 324042, Diesel & Heavy Equipment Technician 324121, Industrial Mechanical Technician 104621, Instrumentation & Controls Engineering Technology 106054, Machine Tool Technician 324201, Solar Electric Technician 104822, Sustainable Heating & Cooling Technician 104831, or Welding 314421 programs.

10605100 // 4 credits
Process Measurements I
Reviews basic principles and calibration standards and practices developed in Instrument Mechanics. Common sensing devices and components employed for the measurement of pressure, temperature, flow, level, and their related phenomena are studied.
Prerequisite: Instrument Mechanics 10605102 with a grade of "C" or better.

10605102 // 3 credits
Instrument Mechanics
An introductory course into instrumentation emphasizing a functional and mathematical approach to the use and study of various pneumatic instruments and principles. Identifies the duties and functions of instruments and their components. Calculations of springs, force balance, moment balance, and an introduction to pressure measurement and controllers.
Corequisite: Intermediate Algebra with Applications 10804118.

10605104 // 3 credits
Process Measurements II
This course covers analog and digital electronic transmitters and controllers, pulp and papermaking, pH, conductivity, ORP, and concludes with a study of basic nuclear theory.
Prerequisites: Process Measurements 1 10605100 and Instrument Mechanics 10605102.

10605105 // 3 credits
Electrical Circuits I
An introduction to AC/DC electricity and the physical laws that apply to electronic circuits. Direct Current (DC) covers basic definitions of voltage, current, and resistance and analysis of series and parallel resistive circuits. Alternating Current (AC) includes an introduction to AC generation, capacitors, inductors, and transformers and their applications in electronic circuits. Approximately 50% of the course is spent in the laboratory applying the principles and theory presented in the classroom.
Corequisite: Intermediate Algebra with Applications 10804118.

CURRICULUM

Term		(18 credits)
10605102	Instrument Mechanics	3
10605105	Electrical Circuits I	3
10623106	Intro to AutoCAD	2
10801136	English Composition I **-or-**	
10801195	Written Communication	3
10804118	Intermediate Algebra with Applications	4
10809198	Intro to Psychology	3

Term		(17 credits)
10462114	Metals & Machining **-or-**	
10462116	Metal Fabrication	3
10605110	Electrical Circuits II	3
10605117	Programmable Logic Controllers - Beginning	3
10623100	Problem Solving & Critical Thinking	1
10804196	Trigonometry with Applications	3
10806154	General Physics 1	4

Term		(16 credits)
10605100	Process Measurements I	4
10605115	Basic Electronics	3
10605118	Programmable Logic Controllers - Advanced	3
10809143	Microeconomics**-or-**	
10809144	Macroeconomics	3
10804195	College Algebra with Applications	3

Term		(17 credits)
10605104	Process Measurements II	3
10605116	Instrumentation Electronics	4
10605171	Process Control	4
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3
10801199	Employment Strategies	3

Total Credits 68

Please Note:
- The Instrumentation & Controls Engineering Technology program has an August start date. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10605110 // 3 credits
Electrical Circuits II
This course continues the study of AC/DC circuits started in Electrical Circuits I. Advanced DC circuit analysis techniques such as Thevenin's Theorem and Node analysis are introduced. AC circuit analysis includes discussion on voltage and power theorems used in the analysis of circuits consisting of both resistance and reactance. The complex plane and construction of phase diagrams are also discussed. The course concludes with an introduction to electronic filter circuits used in transmission and communication equipment. Approximately 50% of the course is spent in the laboratory applying the principles and theory presented in the classroom.
Prerequisite: Electrical Circuits I 10605105 with a grade of "C" or better. Corequisite: Trigonometry with Applications 10804196.

10605115 // 3 credits
Basic Electronics
Presents semi-conductor principles with emphasis on practical applications. After reviewing diode and transistor characteristics, bias stabilizing techniques are studied, followed by an introduction to transistor amplifiers.
Corequisite: Electrical Circuits II 10605110.

10605116 // 4 credits
Instrumentation Electronics
A basic course in industrial electronics involving devices and circuits that relate to the field of instrumentation. Includes a basic review of electronic and electrical fundamentals. Additional topics include power supplies, operational amplifiers, servo mechanisms, relay ladder logic, PLCs, motor control devices, variable frequency drive, single and 3 phase, 110 volt, 220 volt, and 480 volt generation and usage.
Prerequisite: Basic Electronics 10605115 with a grade of "C" or better.

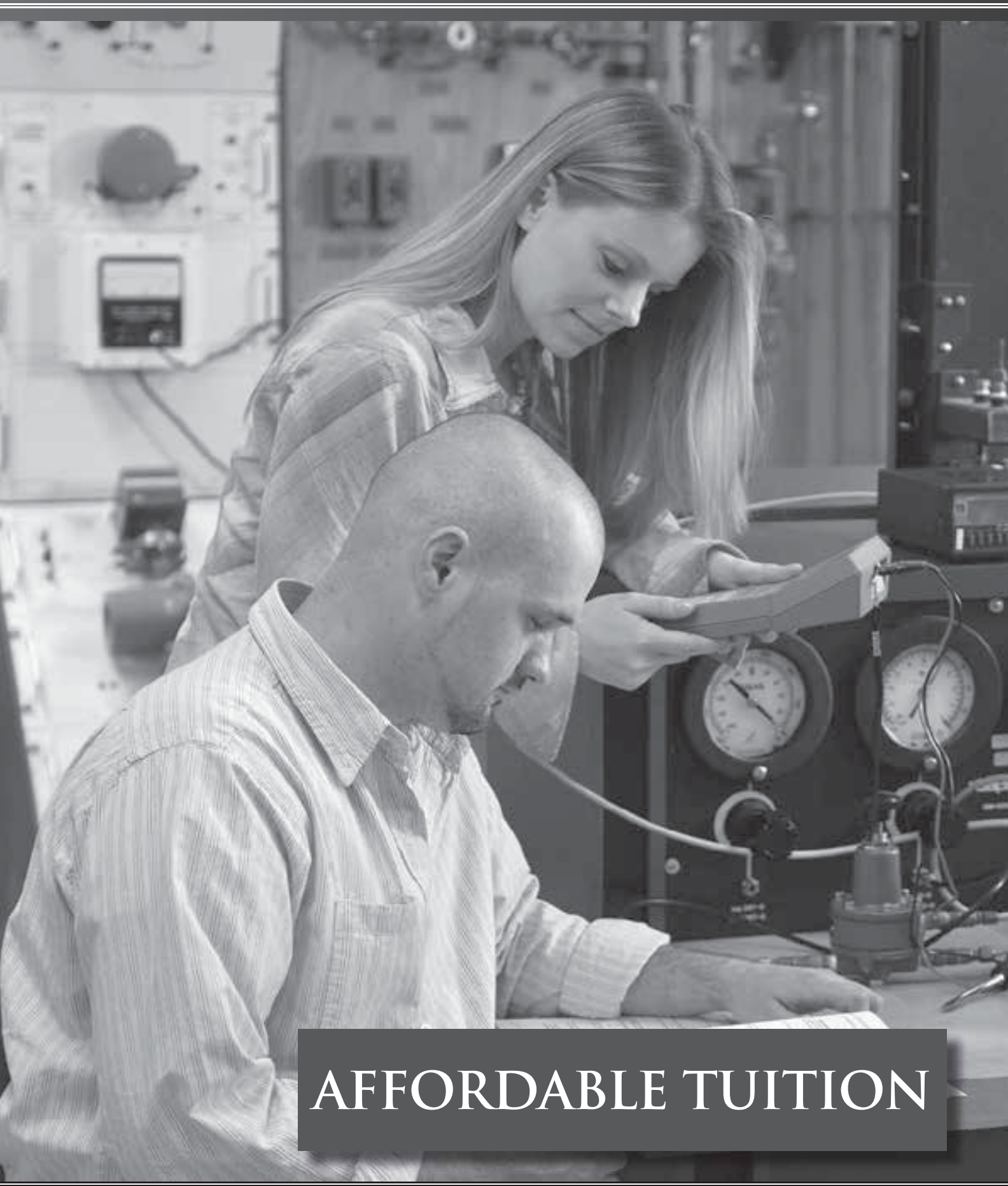
10605117 // 3 credits
Programmable Logic Controllers-Beginning
An overview of programmable logic controllers (PLCs) which provides a foundation of knowledge of the programming techniques, operation, and maintenance of PLCs used in typical industrial automation.

10605118 // 3 credits
Programmable Logic Controllers-Advanced
This lab-intensive course is a continuation of the beginning PLC course designed to build advanced PLC skills. Activities in advanced programming techniques, motor control and operator interfaces may be included. This course may be offered for 1-3 credits. Check with the course instructor for specific competencies to be covered each semester.
Prerequisite: Programmable Logic Controllers-Beginning 10605117 or consent of instructor.

10605171 // 4 credits
Process Control
Introduces the concept of automatic process control on the instrument technician level. Reviews principles of force/moment balance and feedback concepts. Studies two position control, feedback/feedforward control, and process characteristics related to process gain, dead time, time constants, and process capacity. Studies controller functions and effects such as proportional, integral, and derivative, and how different combinations of each cause controller outputs and inputs to respond in open and closed loops. Practices digital controller configuration and loop tuning for level, pressure, flow, and temperature.
Prerequisites: Instrument Mechanics 10605102 and Process Measurements I 10605100.

10623100 // 1 credit
Problem Solving & Critical Thinking
Introductory course in problem setup, organization, and solution. Identification of given and unknown values, equation setup, unit conversions, and use of significant figures. Introduction to physical science; working with units of force, area, volume, time, and distance in metric and imperial systems. This course is designed to help you be successful in technical and engineering classes and should be taken during your first semester of enrollment.

10623106 // 2 credits
Intro to AutoCAD
This is an introductory course in computer aided drafting (CAD) using AutoCAD software. It provides foundation skills in using CAD software to create and print two dimensional technical drawings. This course is available to students in any program. Computer skills and prior knowledge of drawing/drafting techniques is recommended.



AFFORDABLE TUITION

IT NETWORK SPECIALIST

Program Code 10-150-2
2014-2015 Estimated Tuition and Fees: $12,492*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

Computers have become essential tools in almost every type of activity in virtually every form of business. To increase efficiency of their use, LANs (Local Area Networks) and WANs (Wide Area Networks) are used to interconnect computers and their supporting devices to enable data and resources to be shared. As a result, network specialists who install and ensure efficient operation of LANs and WANs are in high demand.

The network specialist administers and supports personal computer and network environments that include installation, troubleshooting, analysis, and repair.

The IT Network Specialist program is offered at the Stevens Point and Wisconsin Rapids campuses.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as an IT Network Specialist graduate, to be able to:

- Design and implement the hardware and software aspects of a basic network
- Install, configure, administer, maintain, and enhance a network operating system and client environment
- Analyze and solve network problems using a structured problem solving process
- Demonstrate effective customer service
- Develop and interpret a variety of technical documentation manuals
- Perform professionally and effectively in team, individual, and cross-cultural work settings
- Demonstrate knowledge of appropriate IT concepts and terminology when communicating with clients, co-workers, team members, and management

CAREER OPTIONS

Network Administrator
Network Infrastructure Architect
Hardware Support Specialist
Help Desk Specialist
PC Troubleshooter

POTENTIAL FOR ADVANCEMENT

Information Systems Director
Project Manager
Senior Network Administrator

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the IT Network Specialist program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

Graduates of the Server Automation & Mobile Technology Synchronization technical diploma may advance into the IT Network Specialist program.

For more information about the Server Automation and Mobile Technology Synchronization program, call 715.422.5460.

PROGRAM COURSE DESCRIPTIONS

10102101 // 3 credits
Intro to Business
An introduction to what a business is, how it operates, and how it is managed. Students will identify forms of ownership and the processes used in production and marketing, finance, personnel, and management in business operations.

10102103 // 3 credits
Business Law & Ethics
This course introduces the student to basic ethical theories and value systems. Students will apply these perspectives to moral issues, problems, and situations which arise within the business environment. Emphasis will be placed on how the applicable laws are being interpreted.

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10105160 // 3 credits
Business Law
Examines the classifications of law, elements of legal contracts, and business applications. Negotiable instruments, sales and bailment contracts, principal-agent relations, and real estate law are also explained. Ethical practices are emphasized rather than narrow, legal definitions.

10150101 // 3 credits
Network Fundamentals
This CISCO Academy based course develops skill in PC hardware and software troubleshooting including installation of hardware components and problem determination and correction of malfunctioning hardware and software.
Corequisite: Windows Operating Systems 10103102 or Microsoft Office-Introduction 10103106.

10150110 // 3 credits
IT Troubleshooting-Beginning
This CISCO Academy based course provides an introduction to networking that includes terminology, basic concepts of planning, designing, implementing, troubleshooting, and administration. Topics included are peer-to-peer versus server-based networks, network topologies, media, interface cards, protocols, and architectures. An in-depth coverage of the OSI model is included.
Prerequisite: Network Fundamentals 10150101.

10150111 // 3 credits
IT Troubleshooting-Intermediate
This CISCO Academy based course expands upon basic network concepts covered in IT Troubleshooting-Beginning. Topics include planning a network upgrade, configuration and management of networking devices, addressing structure, routing, ISP services, and troubleshooting network problems.
Prerequisites: IT Troubleshooting-Beginning 10150110 and Network Fundamentals 10150101.

10150120 // 3 credits
Network Administration-Beginning
This course develops skill in the design, installation, administration, and management of computer networks. Topics include network design, installation and configuration of a commonly used Network Operating System, service packs and updated drivers, user accounts, groups, profiles and policies, file system security, printer management, application software installation, backup, and recovery.
Prerequisite: Network Fundamentals 10150101.

CURRICULUM

Term		(16 credits)
10102101	Intro to Business	3
10103106	Microsoft Office-Introduction	3
10150101	Network Fundamentals	3
10152101	Programming Logic-Beginning	4
10801136	English Composition I **-or-**	
10801195	Written Communication	3

Term		(18-19 credits)
10102103	Business Law & Ethics **-or-**	
10105160	Business Law	3
10150110	IT Troubleshooting-Beginning	3
10150120	Network Administration-Beginning	3
10152170	Systems Analysis	3
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3
10804107	College Mathematics **-or-**	3
10804118	Intermediate Algebra with Applications **-or-**	4
10804189	Introductory Statistics	3

Term		(17 credits)
10150121	Network Administration-Intermediate	3
10150130	Network Operating Systems	3
10150160	Information Security I	3
10154101	IT Customer Support	2
10809144	Macroeconomics	3
10809122	Intro to American Government **-or-**	
10809172	Introduction to Diversity Studies **-or-**	
10809196	Intro to Sociology	3

Term		(17 credits)
10150111	IT Troubleshooting-Intermediate	3
10150141	Supervised Field Experience	2
10150161	Advanced Networking Projects	3
10150165	Network Server Scripting	3
10809143	Microeconomics	3
10809188	Developmental Psychology **-or-**	
10809198	Intro to Psychology	3

Total Credits 68-69

Please Note:
- The IT Network Specialist program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10150121 // 3 credits
Network Administration-Intermediate
This course expands upon the administration skills needed for successful management of a network operating system in a business environment. Topics include installation and configuration of a Network Operating System, monitoring and performance tuning, monitoring and analyzing network traffic, licensing, network devices, DNS, FTP, web services, and directory services.
Prerequisite: Network Administration-Beginning 10150120.

10150130 // 3 credits
Network Operating Systems
This course develops skill in the installation, setup, management, usage, and comparison of various network operating systems and network devices.
Prerequisite: Network Administration-Beginning 10150120.

10150141 // 2 credits
Supervised Field Experience
Integrates networking skill developed in classroom study with specific occupational experiences at local employment sites and develops work behavior appropriate to the computer information systems environment.
Prerequisite: Completion of at least 20 credits in occupational specific IT Network Specialist courses or approval by program instructor.

10150160 // 3 credits
Information Security I
This course introduces students to computer network vulnerabilities and threats. Topics include network security terms and concepts, technology organization, and the legal and ethical issues associated with network security, techniques, and tools to harden operating systems against attacks, and basic configuration of network security devices.
Prerequisite: Network Fundamentals 10150101 and IT Troubleshooting-Beginning 10150110 or equivalent work experience and consent of instructor.

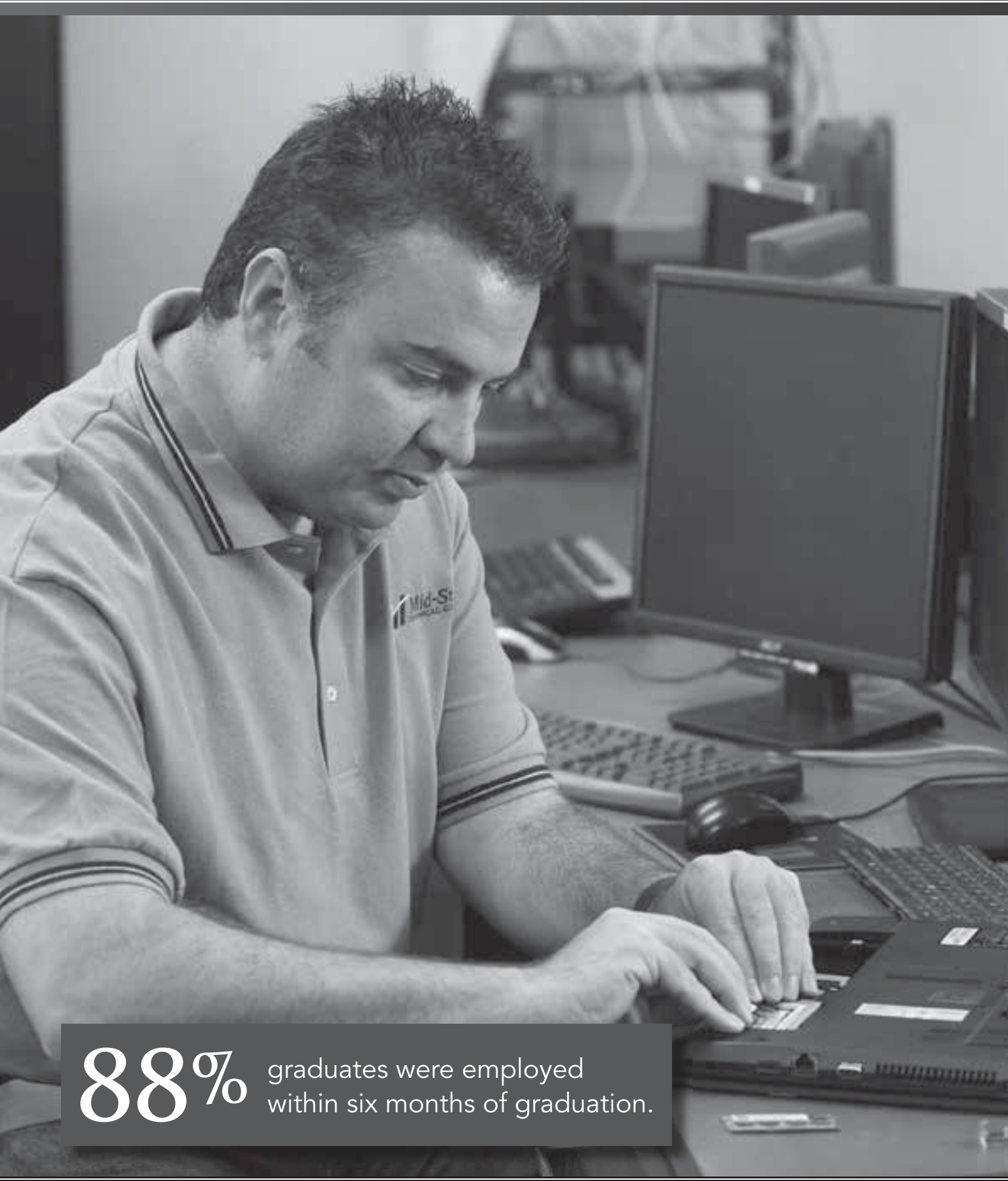
10150161 // 3 credits
Advanced Networking Projects
This course goes into greater depth with the concepts, techniques, and tools introduced in Information Security I. New tools and techniques for detecting, analyzing, assessing, and defending against network attacks is presented in the context of properly securing a network. The course emphasizes network attack and defense methodologies with lab work focused on learning and using network attack and defense techniques and tools. The role of network device configuration is explored.
Prerequisite: Information Security I 10150160.

10150165 // 3 credits
Network Server Scripting
Provides best practices and techniques in Linux and Windows shell and command line scripting.
Prerequisite: Network Administration-Beginning 10150120.

10152101 // 4 credits
Programming Logic-Beginning
This course introduces students to fundamental computer programming logic and terminology. Students utilize the concepts of structures, pseudocode, and modularization in solving problems. The students then uses these tools to program in a current programming language.
Corequisite: Windows Operating Systems 10103102 or Microsoft Office-Introduction 10103106.

10152170 // 3 credits
Systems Analysis
A practical course which provides an overview of the Systems Development Life Cycle and then focuses in on the analysis phase of real world computer and manual systems. Students learn concepts, techniques, and tools to aid in the analysis of existing systems, the identification of user requirements, and the design of database files. Both written and oral communications are emphasized. Most of the work is done in groups.
Prerequisite: Programming Logic-Beginning 10152101.

10154101 // 2 credits
IT Customer Support
Develops skill in serving the needs of computer information system customers and documenting systems and procedures.
Prerequisites: Systems Analysis 10152170 and Written Communication 10801195 or English Composition I 10801136 or consent of instructor.


88% graduates were employed
within six months of graduation.

IT SOFTWARE DEVELOPER

Program Code 10-152-1
2014-2015 Estimated Tuition and Fees: $12,492*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

Digital devices are pervasive in all aspects of our lives, both at work and socially. The demand for professionals who possess the ability to design, develop, and implement software to run a broad range of computing devices is at an all-time high. As an IT Software Developer student you will learn the skills to allow you to develop and maintain software and software systems that run on a broad variety of computing devices.

Training prepares you to design and develop programs to meet the broad spectrum of business needs. Courses provide instruction that ensures graduates are able to create software to run on all platforms including network servers, desktop workstations, web pages, web services, and Android and iOS mobile devices. In addition, graduates are well prepared to analyze and design database systems to provide essential business data to consumers.

The IT Software Developer program is offered at the Stevens Point and Wisconsin Rapids campuses.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as an IT Software Developer graduate, to be able to:

- Design and write structured programs in current languages that execute in multi-platform environments
- Analyze and solve business problems using a structured problem solving process
- Perform professionally and effectively in team, individual, and cross-cultural work settings
- Design and implement database systems
- Demonstrate knowledge of appropriate IT concepts and terminology when communicating with clients, co-workers, team members, and management

CAREER OPTIONS

Application Engineer
Data Analyst
Database Programmer
Mobile Applications Developer
Software Technician
Systems Programmer
Web Designer
Web Developer

POTENTIAL FOR ADVANCEMENT

Information Systems Director
Operations Manager
Product Development Director
Senior Software Developer
Software Architect
Staff Specialist
Support Manager
Systems Specialist
Webmaster

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the IT Software Developer program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math–Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

PROGRAM COURSE DESCRIPTIONS

10102101 // 3 credits
Intro to Business
An introduction to what a business is, how it operates, and how it is managed. Students will identify forms of ownership and the processes used in production and marketing, finance, personnel, and management in business operations.

10102103 // 3 credits
Business Law & Ethics
This course introduces the student to basic ethical theories and value systems. Students will apply these perspectives to moral issues, problems, and situations which arise within the business environment. Emphasis will be placed on how the applicable laws are being interpreted.

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10105160 // 3 credits
Business Law
Examines the classifications of law, elements of legal contracts, and business applications. Negotiable instruments, sales and bailment contracts, principal-agent relations, and real estate law are also explained. Ethical practices are emphasized rather than narrow, legal definitions.

10150101 // 3 credits
Network Fundamentals
This CISCO Academy based course develops skill in PC hardware and software troubleshooting including installation of hardware components and problem determination and correction of malfunctioning hardware and software.
Corequisite: Windows Operating Systems 10103102 or Microsoft Office-Introduction 10103106.

10150151 // 2 credits
Implementing PC Security
The course presents personal computer security awareness concepts, principles, and implementation procedures. The value of securing personal and organizational data along with local, state, and federal legislation pertaining to privacy is discussed. Liability of individuals and institutions in maintaining data confidentiality and integrity is reviewed. The concepts of risk management, security policies, common threats, and threat countermeasures is introduced. Best practices in access control through password policies and other basic security measures is also introduced.
Prerequisite: Windows Operating Systems 10103102, Microsoft Office-Introduction 10103106, or consent of instructor.

10152101 // 4 credits
Programming Logic-Beginning
This course introduces students to fundamental computer programming logic and terminology. Students utilize the concepts of structures, pseudocode, and modularization in solving problems. The students then uses these tools to program in a current programming language.
Corequisite: Windows Operating Systems 10103102 or Microsoft Office-Introduction 10103106.

CURRICULUM

Term		**(16 credits)**
10102101	Intro to Business	3
10103106	Microsoft Office-Introduction	3
10150101	Network Fundamentals	3
10152101	Programming Logic-Beginning	4
10801136	English Composition I **-or-**	
10801195	Written Communication	3
Term		**(18-19 credits)**
10102103	Business Law & Ethics **-or-**	
10105160	Business Law	3
10150151	Implementing PC Security	2
10152102	Programming Logic-Intermediate	4
10152170	Systems Analysis	3
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3
10804107	College Mathematics **-or-**	3
10804118	Intermediate Algebra with Applications **-or-**	4
10804189	Introductory Statistics	3
Term		**(16 credits)**
10152150	Web Programming	3
10152156	Relational Database Development	2
10152163	Introductory Android Development **-or-**	
10152164	Introductory iOS Development	3
10152171	Systems Design	3
10154101	IT Customer Support	2
10809144	Macroeconomics	3
Term		**(18 credits)**
10152155	Web Data Management	3
10152165	Intermediate Android Development **-or-**	
10152166	Intermediate iOS Development	3
10152172	Systems Implementation	3
10809143	Microeconomics	3
10809122	Intro to American Government **-or-**	
10809172	Introduction to Diversity Studies **-or-**	
10809196	Intro to Sociology	3
10809188	Developmental Psychology **-or-**	
10809198	Intro to Psychology	3
	Total Credits 68-69	

Please Note:
- The IT Software Developer program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10152102 // 4 credits
Programming Logic-Intermediate
Building on previous learning of structured programming, this class introduces more complex algorithms and data structures. Programs are written that involve concepts such as arrays, data validation, data manipulation, and beginning object oriented concepts.
Prerequisite: Programming Logic-Beginning 10152101.

10152150 // 3 credits
Web Programming
Using client-side technologies, students will create dynamic web sites. Tools may include elements of the following languages: HTML, CSS, JavaScript, and XML.
Prerequisite: Programming Logic-Intermediate 10152102.

10152155 // 3 credits
Web Data Management
Using server-side technologies the student will create and demonstrate data connectivity to the web. Tools may include elements of the following languages: HTML, JavaScript, SQL, and PHP. The students will retrieve data for display to the web browser and capture data for storage from a web-based form.
Prerequisite: 10152150 Web Programming.

10152156 // 2 credits
Relational Database Development
Provides training for students in the concepts of relational database design and development. Topics covered include relational normalization, referential integrity, proper use of indexing, staging design patterns, T-SQL coding, and stored procedures.
Prerequisite: Programming Logic-Intermediate 10152102.

10152163 // 3 credits
Introductory Android Development
The course provides training in introductory mobile device development for devices running the Android operating system. Topics include platform and SDK setup, Java overview, menu creation, responding to gestures, screen layout, error handling, debugging, image handling, text files, screen state, dialog views, list views, and XML files.
Prerequisite: Programming Logic-Intermediate 10152102.

10152164 // 3 credits
Introductory iOS Development
Course provides training in the following topics: Overview of Xcode and Cocoa Touch libraries and proper setup, Objective C training, View creation, List Views, Scroll Views, Image Views, auto layout, Storyboarding, multi-view navigation, core data, and core graphics.
Prerequisite: Programming Logic-Intermediate 10152102.

10152165 // 3 credits
Intermediate Android Development
Course provides training in advanced Java concepts including interfaces, anonymous methods, and recursive techniques; and training in gesture recognition, data persistence, navigation, and action bar customization.
Prerequisite: Introductory Android Development 10152163.

10152166 // 3 credits
Intermediate iOS Development
Course provides advanced coverage of Objective C topics including blocks, design patterns, delegates, and notifications; and training in gesture recognition, core data, navigation, and accelerometer basics.
Prerequisite: Introductory iOS Development 10152164.

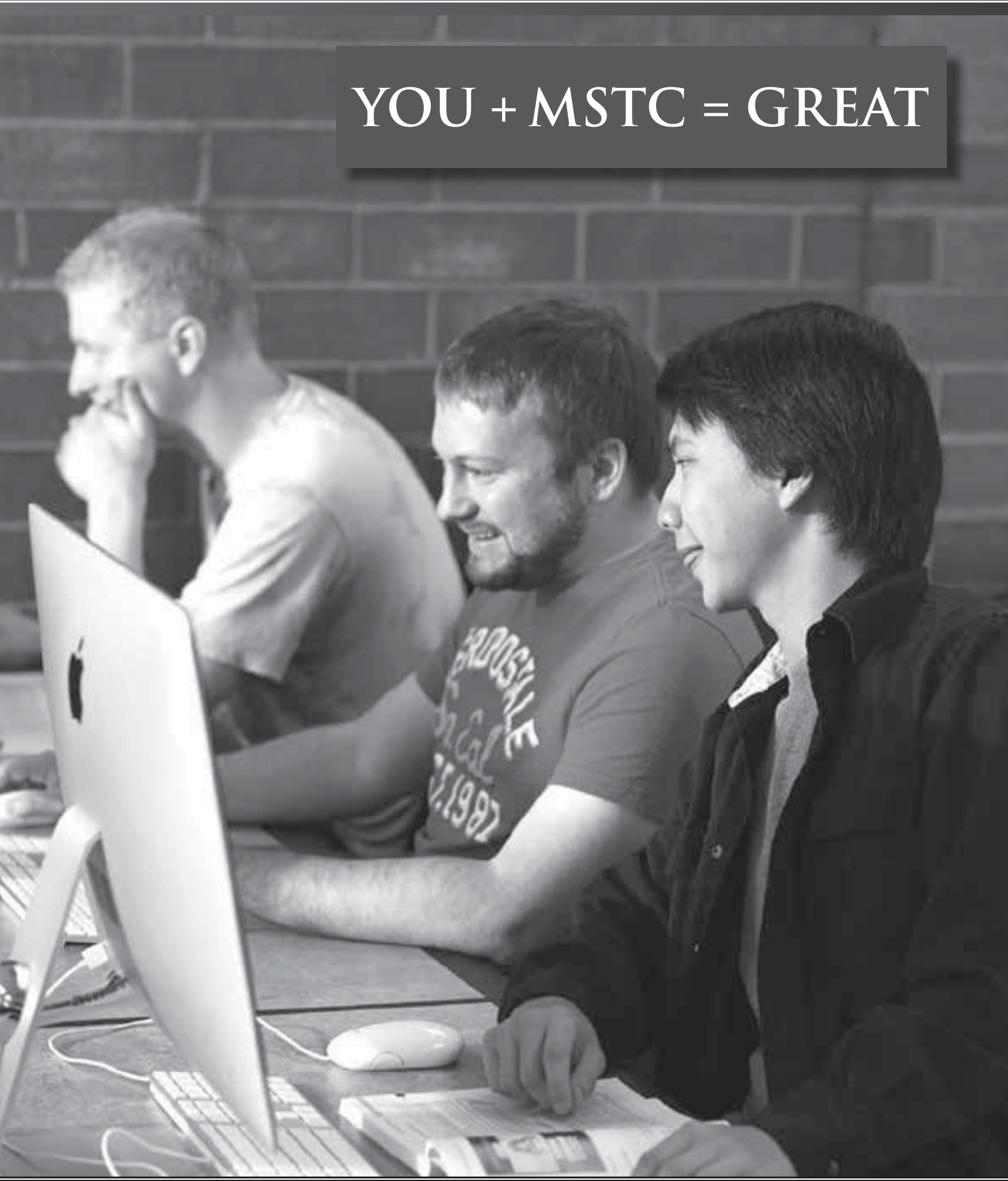
10152170 // 3 credits
Systems Analysis
A practical course which provides an overview of the Systems Development Life Cycle and then focuses in on the analysis phase of real world computer and manual systems. Students learn concepts, techniques, and tools to aid in the analysis of existing systems, the identification of user requirements, and the design of database files. Both written and oral communications are emphasized. Most of the work is done in groups.
Prerequisite: Programming Logic-Beginning 10152101.

10152171 // 3 credits
Systems Design
Provides actual hands-on experience with designing a software project. Students work in teams to develop software design documents and software specifications. Concepts stressed are prototyping, documentation, communication, teamwork, and project management.
Prerequisites: Systems Analysis 10152170 and Access-Beginning 10103133 or Microsoft Office-Introduction 10103106.

10152172 // 3 credits
Systems Implementation
Discusses the importance of and need for Database Management Systems (DBMS). Students are introduced to the three major models: hierarchical, network, and relational. Students design and implement relational databases and learn SQL.
Prerequisite: Systems Design 1015217, RPG-Beginning 10152115, or COBOL-Beginning 10152110.

10154101 // 2 credits
IT Customer Support
Develops skill in serving the needs of computer information system customers and documenting systems and procedures.
Prerequisites: Systems Analysis 10152170 and Written Communication 10801195 or English Composition I 10801136 or consent of instructor.

YOU + MSTC = GREAT



MACHINE TOOL TECHNICIAN

Program Code 32-420-1
2014-2015 Estimated Tuition and Fees: $9,711*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

At the heart of many industrial processes is machine tool technology. This program trains you for various positions relating to machining in industrial production and maintenance environments. Additional training and experience often lead to supervisory, quality assurance, and tool maker positions. You will learn to shape various materials into intricate, precise, usable parts. You will also learn to work from blueprints and written specifications and to select the proper machinery, materials, and tools to accomplish the task.

This program emphasizes precision measurement with micrometers, dial indicators, optical comparators, and gauges. Machine tools, such as lathes, mills, grinders, computers, and computer-controlled machines (CNC), will be used to produce parts.

The Machine Tool Technician program is offered at Wisconsin Rapids Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Machine Tool Technician graduate, to be able to:

- Demonstrate the ability to work safely and cooperatively as individuals and in teams in a classroom/industrial setting
- Using various manual machine tools, construct parts to required specifications following instructions and interpreting blueprints
- Analyze the various programming methods, software, and equipment to machine parts to specifications using CNC machines
- Demonstrate proper machine care while producing precision parts within time estimates
- Use terminology associated with machine tool technology to communicate effectively with co-workers, supervisors, customers, and vendors
- Analyze prints to create parts to specifications using computational skills, proper process planning, and equipment

CAREER OPTIONS

Advanced Machine Operator
CNC Operator
Engineering Prototype Machinist
Job Shop Machinist
Machine Assembler
Machine Maintenance
Machine Operator
Machine Tool Supplies Salesperson
Machinist
Machinist Apprentice
Tool and Die Apprentice
Tool and Die Repairer
Tool Room Machinist

POTENTIAL FOR ADVANCEMENT

CNC Programmer
Journeyperson Machinist
Journeyperson Mold Maker
Journeyperson Tool and Die Maker
Lead Person
Machine Set-Up Person
Manufacturing Engineer
Quality Control Manager
Supervisor
Tool Designer
Tool Engineer

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Machine Tool Technician program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

PROGRAM COURSE DESCRIPTIONS

10462116 // 3 credits
Metal Fabrication
An introduction to structural steel and plate fabrication, sheet metal fabrication, and basic electric arc and oxyacetylene welding. Fabrication techniques, metal selection, layout, cutting, bending, drilling, threading, and joining will be presented. Information will be presented to the student followed by lab activities to provide a hands-on experience. The emphasis will be placed on developing an understanding of the tools, techniques, safe work habits, and the application of metal fabrication skills.
Prerequisite: Admission to Automotive Technician 324042, Diesel & Heavy Equipment Technician 324121, Industrial Mechanical Technician 104621, Instrumentation & Controls Engineering Technology 106054, Machine Tool Technician 324201, Solar Electric Technician 104822, Sustainable Heating & Cooling Technician 104831, or Welding 314421 programs.

10623104 // 3 credits
Mechanical Drafting Concepts
Drafting media, drafting standards, reproduction processes, geometric construction, isometric and oblique pictorial drawings, dimensioning, tolerancing, parts drawing, and part identification are included in this course.

10623106 // 2 credits
Intro to AutoCAD
This is an introductory course in computer aided drafting (CAD) using AutoCAD software. It provides foundation skills in using CAD software to create and print two dimensional technical drawings. This course is available to students in any program. Computer skills and prior knowledge of drawing/drafting techniques is recommended.

10623112 // 3 credits
Manufacturing Practices
As competition for market share continues to increase, manufacturers rely on innovations in technology, methods, and practices to give them the edge they need. To remain competitive globally, manufacturer's watchwords are productivity, efficiency, and quality. In this course, students examine some of the practices that many manufacturing operations have come to rely on to make their operations competitive, efficient, and cost-effective. Topics covered in this class include the principles of lean manufacturing, value versus non-value added waste, 5S's, value stream mapping, set-up reduction and quick changeover, cellular flow, building a lean culture, total productive maintenance, and Statistical Process Control (SPC).

32420301 // 4 credits
Intro to Machine Tool
Students learn the concepts, terms, and basic information relevant and common to all facets of machine tool technology. Emphasis is placed on safety and safe work habits while expanding the learners' knowledge of precision and non-precision measuring tools, limits, tolerance, and hand tools used in the machine shop. The learner is introduced to more common manual machine tools, lathe, drill press, and band saw, while completing projects and exercises.

32420302 // 4 credits
Machine Shop Manual Operations
Learners explore new concepts, terms, and operations of machine tools while reviewing and further developing skills from previous covered operations. Safety must be practiced continually. Safety and the development of safe work habits are emphasized. Learners' working skills on the individual machine tools through exercises and projects will be expanded. Classroom instruction focuses on non-precision and precision layouts, drill presses, drill press accessories, band saws, and cutoff saws.
Prerequisite: Intro to Machine Tool 32420301.

CURRICULUM

Term		(15-16 credits)
10623104	Mechanical Drafting Concepts	3
32420301	Intro to Machine Tool	3
32420302	Machine Shop Manual Operations	5
32420312	Metals Science	2
10804107	College Mathematics	3
	-or-	
32420320	Math for Manufacturing	2

Term		(14 credits)
10623106	Intro to AutoCAD	2
32420303	Manual Lathe & Cutting Fluids	5
32420304	Threads & Mills	5
32420360	Intro to CNC Machining	2

Term		(16 credits)
31801351	Occupational Communication	2
32420305	Advanced Lathes	4
32420306	Advanced Mills	4
32420362	CNC Lathes/Manual Programming	2
32420364	CNC Mills/Manual Programming	2
32806351	Applied Science	2

Term		(17 credits)
10462116	Metal Fabrication	3
10623112	Manufacturing Practices	3
32420307	Non-Traditional Machine Operations	3
32420322	Geometric Dimensioning & Tolerancing	2
32420366	CNC Controls	3
32420368	CAD/CAM	3

Total Credits 64

Please Note:
- The Machine Tool Technician program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

32420303 // 5 credits
Manual Lathe & Cutting Fluids
The learners' understanding of new concepts, terms and operations of machine tools is developed while reviewing and further developing skills from previous covered operations. Safety must be practiced continually. Safety and the development of safe work habits are emphasized. The learners' working skills on the individual machine tools through exercises and projects are expanded. Classroom instruction places emphasis on the parts and accessories of the engine lathe, the use and benefit of cutting fluids, and the different operations performed on the lathe. The operations covered in this nine-week period include: setting up and turning work between centers, facing, knurling, cutting tapers; setting up and using 3 jaw and 4 jaw chucks; and using a follow rest and a steady rest.
Prerequisite: Intro to Machine Tool 32420301.

32420304 // 5 credits
Threads & Mills
Learners are presented with new concepts; terms and operations of machine tools while reviewing and further developing skills from previous covered operations. Safety must be practiced continually. Safety and the development of safe work habits are emphasized. The learner's working skills on the individual machine tools through exercises and projects are expanded. Classroom instruction places emphasis on threads, thread terminology, thread measuring, thread cutting, and the vertical milling machine.
Prerequisite: Intro to Machine Tool 32420301.

32420305 // 4 credits
Advanced Lathes
Instruction will give the student further insight in lathe concepts. Safety will be reviewed and advanced cutting tool materials such as carbides, ceramics, cubic boron nitride (CBN), and polycrystalline diamonds (PCD) will be covered. Tooling, speeds and feeds, cutting tool selection, and advanced machine practices such as multi-operations and process planning will be covered.
Prerequisite: Threads & Mills 32420304.

32420306 // 4 credits
Advanced Mills
Instruction gives the student greater insight in milling machine concepts. Major emphasis is placed on milling machine terminology, work holding methods, location principles, tooling, and cutting tool selection along with operations and process planning. Rotary tables and indexing methods such as direct, simple, and angular are also taught.
Prerequisite: Threads & Mills 32420304.

32420307 // 3 credits
Non-Traditional Machine Operations
Students explore a variety non-traditional machining operations. Students gain knowledge of the theory and operation of electrical discharge machining (EDM) and coordinate measuring machine. The focus of this course is on the cutting edge processes that are becoming the mainstream of modern machining.
Prerequisites: Advanced Lathes 32420305 and Advanced Mills 32420306.

32420312 // 2 credits
Metals Science
Students are introduced to the field of metallurgy. Includes the following topics: sources of common metals including both ferrous and non-ferrous methods of ore extraction and refining and classification of these metals and the alloy systems. The heat treatment of various metals and properties of metals are studied including lab work on shear, compression, tensile strength, and corrosion.

32420320 // 2 credits
Math for Manufacturing
This course includes the study of machine tool problems involving calculations with fractions, decimals, and percentage. Includes work with the metric system, measurement conversion, geometry, trigonometry of right triangles, and use of a scientific calculator. Formulas with application to the trades are also studied.
Prerequisite: Admission into Machine Tool Technician 324201 or Welding 314421 programs or consent of instructor.

32420322 // 2 credits
Geometric Dimensioning & Tolerancing
Provides fundamentals of Geometric Dimensions and Tolerancing per the ASME Y14.5 standard. The development of the technical knowledge and skills required for application and interpretation of GD&T is the focus of the course.
Prerequisite: Admission to Machine Tool 324201 program or consent of instructor.

32420360 // 2 credits
Intro to CNC Machining
This course introduces learners to the world of CNC (Computer Numerical Controlled) machining. Students explore the general terminology associated with automated machine tools, accompanied by an introduction to programming and operations of CNC mills and lathes. This course gives learners a hands-on understanding of the importance of the use of CNC machinery in modern manufacturing.
Prerequisites: Basic Mill Operation 32420309 and Basic Lathe Operation 32420308.

32420362 // 2 credits
CNC Lathes/Manual Programming
NC/CNC terminology including introduction to computers, and components of NC/CNC lathes are covered. All programming is manual word address (G + M Code) basics. Basic CNC lathe operation is included.
Corequisite: Advanced Lathes 32420305.

32420364 // 2 credits
CNC Mills/Manual Programming
NC/CNC terminology including introduction to computers and components of NC/CNC mills are covered. All programming is manual word address (G + M code) basics. Basic CNC mill operation is included.
Prerequisite: Mechanical Drafting Concepts 10623104. Corequisite: Advanced Lathes 32420305.

32420366 // 3 credits
CNC Controls
This course provides students with the skills needed to navigate common CNC machine control panels. Students learn common methods to set tool offsets, work offsets, and common part set up practices. Focus of this course is on accuracy, repeatability, and efficiency in the operations of CNC machine tools.
Prerequisites: CNC Lathes/Manual Programming 32420362 and CNC Mills/ Manual Programming 32420364.

32420368 // 3 credits
CAD/CAM
This course introduces students to Computer-Aided Drafting/Design (CAD) and computer-Aided Machining/ Manufacturing (CAM). This course consists of demonstrations and hands-on use of CAD/CAM software and hardware. Major emphasis is placed on geometry creation and editing functions, process planning, proper cutter selection, feed and speed selection, and tool path generation along with post processing to specific CNC machines. Some basic machine set-up and operation are included to verify program operation. Students should have knowledge of drafting/ design, machining processes and procedures, and computer operating systems (MS Windows).
Prerequisites: CNC Lathes/Manual Programming 32420362 and CNC Mills/ Manual Programming 32420364.

MARKETING

Program Code 10-104-3
2014-2015 Estimated Tuition and Fees: $12,457*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The Marketing program helps you to develop skills, real-world experience in and outside of the classroom, and solid connections to industry experts. With the ability to create inventive promotional campaigns, effectively brand, construct a dynamic social media presence, and analyze market research data, marketing positions are increasingly critical to business success. Labor market information indicates that the demand for marketing specialists will grow at an even faster rate than in the past. Earning a Marketing degree will give you that unique competitive edge that employers require.

This program utilizes an exciting variety of hands-on activities such as creating, developing, and analyzing marketing research data. Other experiential learning opportunities include the development of integrated and strategic promotional plans, branding, and advertising campaigns for business and industry and non-profit organizations. Using current technology and tools, Marketing program students also develop selling skills and digital marketing expertise.

The Marketing program is offered at the Stevens Point and Wisconsin Rapids campuses. The first year of the program is available at Marshfield Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Marketing graduate, to be able to:

- Develop strategies to anticipate and satisfy market needs
- Promote products, services, images, and/or ideas to achieve a desired outcome
- Evaluate information through the market research process to make business decisions
- Prepare selling strategies

CAREER OPTIONS

Account Representative
Customer Service Representative
Digital Marketer
Digital Sales
Market Researcher
Marketing Coordinator
Public Relations
Retail Sales and Management
Sales Assistant
Social Media Coordinator
Telemarketing Representative

POTENTIAL FOR ADVANCEMENT

Account Manager
Customer Service Manager
Digital Sales and Marketing Manager
Market Research Manager
Marketing Manager
Product Manager
Public Relations Manager
Retail Management
Sales Manager
Social Media Manager
Telemarketing Manager

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Marketing program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options.

   To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

Mobile Device Enhancement
To support your hands-on learning and give you an edge in today's digital workplace, Marketing program students are required to purchase a tablet device. Students accepted into the program will receive specific details about purchasing the mobile device (financial aid available).

PROGRAM COURSE DESCRIPTIONS

10101111 // 4 credits
Accounting I
A beginning course designed especially for majors or those who need a strong foundation in accounting principles. Develops the accounting cycle of journalizing, posting, adjusting, closing, and reporting. It emphasizes service and merchandising sole proprietorships in developing the accounting cycle. Explores issues for accounting for cash, accounts and notes receivable, inventories, and fixed assets.

10102101 // 3 credits
Intro to Business
An introduction to what a business is, how it operates, and how it is managed. Students will identify forms of ownership and the processes used in production and marketing, finance, personnel, and management in business operations.

10102103 // 3 credits
Business Law & Ethics
This course introduces the student to basic ethical theories and value systems. Students will apply these perspectives to moral issues, problems, and situations which arise within the business environment. Emphasis will be placed on how the applicable laws are being interpreted.

10102180 // 3 credits
International Business
This course introduces topics concerning international business while illustrating its scope and importance. Topics will include the impact of geography, trade protectionism, culture, legal structure, politics, and currency on business dealings. Students will also research a particular country in depth.

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10104102 // 4 credits
Marketing Principles
Students study the practices and methods of manufacturers and distributors in the marketing of goods and services. Product planning, pricing strategies, distribution systems, channel activities, and the role of government, as well as other factors influencing marketing today, are emphasized.

10104105 // 3 credits
Selling Principles
Helps students develop the kind of sales techniques that encourage customers to believe in the integrity of the salesperson and the product. Subjects include handling customers' tangible and intangible needs, attitude conversion, sales strategies for a variety of conditions, and the changing form of selling techniques. Focuses on the need for a sales personality and the importance of psychology and creativity in selling.

CURRICULUM

Term		(16 credits)
10102101	Intro to Business	3
10103106	Microsoft Office-Introduction	3
10104102	Marketing Principles	4
10104120	Media Strategies	3
10801136	English Composition I **-or-**	
10801195	Written Communication	3

Term		(18-19 credits)
10102103	Business Law & Ethics **-or-**	
10105160	Business Law	3
10104105	Selling Principles	3
10104107	Social Media Marketing	3
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3
10804107	College Mathematics **-or-**	3
10804118	Intermediate Algebra with Applications **-or-**	4
10804189	Introductory Statistics	3
10809122	Intro to American Government **-or-**	
10809172	Introduction to Diversity Studies **-or-**	
10809196	Intro to Sociology	3

Term		(17 credits)
10101111	Accounting I	4
10102180	International Business	3
10104125	Promotion Principles	4
10104174	Marketing Research	3
10809144	Macroeconomics	3

Term		(17 credits)
10104160	Marketing Decision-Making	4
10104180	E-Commerce Principles	3
10809143	Microeconomics	3
10809188	Developmental Psychology **-or-**	
10809198	Intro to Psychology	3
	Elective	1
	Elective	3

Total Credits 68-69

Please Note:
- The Marketing program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10104107 // 3 credits
Social Media Marketing
This course addresses how social media has transformed marketing communications from traditional, mass media to individualized marketing. Using social media tools such as Facebook, YouTube, Twitter, LinkedIn, and more, this class explores the different methodologies for social media marketing. Topics addressed include creating social media, integrating social media as part of a marketing campaign, the concept of viral marketing, the ethical and potential legal concerns that have arisen over these forms of communication, and how organizations and individuals have successfully applied social media marketing.

10104120 // 3 credits
Media Strategies
This course prepares the student to compare, evaluate, and select different advertising mediums. It will include analyzing media purchasing strategies and the design and development of effective advertising for each medium. Additional topics include the evaluation of survey information and pricing methodology for each medium.
Corequisite: Marketing Principles 10104102.

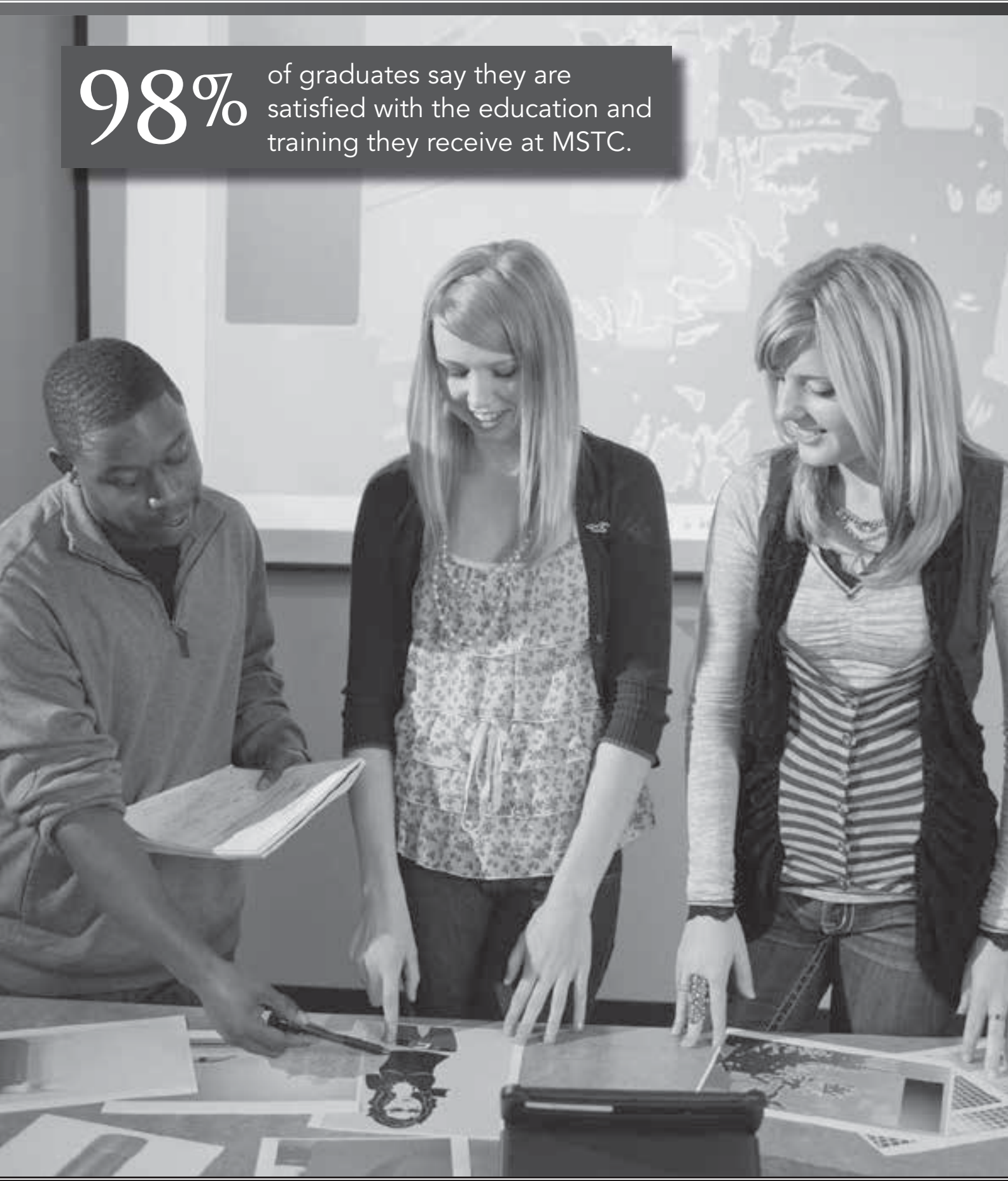
10104125 // 4 credits
Promotion Principles
This course focuses on non-personal communication about product services, image or ideas to influence customer behavior. Topics include advertising, sales and visual promotion, public relations, and managing the promotion function.

10104160 // 4 credits
Marketing Decision-Making
Examines the marketing function from the manager's perspective. Topics include management functions, decision making in regard to the customer, product planning, pricing strategies, evaluation of distribution channels, and promotional tactics.
Prerequisite: 12 Marketing credits.

10104174 // 3 credits
Marketing Research
Primarily for students with previous business courses or work experience. Introduces techniques of research and research reporting. The study of market behavior is pursued as students undertake several well-ordered research projects in their career fields.
Prerequisite: Marketing Principles 10104102.

10104180 // 3 credits
E-Commerce Principles
This course provides an overview of electronic commerce. Business models underlying these electronic commerce applications are studied from both operational and strategic perspectives. A review is made of worldwide web technology trends including electronic payments and related issues of authentication, security, privacy, intellectual property right, and tax implications.

10105160 // 3 credits
Business Law
Examines the classifications of law, elements of legal contracts, and business applications. Negotiable instruments, sales and bailment contracts, principal-agent relations, and real estate law are also explained. Ethical practices are emphasized rather than narrow, legal definitions.


98% of graduates say they are satisfied with the education and training they receive at MSTC.

MEDICAL ASSISTANT

Program Code 31-509-1
2014-2015 Estimated Tuition and Fees: $4,599*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The Medical Assistant program prepares you for a rewarding career working in medical offices and clinics. This career involves assisting in the reception, examination, and treatment of patients. Learn valuable clinical and clerical skills such as scheduling appointments, maintaining medical records, performing various lab procedures, EKGs, injections, and sterilizing equipment. You will receive classroom instruction and clinical practicum at a variety of medical offices and clinics in the area. Students are required to participate in an unpaid practicum.

This program prepares competent entry-level medical assistants in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains. This program is accredited by the Commission on Accreditation of Allied Health Programs (www.caahep.org) upon the recommendation of the Medical Assisting Education Review Board (MAERB).

Commission on Accreditation of Allied Health Education Programs
1361 Park Street, Clearwater FL 33756
Phone: 727.210.2350
www.caahep.org

As a successful graduate of this program, you are eligible to write one of two National Certification Exams for Medical Assistants. This certification is voluntary.

The Medical Assistant program is offered at the Marshfield and Stevens Point campuses.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Medical Assistant graduate, to be able to:

- Perform medical office administrative functions
- Provide patient care in accordance with regulations, policies, laws, and patient rights. Perform medical laboratory procedures
- Demonstrate professionalism in a health care setting
- Demonstrate safety and emergency practices in a health care setting

CAREER OPTIONS

Appointment Clerk
Appointment Secretary
Dental Aide
Medical Assistant
Medical Records Clerk
Optometric Assistant
Pharmacy Technician
Physical Therapy Aide
Receptionist

POTENTIAL FOR ADVANCEMENT

Audiology Assistant
Departmental Supervisor
EEG Technician
Emergency Medical Technician
EMG Technician
Histology Assistant
Home Care Aide
In-Service Educator-Medical
Office Manager

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Medical Assistant program, submit documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents or select course completion are acceptable alternatives for above scores.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.
4. Submit the Criminal Background Statement of Understanding and Release of Information form.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function as a Medical Assistant is available in the online program orientation. It is your responsibility to notify the disabilities services coordinator in Student Affairs to receive assistance.

CLINICAL-RELATED REQUIREMENTS

Prior to placement at a clinical site, students need to pay for a criminal background check and provide documentation of required healthwork to a private vendor.

Students are responsible for ensuring all requirements remain current during program enrollment.

Clinical sites have the right to refuse a student's placement based on inadequate health records, pending charges, or conviction records. Students with a criminal history may not be able to complete clinical courses. MSTC will make two attempts to place a student in an appropriate clinical experience. If MSTC is unable to place the student after two attempts, the student will be withdrawn from the clinical course and will not be able to advance in the program. Contact the program counselor for more details.

PROGRAM PROGRESSION

In order to maintain a passing status and progress in the program, students must:

- Repeat courses not completed with a grade of "C" or better prior to progressing in core courses or other courses with co- or prerequisites.
- Receive a grade of "C" or better in all courses required for graduation.

Please note that the ability to repeat courses is dependent upon availability in courses. Students may be required to apply for program re-entry in order to repeat courses within the programs instructional area.

PROGRAM COURSE DESCRIPTIONS

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10501101 // 3 credits
Medical Terminology
Students focus on the component parts of medical terms: prefixes, suffixes, and word roots. Students practice formation, analysis, and reconstruction of terms. Emphasis on spelling, definition, and pronunciation. Introduction to operative, diagnostic, therapeutic, and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

10501108 // 2 credits
Pharmacology for Allied Health
Introduces students to classifying medications into correct drug categories and applying basic pharmacology principles. Students apply basic pharmacodynamics to identifying common medications, medication preparation, and administration of medications used by the major body systems.

10501109 // 2 credits
Medical Law, Ethics, and Professionalism
Prepares students to display professionalism and perform within ethical boundaries in the health care setting. Students maintain confidentiality, examine legal aspects of the medical record, perform risk management procedures, and examine legal and bioethical issues.

CURRICULUM

Term		(17 credits)
10103106	Microsoft Office-Introduction	3
10501101	Medical Terminology	3
10509102	Human Body in Health and Disease	3
31509301	Medical Assistant Administrative Procedures	2
31509303	Medical Assistant Laboratory Procedures 1	2
31509304	Medical Assistant Clinical Procedures 1	4

Term		(17 credits)
10501108	Pharmacology for Allied Health	2
10501109	Medical Law, Ethics, and Professionalism	2
10801136	English Composition I **-or-**	
10801195	Written Communication	3
31509305	Medical Assistant Laboratory Procedures 2	2
31509306	Medical Assistant Clinical Procedures 2	3
31509307	Medical Office, Insurance, and Finance	2
31509310	Medical Assistant Practicum	3

Total Credits 33

Please Note:
- The Medical Assistant program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10509102 // 3 credits
Human Body in Health and Disease
Focuses on diseases that are frequently first diagnosed and treated in the medical office setting. Students learn to recognize the causes, signs, and symptoms of diseases of the major body systems as well as the diagnostic procedures, usual treatment, prognosis, and prevention of common diseases.
Corequisite: Medical Terminology 10501101.

31509301 // 2 credits
Medical Assistant Administrative Procedures
Introduces medical assistant students to office management and business administration in the medical office. Students learn to schedule appointments, perform filing, record keeping, telephone and reception duties, communicate effectively with patients and other medical staff, and keep inventory of supplies. Students apply introductory medical coding skills and managed care terminology.
Prerequisite: Admission to Medical Assistant 315091 program.

31509303 // 2 credits
Medical Assistant Laboratory Procedures 1
Introduces medical assistant students to laboratory procedures commonly performed by medical assistants in a medical office setting. Students perform routine laboratory procedures commonly performed in the ambulatory care setting under the supervision of a physician. Students follow laboratory safety requirements and federal regulations while performing specimen collection and processing, microbiology, and urinalysis testing.
Prerequisite: Admission to Medical Assistant 315091 program.

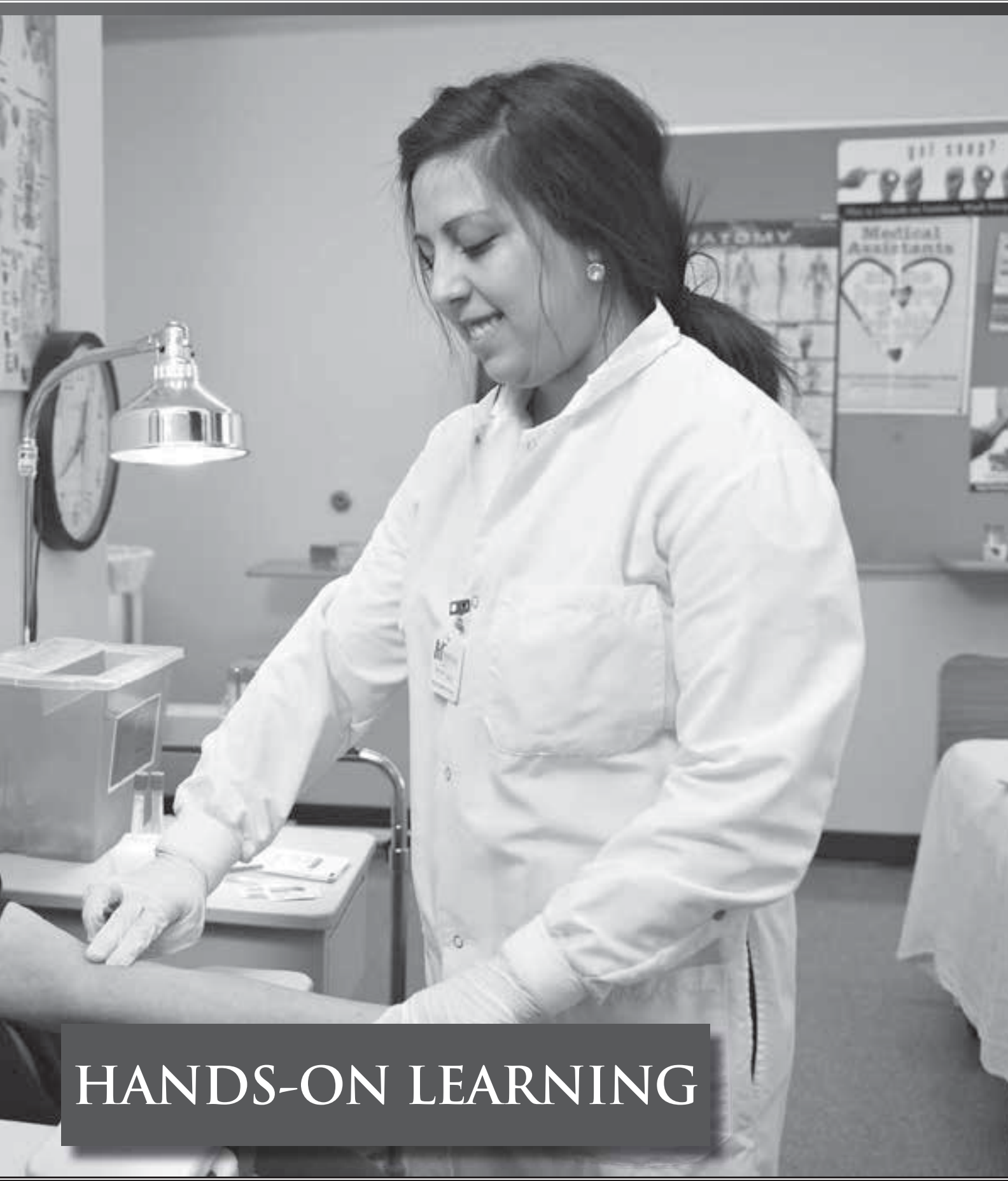
31509304 // 4 credits
Medical Assistant Clinical Procedures 1
Introduces medical assistant students to clinical procedures performed in the medical office setting. Students perform basic examining room skills including screening, vital signs, patient history, minor surgery, and patient preparation for routine and specialty exams in the ambulatory setting.
Prerequisite: Admission to Medical Assistant 315091 program.

31509305 // 2 credits
Medical Assistant Laboratory Procedures 2
Prepares students to perform laboratory procedures commonly performed by the medical assistants in the ambulatory care setting under the supervision of a physician. Students perform phlebotomy, immunology, hematology, and chemistry laboratory procedures.
Prerequisite: Medical Assistant Laboratory Procedures 1.

31509306 // 3 credits
Medical Assistant Clinical Procedures 2
Prepares medical assistant students to perform patient care skills in the medical office setting. Students perform clinical procedures including administering medications, assisting with minor surgery, performing an electrocardiogram, assisting with respiratory testing, educating patients/community, and maintaining clinical equipment in an ambulatory setting.
Prerequisites: Medical Assistant Clinical Procedures 1 31509304, Medical Assistant Laboratory Procedures 1 31509303, Medical Terminology 10501101, and Human Body in Health and Disease 10509102.

31509307 // 2 credits
Medical Office, Insurance, and Finance
Introduces medical assistant students to health insurance and finance in the medical office. Students perform bookkeeping procedures, apply managed care guidelines, and complete insurance claim forms. Students use medical coding and managed care terminology to perform insurance related duties.
Prerequisite: Admission to Medical Assistant 315091 program.

31509310 // 3 credits
Medical Assistant Practicum
Requires medical assistant students to integrate and apply knowledge and skills from all previous medical assistant courses in actual patient settings. Learners perform medical assistant administrative, clinical, and laboratory duties under the supervision of trained mentors to effectively transition to the role of a medical assistant. There is no remuneration for students enrolled in this course.
Prerequisites: Medical Assistant Administrative Procedures 10509130, Human Body in Health and Disease 10509102, Medical Terminology 10501101, Medical Assistant Laboratory Procedures 1 31509303, Medical Assistant Clinical Procedures 1 31509304, and Applied Microsoft Office for Health 10103107. Corequisite: Medical Assistant Clinical Procedures 2 31509306; Medical Assistant Laboratory Procedures 2 31509305; Medical Office, Insurance, and Finance 10509131; Medical Law, Ethics, and Professionalism 10501109; and Written Communication 10801195.



HANDS-ON LEARNING

MEDICAL CODER

Program Code 31-530-3
2014-2015 Estimated Tuition and Fees: $3,133*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The Medical Coder technical diploma prepares individuals for employment as entry-level medical coders in health care settings such as hospitals, physician offices, long-term care facilities, health plans, and more. Medical coders review medical documentation of health care providers and assign diagnosis and procedure codes for the purposes of billing, quality improvement, statistical reporting, and medical research. Learners are introduced to reimbursement principles and demonstrate proficiency in assigning codes from two different data sets, ICD and CPT, which prepares them for coding across all settings, including hospitals and physician offices. After program completion, graduates may qualify to take the Certified Coding Associate (CCA) credentialing exam through American Health Information Management Association (AHIMA).

The Medical Coder program is available primarily online and therefore not location dependent.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Medical Coder graduate, to be able to:

- Review clinical documentation and diagnostic results to ensure accurate diagnostic and procedural coding
- Extract data, abstract and apply appropriate clinical codes using proper classification systems accurately.
- Provide charge validation

CAREER OPTIONS

Chargemaster Coordinator
Coding Specialist
Coding Support Specialist
Medical Coder

POTENTIAL FOR ADVANCEMENT

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Medical Coder program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

Graduates of the Medical Coder technical diploma may advance into the Health Informatics and Information Management program.

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function as a Medical Coder is available in the online program orientation. It is the student's responsibility to notify the disability services coordinator in the Student Affairs Office to receive assistance.

PROGRAM PROGRESSION AND COMPLETION

In order to progress in and successfully complete the program, students must:

- Repeat courses not completed with a "C" or better prior to progressing in core courses or other courses with co- or prerequisites.
- Receive a grade of "C" or better in all courses required for graduation.

Please note that the ability to repeat courses is dependent upon availability in courses. Students may be required to apply for program re-entry in order to repeat courses within the program's instructional area.

PROGRAM COURSE DESCRIPTIONS

10501101 // 3 credits
Medical Terminology
Students focus on the component parts of medical terms: prefixes, suffixes, and word roots. Students practice formation, analysis, and reconstruction of terms. Emphasis on spelling, definition, and pronunciation. Introduction to operative, diagnostic, therapeutic, and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

10530111 // 3 credits
Introduction to Health Records
Focuses on the purpose, format, content, use, confidentiality, and administrative issues of a patient's medical history and care. Students study the use of the patient's medical record as a basis for planning patient care, documenting communication between the health care provider and any other health professional contributing to the patient's care, assisting in protecting the legal interest of the patient and the health care providers responsible for the patient's care, and documenting the care and services provided to the patient. Emphasis is placed on accuracy, organization, and confidentiality. Students will be introduced to EMR concepts.
Corequisite: Medical Terminology 10501101.

10530122 // 3 credits
Electronic Health Records
Course introduces students to the electronic health record (EHR) as a technology-based representation of health care data integration from a participating collection of varied systems for a single patient. Course covers emerging use of the electronic health record, an overview of EHR, applications, benefits and barriers to its use, vocabularies, principles of implementation, health information exchange, standards, privacy, security, information retrieval, digital libraries, and image management.
Prerequisites: Medical Terminology 10501101, General Anatomy & Physiology 10806177, and Intro to Health Records 10530111.

10530144 // 3 credits
CPT Coding
Prepares learners to assign current procedural terminology (CPT) codes supported by medical documentation with entry-level proficiency. Students are familiar with and use standard coding references. Emphasis is placed on accuracy, CPT instructional notations, conventions, rules, and official coding guidelines when assigning CPT codes to case studies and actual medical record documentation. Application of modifiers to services and relationship to financial impact is also covered.
Prerequisites: Medical Terminology 10501101, General Anatomy & Physiology 10806177, Human Diseases for Health Professions 10530182, and Intro to Health Records 10530111.

CURRICULUM

Term		(10 credits)
10530111	Introduction to Health Records	3
10501101	Medical Terminology	3
10806177	General Anatomy & Physiology	4

Term		(12 credits)
10530122	Electronic Health Records	3
10530144	CPT Coding	3
10530182	Human Disease for the Health Professions	3
10530197	ICD Diagnosis Coding	3

Term		(7 credits)
10530146	Private and Government Reimbursement	3
10530148	Advanced Coding	2
10530199	ICD Procedure Coding	2

Total Credits 29

Please Note:
- Medical Coder students may begin coursework in June, August, or January although not all courses are available each term. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10530146 // 3 credits
Private and Government Reimbursement
Introduces students to the vocabulary of private or voluntary-based health care reimbursement. Students identify and compare the varieties of private health care insurance including the advantages and disadvantages of each for the provider and for the policyholder. Learners assign Diagnosis Related Groups (DRGs), Ambulatory Payment Classifications (APCs), and Resource Utilization (RUGs) with entry-level proficiency using computerized encoding and grouping software. HIPAA guidelines are utilized throughout.
Prerequisites: ICD Diagnosis Coding 10530197, ICD Procedure Coding 10530199, and CPT Coding 10530144.

10530148 // 2 credits
Advanced Coding
This course builds on basic coding knowledge and skills by providing the student with coding of clinical case studies and actual medical records. Students access, review, and code electronic medical records from the Academic EHR System. Students perform data quality reviews to validate code assignment and compliance with reporting requirements.
Prerequisites: ICD Diagnosis Coding 10530197, ICD Procedure Coding 10530199, and CPT Coding 10530144. Corequisite: Private and Government Reimbursement 10530146.

10530182 // 3 credits
Human Disease for the Health Professions
This course focuses on the common diseases of each body system as encountered in all types of health care settings by health information professionals. Emphasis is placed on understanding the etiology (causes), signs and symptoms, diagnostic tests, and treatment (including pharmacologic) of each disease.
Prerequisites: Medical Terminology 10501101 and General Anatomy & Physiology 10806177.

10530197 // 3 credits
ICD Diagnosis Coding
Prepares students to assign ICD diagnosis codes supported by medical documentation with entry-level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD diagnosis codes to case studies and actual medical record documentation.
Prerequisites: Medical Terminology 10501101, Intro to Health Records 10530111, and General Anatomy & Physiology 10806177. Corequisite: Human Disease for the Health Professions 10530182.

10530199 // 2 credits
ICD Procedure Coding
Prepares students to assign ICD procedure codes supported by medical documentation with entry-level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD procedure codes to case studies and actual medical record documentation.
Prerequisites: Medical Terminology 10501101, Intro to Health Records 10530111, General Anatomy & Physiology 10806177, and Human Disease for the Health Professions 10530182.

STRONG JOB PLACEMENT

Program Code 10-543-1
2014-2015 Estimated Tuition and Fees: $10,111*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

As a Registered Nurse (RN) you are a vital member of the health care team. The Associate Degree Nursing (ADN) program prepares you to function with judgment and technical competence in providing care for individual patients, as well as groups of patients. You will gain the knowledge and skills to work competently as a registered nurse. The ADN program provides a balance between knowledge and technical skills in physical and biological sciences, social sciences, and nursing. It also includes classroom discussion, independent learning projects, skills labs, and hands-on clinical experiences in area health care agencies.

MSTC's Nursing program is part of the system-wide curriculum developed by the Wisconsin Technical College System (WTCS). The ADN program offers the option to students to be eligible to take the national licensing test for Licensed Practical Nurse after completion of the first year (32 credits). Students will be eligible to take the licensing exam for Registered Nurse after completion of all 70 credits in the ADN program.

The Nursing program is approved by the Wisconsin Board of Nursing and fully accredited by the Accreditation Commission for Education in Nursing (ACEN). ACEN can be reached for program verification information at:

Accreditation Commission for Education in Nursing (ACEN)
3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326
www.acenursing.org
Phone: 404.975.5000

The Nursing program is offered at the Marshfield and Wisconsin Rapids campuses.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Nursing graduate, to be able to:

- Implement one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving professional identity as a nurse committed to evidence-based practice, caring, advocacy, and quality care
- Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts
- Integrate social, mathematical, and physical sciences, pharmacology, and pathophysiology in clinical decision making
- Provide patient centered care by utilizing the nursing process across diverse populations and health care settings
- Minimize risk of harm to patients, members of the health care team and self through safe individual performance and participation in system effectiveness
- Lead the multidisciplinary health care team to provide effective patient care throughout the lifespan
- Use information and technology to communicate, manage data, mitigate error, and support decision making

CAREER OPTIONS

Upon successful completion of licensure examination:

Staff nurse/RN positions in various specialties in hospitals, clinics, nursing homes, and home health care

POTENTIAL FOR ADVANCEMENT

Nurse Educator
Nurse Manager/Administrator
Nurse Practitioner
Public Health Nurse
School Nurse

Generally requires a bachelor's or master's degree in nursing.

ADMISSIONS PROCEDURES

To apply to the Nursing program, please complete the following steps and submit documents to the MSTC Admissions Office:

Step 1:

1. Complete an MSTC Application form and return it with a $30 non-refundable application fee.
2. Complete an online or face to face nursing informational session.
3. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading–Accuplacer score of 95
   - Sentence Skills–Accuplacer score of 103
   - Math–Accuplacer score of 79
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.

4. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.
5. Submit the Criminal Background Statement of Understanding and Release of Information form.

When the requirements for Step 1 are completed, the student will be admitted to the program and may be eligible to apply for financial aid.

Step 2:
Complete the following prerequisite coursework:

1. One year of high school chemistry or biology or combination with at least a grade of "C" or better both semesters or one semester of college chemistry with a grade of "C" or better.
2. General Anatomy & Physiology with a grade of "B-" or better. This course has a science prerequisite.
3. Submit Functional Abilities form. This form is available at mstc.edu/nursing-admission-procedures.
4. Submit Intent to Enroll form with all required documentation. This form is available at mstc.edu/nursing-admission-procedures.

Step 2 completed packets are accepted at any time. All incomplete packets will be returned. MSTC will accept at least 40 students to the Nursing program each semester. Student placement will be based on the date the Intent to Enroll form is submitted. If more than one student submits on the same date, placement will be determined by original program application date. Submit packets to MSTC Admissions Office.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

After your Step 2 packet has been submitted, proceed to Step 3.

Step 3:
To be eligible to enroll in Nursing core courses, complete the following requirements:

1. Complete Nursing Assistant prerequisite requirement if needed.
2. Complete the following courses with a grade of "C" or better prior to starting core courses:
   - Developmental Psychology
   - English Composition I or Written Communications
   - Advanced Anatomy & Physiology
   - Microbiology
3. Students are highly encouraged to have the following courses completed with a grade of "C" or better prior to starting nursing courses:
   - Oral/Interpersonal Communication or Speech
   - Intro to Psychology
   - Intro to Sociology or Introduction to Diversity Studies
   - Five credits of electives
4. Must have a total program GPA of 2.0 or higher.
5. If you have all General Education and elective courses completed and within one semester of nursing clinical, you may take the Nursing Fundamentals and Nursing Pharmacology courses. You will receive an email describing the process at that time.

Nursing Information Line
715.422.5570

CREDIT FOR PRIOR LEARNING

Credit for Prior Learning is available for certain courses in the form of high school advanced standing, transfer credit, test credit, military experience, and experiential credit. Contact the program counselor with any questions you may have regarding this option.

CURRICULUM

Required Prior to Beginning Nursing Courses		**(18 credits)**
10806177	General Anatomy & Physiology	4
10806179	Advanced Anatomy & Physiology	4
10809188	Developmental Psychology	3
10801136	English Composition I **-or-**	
10801195	Written Communication	3
10806197	Microbiology	4
Recommended Prior to Nursing Courses		**(14 credits)**
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3
10809172	Introduction to Diversity Studies **-or-**	
10809196	Intro to Sociology	3
10809198	Intro to Psychology	3
	Electives	5
Term		**(9 credits)**
10543101	Nursing: Fundamentals	2
10543102	Nursing: Skills	3
10543103	Nursing: Pharmacology	2
10543104	Nursing: Intro to Clinical Practice	2
Term		**(10 credits)**
10543105	Nursing: Health Alterations	3
10543106	Nursing: Health Promotion	3
10543107	Nursing: Clinical Care Across the Lifespan	2
10543108	Nursing: Intro to Clinical Care Management	2
Term		**(9 credits)**
10543109	Nursing: Complex Health Alterations 1	3
10543110	Nursing: Mental Health and Community Concepts	2
10543111	Nursing: Intermediate Clinical Practice	3
10543112	Nursing: Advanced Skills	1
Term		**(10 Credits)**
10543113	Nursing: Complex Health Alterations 2	3
10543114	Nursing: Management and Professional Concepts	2
10543115	Nursing: Advanced Clinical Practice	3
10543116	Nursing: Clinical Transition	2
	Total Credits	**70**

Continued on next page

CURRICULUM

Continued from the previous page

Please Note:

- The Nursing program has August and January starting dates. Students are advised to attend a Question and Answer session. These sessions are offered on a frequent basis.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function as a Nurse is available at mstc.edu. It is the student's responsibility to notify the disability services coordinator in Student Affairs to receive assistance.

CLINICAL-RELATED REQUIREMENTS

Prior to placement at a clinical site, students need to pay for a criminal background check and provide documentation of required healthwork to a private vendor, Certified Background.

Clinical sites have the right to refuse a student's placement based on inadequate health records, pending charges, or conviction records. Students with a criminal history may not be able to complete clinical courses. MSTC will make two attempts to place a student in an appropriate clinical experience. If MSTC is unable to place the student after two attempts, the student will be withdrawn from the clinical course and will not be able to advance in the program. Contact the program counselor for more details.

Prior to beginning a clinical experience in a health care facility, students must:

a) Submit evidence of completed health work
b) Provide evidence of current CPR
c) Obtain the required uniform for clinical experiences
d) Accept responsibility for clinical assignment(s) regardless of time and location, including transportation and other personal arrangements

PROGRAM PROGRESSION AND COMPLETION

In order to progress in and successfully complete the program, students must:

- Maintain a program GPA of 2.0 or higher
- Receive a grade of "C" or better in all courses required for graduation except General Anatomy & Physiology with a grade of "B-" or better
- If a student is not successful in a Nursing 10543 core course, he/she will need to repeat that course prior to progressing in the program. Potential continuation is dependent upon availability in the course/program.

Students will receive two attempts to pass any Nursing 10543 course. If a passing grade is not achieved in two attempts, the student will be withdrawn from the program. A withdrawal grade of "W" counts as one attempt for the course. Requests for special consideration may be directed to the Service & Health Associate Dean for Nursing.

ARTICULATION OPPORTUNITIES

Articulation opportunities are between Wisconsin technical colleges with the implementation of the system-wide nursing curriculum. Identical courses in nursing throughout the Wisconsin Technical College System (WTCS) make transfer and readmission to other WTCS colleges easier for nursing students throughout the state. This articulation is based on seat availability and college residency requirements.

Also, articulation opportunities in nursing are available with most private universities and all public universities in Wisconsin. Generally, an MSTC graduate in the Nursing program can expect approximately 60-70 credits to transfer from MSTC to a Wisconsin university.

ELIGIBILITY REQUIREMENTS FOR REGISTERED NURSE EXAMINATION

1. Graduated from high school or its equivalent as determined by the Wisconsin State Board of Nursing.
2. Wisconsin State Statutes require that the student DOES NOT have an arrest or conviction record for acts or circumstances that relate directly to the clinical practice of the license being requested (e.g., harm/injury; drug or alcohol impairment). Individuals cannot be discriminated against for arrest or conviction records if the precipitating actions do not directly relate to practice.
3. Graduated from a Wisconsin Board of Nursing approved program.
4. Payment of fees to Mid-State Technical College and the Wisconsin State Board of Nursing.

MAINTAINING A NURSING LICENSE

The State Board of Nursing may revoke, limit, suspend, or deny renewal of license if the person committed any of the following:

1. Fraud in the procuring or renewal of the license.
2. One or more violations of the Nurse Practice Act (Chapter 441) or accompanying Administrative Rules.
3. Acts which show practitioner to be unfit or incompetent.
4. Misconduct or unprofessional conduct.

PROGRAM COURSE DESCRIPTIONS

10543101 // 2 credits
Nursing Fundamentals
This course focuses on basic nursing concepts to provide evidenced-based care to diverse patient populations across the lifespan. Current and historical issues impacting nursing are explored within the scope of nursing practice. The nursing process is introduced as a framework for organizing the care of patients.
Prerequisite: Successful completion of all Step 3 Nursing program required courses and space availability.

10543102 // 3 credits
Nursing Skills
This course focuses on development of evidence-based clinical skills and physical assessment across the lifespan. Content includes mathematical calculations and conversions related to clinical skills. In addition, the course includes techniques related to obtaining a health history and basic physical assessment skills using a body systems approach.
Prerequisite: Successful completion of all Step 3 Nursing program required courses and space availability.

10543103 // 2 credits
Nursing Pharmacology
Introduces the principles of pharmacology, including drug classifications and their effects on the body. Emphasis is on the use of the components of the nursing process when administering medications.
Prerequisite: Successful completion of all Step 3 Nursing program required courses and space availability.

10543104 // 2 credits
Nursing: Intro to Clinical Practice
This introductory clinical course emphasizes basic nursing skills and application of the nursing process in meeting the needs of diverse clients across the lifespan. Emphasis is placed on performing basic nursing skills, the formation of nurse-client relationships, communication, data collection, documentation, and medication administration.
Prerequisite: Successful completion of all Step 3 Nursing program required courses and space availability.
Corequisites: Nursing Fundamentals 10543101, Nursing Skills 10543102, and Nursing Pharmacology 10543103.

10543105 // 3 credits
Nursing Health Alterations
This course elaborates upon the basic concepts of health and illness as presented in Nursing Fundamentals. It applies theories of nursing in the care of patients through the lifespan, utilizing problem solving and critical thinking. This course provides an opportunity to study conditions affecting different body systems and apply evidence-based nursing interventions. It also introduces concepts of leadership and management.
Prerequisites: Nursing Fundamentals 10543101, Nursing Skills 10543102, Nursing Pharmacology 10543103, and Intro to Clinical 10543104.

10543106 // 3 credits
Nursing Health Promotion
This course focuses on topics related to health promotion for individuals and families throughout the lifespan. We will cover nursing care of the developing family, which includes reproductive issues, pregnancy, labor and delivery, post-partum, the newborn, and the child. Recognizing the spectrum of healthy families, we will discern patterns associated with adaptive and maladaptive behaviors applying mental health principles. An emphasis is placed on teaching and supporting healthy lifestyles choices for individuals of all ages. Nutrition, exercise, stress management, empowerment, and risk reduction practices are highlighted. Study of the family will cover dynamics, functions, discipline styles, and stages of development.
Prerequisites: Nursing Fundamentals 10543101, Nursing Skills 10543102, Nursing Pharmacology 10543103, Intro to Clinical Practice 10543104, and Developmental Psychology 10809188.

10543107 // 2 credits
Nursing: Clinical Care Across the Lifespan
Applies nursing concepts and therapeutic interventions to clients across the lifespan. It also provides an introduction to concepts of teaching and learning. Extending care to include the family is emphasized.
Prerequisites: Nursing Fundamentals 10543101, Nursing Skills 10543102, Nursing Pharmacology 10543103, and Intro to Clinical Practice 10543104.

10543108 // 2 credits
Nursing: Intro to Clinical Care Management
Applies nursing concepts and therapeutic nursing interventions to groups of clients across the lifespan. It also provides an introduction to leadership, management, and team building.
Prerequisites: Nursing Fundamentals 10543101, Nursing Skills 10543102, Nursing Pharmacology 10543103, and Intro to Clinical Practice 10543104.

10543109 // 3 credits
Nursing: Complex Health Alterations 1
Complex Health Alterations I prepares the learner to provide and evaluate care for patients across the lifespan with alterations in cardiovascular, respiratory, endocrine, and hematologic systems as well as patients with fluid/electrolyte and acid-base imbalance, and alterations in comfort.
Prerequisites: Health Alterations 10543105, Nursing Health Promotion 10543106, Clinical Care Across the Lifespan 10543107, and Intro to Clinical Care Management 10543108.
Corequisite: Microbiology 10806197.

10543110 // 2 credits
Nursing: Mental Health and Community Concepts
This course covers topics related to the delivery of community and mental health care. Specific health needs of individuals, families, and groups will be addressed across the lifespan. Attention will be given to diverse and at-risk populations. Mental health concepts will concentrate on adaptive/maladaptive behaviors and specific mental health disorders. Community resources will be examined in relation to specific types of support offered to racial, ethnic, economically diverse individuals and groups.
Prerequisites: Health Alterations 10543105, Nursing Health Promotion 10543106, Clinical Care Across the Lifespan 10543107, and Intro to Clinical Care Management 10543108.

10543111 // 3 credits
Nursing: Intermediate Clinical Practice
This intermediate level clinical course develops the RN role when working with clients with complex health care needs. A focus of the course is developing skills needed for managing multiple clients and priorities. Using the nursing process, students will gain experience in adapting nursing practice to meet the needs of clients with diverse needs and backgrounds.
Prerequisites: Health Alterations 10543105, Nursing Health Promotion 10543106, Clinical Care Across the Lifespan 10543107, and Intro to Clinical Care Management 10543108.

10543112 // 1 credit
Nursing Advanced Skills
This course focuses on the development of advanced clinical skills across the lifespan. Content includes advanced intravenous skills, blood product administration, chest tube systems, basic electrocardiogram interpretation, and nasogastric/feeding tube insertion.
Prerequisites: Health Alterations 10543105, Nursing Health Promotion 10543106, Clinical Care Across the Lifespan 10543107, and Intro to Clinical Care Management 10543108.

10543113 // 3 credits
Nursing: Complex Health Alterations 2
Complex Health Alterations II prepares the learner to provide and evaluate care for patients across the lifespan with alterations in the immune, neuro-sensory, musculoskeletal, gastrointestinal, hepatobiliary, renal/urinary, and reproductive systems and shock, burns, and trauma. The learner will also focus on management of care for patients with high-risk perinatal conditions and high-risk newborns.
Prerequisites: Complex Health Alterations 1 10543109, Mental Health & Community Concepts 10543110, Intermediate Clinical Practice 10543111, and Nursing Advanced Skills 10543112.

10543114 // 2 credits
Nursing: Management and Professional Concepts
This course covers nursing management and professional issues related to the role of the registered nurse. Emphasis is placed on preparing for practice as a registered nurse.
Prerequisites: Complex Health Alterations 1 10543109, Mental Health & Community Concepts 10543110, Intermediate Clinical Practice 10543111, and Nursing Advanced Skills 10543112.

10543115 // 3 credits
Nursing: Advanced Clinical Practice
This advanced clinical course requires the student to integrate concepts from all previous courses in the management of groups of clients facing complex health alterations. Students have the opportunity to further develop critical thinking skills using the nursing process in making clinical decisions. Continuity of care through interdisciplinary collaboration is emphasized.
Prerequisites: Complex Health Alterations 1 10543109, Mental Health & Community Concepts 10543110, Intermediate Clinical Practice 10543111, and Nursing Advanced Skills 10543112.

10543116 // 2 credits
Nursing: Clinical Transition
This clinical experience integrates all knowledge learned in the previous courses in transitioning to the role of the graduate nurse. The course promotes relatively independent clinical decisions, delegation, and works collaboratively with others to achieve client and organizational outcomes. Continued professional development is fostered.
Corequisite: Nursing: Advanced Clinical Practice 10543115.

AFFORDABLE TUITION

NURSING ASSISTANT

Program Code 30-543-1
2014-2015 Estimated Tuition and Fees: $426*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

Nursing assistants, sometimes called nurse aides or attendants, are in high demand to assist in the care of patients in hospitals, extended care facilities, and home care situations. Working under the direct supervision of a registered nurse, their responsibilities may vary, but personal care and emotional support of patients are always primary considerations.

This 120-hour program involves online learning, campus lab experiences, and 48-hours of clinical practicum, which involves working in health care agencies with patients and residents. Students must be at least 16 years old to attend clinical practicum.

The Mid-State Technical College Nursing Assistant program is accredited by the Wisconsin Department of Health Services (DHS) Bureau of Quality Assurance.

The Nursing Assistant program is offered at the Marshfield, Stevens Point, and Wisconsin Rapids campuses.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Nursing Assistant graduate, to be able to:

- Communicate and interact effectively with clients, family, and co-workers
- Maintain and protect client rights
- Report information and record observations
- Demonstrate the ethical and legal responsibilities of the NA/HHA
- Provide safe care to a diverse population, meeting personal, physical, and psychosocial client needs
- Assist with client rehabilitation and restorative care, promoting independence
- Assist clients with long-term, disabling conditions including dementia, always focusing on the strengths of the client
- Work cooperatively in a team environment
- Eligible to take the WI NA Competency evaluation

Note: Outcomes for the Nursing Assistant program are state and federally mandated.

CAREER OPTIONS

CBRF Caregiver
Home Health Aide
Nursing Assistant

POTENTIAL FOR ADVANCEMENT

Potential advancements generally require further education.

ADMISSIONS PROCEDURES

To apply to the Nursing Assistant program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with a $30 nonrefundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.
3. Must be at least 16 years of age.
4. Complete a Background Information Disclosure (BID) form and return it with the $15 Caregiver Background check fee. The Wisconsin Caregiver Law requires a background check.
5. After satisfactorily completing steps 1-4, complete an online information session and accompanying quiz found on the Nursing Assistant accepted student website. This website address will be provided in the program acceptance letter sent to applicants upon satisfactory completion of those steps. In the information session, students learn about the profession, academic requirements of the program, and the impact of program coursework on one's personal life. Once a student has completed steps 1-5, he/she is then able to register for the Nursing Assistant course.

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Upon completion of the nursing assistant course students must pass a state certification exam to become a Certified Nursing Assistant (CNA). Appropriate proof of identity will be required by the certification testing agency.

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function as a Nursing Assistant is available at mstc.edu. It is the student's responsibility to notify the disability services coordinator in Student Affairs to receive assistance.

CLINICAL-RELATED REQUIREMENTS

Prior to placement at a clinical site, students need to pay for a criminal background check and provide documentation of required healthwork.

Clinical sites have the right to refuse a student's placement based on inadequate health records, pending charges, or conviction records. Students with a criminal history may not be able to complete clinical courses. MSTC will make two attempts to place a student in an appropriate clinical experience. If MSTC is unable to place the student after two attempts, the student will be withdrawn from the clinical course and will not be able to advance in the program. Contact the program counselor for more details.

Prior to beginning a clinical experience in a health care facility, students must:

a. Provide evidence of good health by completion of required health work within three months prior to starting their clinical experience. The required form for reporting the results of your physical exam and specific immunization information is available on the accepted student website. The completed physical form is due the first day of class unless the class is accelerated, in which case it is due three weeks prior to the first day of class.
b. Obtain the required uniform for clinical experiences.
c. Assume responsibility for clinical assignment(s) regardless of time and location, including transportation and other personal arrangements.

PROGRAM PROGRESSION

In order to successfully complete the program, students must receive a "C" or better in 30543300.

CERTIFICATION

The Department of Health Services, Bureau of Quality Assurance requires that students who successfully pass the Nursing Assistant program take a state certification exam to qualify them to be listed in the state and federal nurse aide registries. Information to apply for this certification exam will be provided to students during their Nursing Assistant course. Nursing assistants must be listed on the state and federal nurse aide registries to be eligible to work in Wisconsin. Appropriate proof of identity will be required by the certification testing agency.

CURRICULUM		
30543300	Nursing Assistant	3

PROGRAM COURSE DESCRIPTIONS

30543300 // 3 credits
Nursing Assistant
The Nursing Assistant program prepares students for employment as nursing assistants. The program also prepares Nursing Assistant students with some of the skills needed for the first semester of the Nursing program. During the 120-hour course, students are required to demonstrate the following skills under the supervision of a licensed nurse: communication, basic nursing assistant and personal care skills, attention to client's rights, and care of clients with dementias. The program is recognized by the Wisconsin Department of Health Services as a nurse-aide training program. Upon successful completion of the program, the student is eligible to take the Wisconsin Nursing Assistant competency evaluation for employment in nursing homes, hospitals, home health agencies, hospices, CBRF's, assisted living centers, and homes for the developmentally disabled.
Prerequisite: Admission to Nursing Assistant 305431 program and Nursing Assistant Informational Session.

Additional Options

- MSTC offers Personal Care Worker training (47543400), which is an optional introduction to Nursing Assistant.
- The Nursing Assistant – Acute Care course (10543173) expands the skill set of the nursing assistant. Prerequisite: completion of a 120-hour state approved Nurse Aide training program or current certification on the Wisconsin Nurse Aide registry. This course is an approved elective for the Associate Degree Nursing Program.
- Nursing Assistant program is a prerequisite for admission to the Nursing program.

OFFICE SUPPORT SPECIALIST

Program Code 31-106-8
2014-2015 Estimated Tuition and Fees: $6,577*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

As an office support specialist, you are a key member of the office team responsible for a variety of activities which support office operations. The office support specialist is often the communication link in the office through the use of technology and personal interactions. A primary focus of your job is the preparation of documents using software applications.

As valued employees in business, industry, education, and government, office support specialists are trained to:

- Be professional and ethical
- Communicate effectively
- Create documents using appropriate software
- Problem solve to effectively handle day-to-day issues
- Process mail
- Store and retrieve records manually and using an automated system
- Work with individuals, teams, and the public

Executive assistant, administrative assistant, receptionist, and customer service positions were named in the top 25 best business jobs of 2014 according to U.S. News & World Report.

The Office Support Specialist program is offered at the Adams County Center and the Marshfield, Stevens Point, and Wisconsin Rapids campuses.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as an Office Support Specialist graduate, to be able to:

- Demonstrate effective workplace communications
- Apply technology skills to business and administrative tasks
- Perform routine administrative procedures
- Maintain internal and external relationships
- Model professionalism in the workplace

CAREER OPTIONS

Administrative Clerk
Customer Service Representative
General Office Assistant
Office Assistant
Office Computer Specialist
Program Assistant
Receptionist
Records Assistant

POTENTIAL FOR ADVANCEMENT

Administrative Professional
Administrative Support Supervisor
Clerical Supervisor
Medical Records Technician
Office Manager
Records Supervisor

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Office Support Specialist program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

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Wisconsin Rapids, WI 54494

PROGRAM COURSE DESCRIPTIONS

10102101 // 3 credits
Intro to Business
An introduction to what a business is, how it operates, and how it is managed. Students will identify forms of ownership and the processes used in production and marketing, finance, personnel, and management in business operations.

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10103114 // 1 credit
Word-Intermediate
Students create columns, lists, indexes, footnotes, endnotes, and table of contents. Outlines, paragraph numbering, mail merges, sorts, macros, thesaurus, and graphics are also covered.
Prerequisite: Microsoft Office-Beginning 10103106 or Word-Introduction 10103113.

10103124 // 1 credit
Excel-Intermediate
Develop skill to write and debug macros, create custom menus, perform database functions, and develop graphs.
Prerequisite: Microsoft Office-Introduction 10103106 or Excel-Beginning 10103123.

10103134 // 1 credit
Access-Intermediate
Students develop advanced indexing, logical and decision-making commands, access multiple files, and create menus and command files.
Prerequisite: Microsoft Office-Beginning 10103106 or Access-Introduction 10103133.

10104107 // 3 credits
Social Media Marketing
This course addresses how social media has transformed marketing communications from traditional, mass media to individualized marketing. Using social media tools such as Facebook, YouTube, Twitter, LinkedIn, and more, this class explores the different methodologies for social media marketing. Topics addressed include creating social media, integrating social media as part of a marketing campaign, the concept of viral marketing, the ethical and potential legal concerns that have arisen over these forms of communication, and how organizations and individuals have successfully applied social media marketing.

10106140 // 3 credits
Business Information Management
Following commonly used ARMA rules, the student will apply basic filing methods to paper and database filing systems. Methods to permanently archive data are also covered.
Corequisite: Microsoft Office-Introduction 10103106.

10106150 // 3 credits
Administrative Office Procedures
Develops professional skills and attitudes needed in a global business environment. Skills include time management, problem solving, and decision making while working independently and as part of a team. Tasks such as electronic mail, calendaring, meeting and event planning, domestic and international travel, and project management and minute-taking are included. Familiarity with office machines is required.
Corequisites: Written Communication 10801195 and Microsoft Office-Introduction 10103106.

10106157 // 3 credits
Document Formatting
The competencies for this course cover formatting styles of business letters, business and academic reports, memos, tables, business meeting documents, itineraries, legal documents, and business forms. The course also includes drill work for improving keying speed and accuracy. Minimum typing speed of 30 wpm required (alphabetic keys only).
Corequisite: Microsoft Office-Introduction 10103106.

10106160 // 3 credits
Proofreading & Editing
This course is designed to sharpen proofreading and editing skills. Competencies cover detecting and editing errors in keying, spelling, capitalization, plurals, possessives, punctuation, numbers, grammar, sentence structure, and formatting. Documents will also be edited for clarity, conciseness, and completeness.
Corequisite: Microsoft Office-Introduction 10103106.

CURRICULUM

Term		**(18-19 credits)**
10102101	Intro to Business	3
10103106	Microsoft Office-Introduction	3
10106157	Document Formatting	3
10106160	Proofreading & Editing	3
10801136	English Composition I **-or-**	
10801195	Written Communication	3
10804107	College Mathematics	3
	-or-	
10804118	Intermediate Algebra with Applications	4
	-or-	
10804189	Introductory Statistics	3

Term		**(18 credits)**
10103114	Word-Intermediate	1
10103124	Excel-Intermediate	1
10103134	Access-Intermediate	1
10104107	Social Media Marketing	3
10106140	Business Information Management	3
10106150	Administrative Office Procedures	3
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3
10801199	Employment Strategies	3

Total Credits 36-37

Please Note:
- The Office Support Specialist program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

PARAMEDIC TECHNICIAN

Program Code 10-531-1
2014-2015 Estimated Tuition and Fees: $9,911*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

Paramedic Technician is an 1150-hour program based upon the U.S. Department of Transportation Administration/Wisconsin Bureau Local Health Support and EMS curriculum. The Paramedic Technician curriculum prepares the student with the knowledge and skills to work competently as an entry-level EMT-Paramedic. The program consists of classroom lectures, practical skills lab, laboratory simulations, and hospital and prehospital clinical experiences.

Completion of the Emergency Medical Technician program is required prior to beginning the Paramedic core courses. The program offers additional certifications in Advanced Cardiac Life Support, Trauma Life Support, and Pediatric Advanced Life Support. Students learn advanced prehospital skills in the classroom, skills laboratory, hospital, and prehospital settings.

Students who successfully complete the program are eligible to take the National Registry written and practical examination.

The Paramedic Technician program is offered at Wisconsin Rapids Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Paramedic Technician graduate, to be able to:

- Prepare for incident response and EMS operations
- Integrate pathophysiological principles and assessment findings for a variety of patient encounters
- Demonstrate paramedic skills associated with established standards and procedures for a variety of patient encounters
- Communicate effectively with others
- Demonstrate professional behavior
- Meet state and national competency requirements for paramedic credentialing

CAREER OPTIONS

Ambulance Services
Dispatch Centers
First Responder Units
Hospitals/Emergency Departments
Industry Safety Departments
Rescue Squads
Urgent Care Facilities

POTENTIAL FOR ADVANCEMENT

Ambulance Service Manager
EMT-Instructor
EMT-Shift Supervisor
Service Training Coordinator

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Paramedic Technician program, please complete the following and submit documents to the MSTC Admissions Office:

Step 1:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum required scores are:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.
4. Submit the Criminal Background Statement of Understanding and Release of Information form.

Completion of step 1 requirements allows the student to begin general education courses.

- If you are taking EMT as part of the Paramedic Technician program, you must apply to that program (30-531-3) separately. Even though EMT is part of the curriculum, it is handled as a stand-alone program for admission purposes.

Step 2:
1. Submit a current State of Wisconsin EMT license.

Completion of the Step 2 requirement will make the student eligible for entry into the Paramedic core courses (10-531-911 through 10-531-924). Completion of Step 2 does not guarantee entry into the next available cohort of core program students. Cohorts are filled on a first eligible, first served basis.

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Wisconsin Rapids, WI 54494

Students who fail to meet the non-paramedic core (associate degree) requirements within 31 undergraduate credit hours will have their conditional admission to the Paramedic program withdrawn and will no longer be eligible for financial aid.

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function as a Paramedic Technician is available at mstc.edu. It is the student's responsibility to notify the disability services coordinator in the Student Affairs Office to receive assistance.

CLINICAL-RELATED REQUIREMENTS

Prior to placement at a clinical site, students need to pay for a criminal background check and provide documentation of required healthwork and current health care provider level CPR certification to a private vendor. Students are responsible for ensuring all requirements remain current during program enrollment.

Clinical sites have the right to refuse a student's placement based on inadequate health records, pending charges, or conviction records. Students with a criminal history may not be able to complete clinical courses. MSTC will make two attempts to place a student in an appropriate clinical experience. If MSTC is unable to place the student after two attempts, the student will be withdrawn from the clinical course and will not be able to advance in the program. Contact the program counselor for more details.

Prior to beginning a clinical experience in a health care facility or ambulance service, students must:

- Provide evidence of completion of the required health work within one month following the start of EMS Fundamentals (10531911).
- Hold a current State of Wisconsin EMT license
- Hold or be eligible to hold a Department of Health Services EMT Paramedic Training permit
- Provide evidence of current CPR at the health care professional level by a CPR organization specified under s. DHS 110.17(1)
- Obtain the required uniform for clinical experiences
- Assume responsibility for clinical assignment(s) regardless of time and location, including transportation and other personal arrangements

PROGRAM PROGRESSION AND COMPLETION

In order to progress in and complete the program, students must receive a grade of "C" or better in each of the paramedic core courses. Failure to obtain a grade of "C" in any core course will prevent a student from progressing onto the next course in the sequence until they have retaken the course and achieved a grade of "C" or better.

Having to retake a core course will require removal from the student's cohort and placement will be made in the next cohort with an available seat.

This requirement also applies to the last class in the sequence, as the grade of "C" or better is required in all core courses in order to retain eligibility to take the National Registry exam.

CURRICULUM

Term		(18 credits)
10531168	EMT Basic	5
10801136	English Composition I **-or-**	
10801195	Written Communication	3
10806177	General Anatomy & Physiology	4
10809172	Introduction to Diversity Studies	3
10809198	Intro to Psychology	3

Term		(14 credits)
10531169	EMS Career Fundamentals	4
10801196	Oral/Interpersonal Communication	3
10806179	Advanced Anatomy & Physiology	4
10809188	Developmental Psychology	3

Term		(20 credits)
10531911	EMS Fundamental	2
10531912	Paramedic Medical Principles	4
10531913	Patient Assessment Principles	3
10531914	Prehospital Pharmacology	3
10531916	Paramedic Cardiology	4
10531917	Paramedic Clinical/Field 1	3
10531918	Advanced Resuscitation	1

Term		(18 credits)
10531915	Paramedic Respiratory Management	2
10531919	Paramedic Medical Emergencies	4
10531920	Paramedic Trauma	3
10531921	Special Patient Populations	3
10531922	EMS Operations	1
10531923	Paramedic Capstone	1
10531924	Paramedic Clinical/Field 2	4

Total Credits 70

Please Note:
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

PROGRAM COURSE DESCRIPTIONS

10531168 // 5 credits
EMT Basic
Based upon the State of Wisconsin/ U.S. Department of Transportation/ National Highway Transportation Safety Administration curriculum, this 185-hour program includes classroom instruction—lectures, discussion, demonstrations, skill practice—and an additional patient care experience, which requires a minimum of ten patient care contacts.
Prerequisite: Admission to Emergency Medical Technician 305313 program.

10531169 // 4 credits
EMS Career Fundamentals
This course is designed to introduce the student to a variety of topics that are relevant to a successful career in EMS. The course content focuses on employment readiness, organizational structure, leadership concepts, community involvement, and application of EMS research findings.

10531911 // 2 credits
EMS Fundamental
This course provides the paramedic student with comprehensive knowledge of EMS systems, safety, well-being, legal issues, and ethical issues, with the intended outcome of improving the health of EMS personnel, patients, and the community. The students obtain fundamental knowledge of public health principles and epidemiology as related to public health emergencies, health promotion, and illness/injury prevention. Introducing students to comprehensive anatomical and medical terminology and abbreviations fosters the development of effective written and oral communications with colleagues and other health care professionals.
Prerequisites: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs and Wisconsin Emergency Medical Technician (or higher) license or a current National Registry of EMTs certification at the Emergency Medical Technician level or higher.

10531912 // 4 credits
Paramedic Medical Principles
This course addresses the complex depth of anatomy, physiology, and pathophysiology of major human systems while also introducing paramedic students to the topics of shock, immunology, and bleeding.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531913 // 3 credits
Patient Assessment Principles
This course teaches the paramedic student to integrate scene and patient assessment findings with knowledge of epidemiology and pathophysiology to form a field impression. By utilizing a structured and organized assessment process with knowledge of anatomy, physiology, pathophysiology, life span development, and changes that occur to the human body with time, students will learn to develop a list of differential diagnoses through clinical reasoning, along with the ability to modify the assessment as necessary to formulate a treatment plan for their patients.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531914 // 3 credits
Prehospital Pharmacology
This course provides the paramedic student with the comprehensive knowledge of pharmacology required to formulate and administer a pharmacological treatment plan intended to mitigate emergencies and improve the overall health of the patient.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531915 // 2 credits
Paramedic Respiratory Management
This course teaches the paramedic student to integrate complex knowledge of anatomy, physiology, and pathophysiology into the assessment to develop and implement a treatment plan with the goal of assuring a patient airway, adequate mechanical ventilation, and respiration for patients of all ages. Specific knowledge pertaining to the respiratory system is also provided to ensure the student is prepared to formulate a field impression and implement a comprehensive treatment plan for a patient with a respiratory complaint.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531916 // 4 credits
Paramedic Cardiology
This course teaches the paramedic student to integrate assessment findings with principles of cardiovascular anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for a patient with a cardiovascular complaint.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531917 // 3 credits
Paramedic Clinical/Field 1
This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in field and health care environment experiences with actual patients under the supervision of instructors or approved preceptors. Students may also have the opportunity to participate in formal high-fidelity human patient simulator experiences as a part of this course.
Prerequisites: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs, Advanced Prehosital Pharmacology 10531914, and a current Wisconsin license at the Emergency Medical Technician (or higher) level.

10531918 // 1 credit
Advanced Resuscitation
By teaching Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS) methodologies and protocols, this course prepares the paramedic student in the integration of comprehensive knowledge of causes and pathophysiology into the management of shock, respiratory failure, respiratory arrest, cardiac arrest, and peri-arrest states with an emphasis on early intervention to prevent respiratory and/or cardiac arrest if possible.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531919 // 4 credits
Paramedic Medical Emergencies
This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for a patient with a medical complaint.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531920 // 3 credits
Paramedic Trauma
This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for an acutely injured patient.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531921 // 3 credits
Special Patient Populations
This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for patients with special needs. Gynecological emergencies, along with special considerations in trauma, are also included within this course.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531922 // 1 credit
EMS Operations
This course provides the paramedic student with the knowledge of operational roles and responsibilities to ensure patient, public, and EMS personnel safety.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531923 // 1 credit
Paramedic Capstone
This course provides the student with a final opportunity to incorporate their cognitive knowledge and psychomotor skills through labs and scenario-based practice and evaluations prior to taking the National Registry written and practical examinations. Technical Skills Attainment (TSA) for each student will be compiled and/or documented within this course as required by the DHS-approved paramedic curriculum.
Prerequisite: EMS Operations 10531922.

10531924 // 4 credits
Paramedic Clinical/Field 2
This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in field and health care environment experiences with actual patients under the supervision of instructors or approved preceptors. Students may also have the opportunity to participate in formal high-fidelity human patient simulator experiences as a part of this course. Successful completion of this course requires the student to meet all clinical and field competency requirements at the paramedic level as defined by WI DHS EMS.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

PHARMACY TECHNICIAN

Program Code 31-536-1
2014-2015 Estimated Tuition and Fees: Contact Lakeshore Technical College
Median Salary Six Months After Graduation: mstc.edu/programsalaries

If you're ill or injured, you have access to an enormous variety of therapeutic medications, and you trust your pharmacy to correctly interpret and fill your prescriptions. Pharmacy technicians contribute to our safety by assisting pharmacists in a variety of technical tasks. If you're attentive to detail, organized, a good communicator, and like math, science, and working with people, a career as a pharmacy technician may be your prescription for success. Students will receive both lab and actual clinical experience.

Core program courses are offered via video conference hosted by Lakeshore Technical College (LTC) and are supported by select classes available in the MSTC District. The Pharmacy Technician program is offered at Stevens Point Campus.

PROGRAM OUTCOMES

Employers will expect you, as a Pharmacy Technician graduate, to be able to:

- Package and label drugs for prescription dispensing
- Prepare and deliver unit dose to the nursing services of hospitals or nursing homes
- Prepare parenteral admixtures under aseptic and sterile conditions
- Receive and inventory drug shipments
- Maintain records, including patient profiles
- Facilitate communication for third party reimbursement
- Compound solutions, ointments, lotions, suppositories, and other medications
- Comprehend and utilize medical and drug terminology common to the pharmaceutical environment
- Practice ethical standards and recognize legal implications of your actions as they relate to yourself, the pharmacist, and the pharmacy

CAREER OPTIONS

Home IV Specialist
Pharmacy Technician employed at Community Pharmacies, Hospital Pharmacies, Nursing Home Pharmacies

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Pharmacy Technician program, please submit the following to Lakeshore Technical College (LTC):

1. Complete a WTCS application form and return it with the $30 non-refundable application fee. Check is payable to LTC.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 70
   - Math-Accuplacer score of 50
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.
4. Complete a Background Information Disclosure (BID) form and submit $16 for Caregiver Background check. The Wisconsin Caregiver Law requires a background check.
5. Complete Health form and immunization records.
6. Read, sign, and return the Functional Abilities Statement of Understanding form.
7. Read, sign, and return the sign-off sheet for the Pharmacy Technician Program Handbook.
8. Complete a telephone program advising session with LTC Counselor.
9. Upon receipt of the above materials, you will be accepted to Lakeshore Technical College. LTC will then notify you of additional program requirements.

Lakeshore Technical College
Admissions
1290 North Avenue
Cleveland, WI 53015-1414
888.GO TO LTC • 888.468.6582

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500 32nd Street North
Wisconsin Rapids, WI 54494

CREDIT FOR PRIOR LEARNING

Credit for Prior Learning is available for certain courses in the form of high school advanced standing, transfer credit, test credit, military experience, and experiential credit. Contact the program counselor with any questions you may have regarding this option.

CLINICAL-RELATED REQUIREMENTS

Clinical sites have the right to refuse a student's admission based on conviction records. If you have a criminal history, you may not be able to complete clinical courses. Also, clinical agencies will be notified of all students with pending charges and convictions and agencies can decline student admission to that agency. You may contact the program counselor for more details.

PROGRAM COURSE DESCRIPTION

10104102 // 3 credits
Principles of Marketing
Introduces the student to the consumer decision process model; the bases used to segment a market; basic concepts about goods, services, and ideas; the nature of supply chain and distribution; integrated marketing communications; and the stages of the product life cycle and their impact on the marketing mix.
Corequisite: Microsoft Word and PowerPoint skills or equivalent or Pharmacy Word 2000-Intro 10103109. Condition: Admn Asst requirements met for Pharmacy Technician 105361.

10104104 // 3 credits
Selling Principles
Prepares the student to use the steps of the selling process to perform sales presentations.

10182108 // 3 credits
Purchasing
Introduces the participant to basic purchasing, quality specifications, inventory control, supplier selection, price aspects, research and measurement, and global purchasing. This course is exciting for anyone interested in working in a challenging and rewarding purchasing and supply chain management career.

10501101 // 3 credits
Medical Terminology
Prepares the learner to use appropriate medical terminology for the digestive, urinary, integumentary, reproductive, respiratory, endocrine, nervous, musculoskeletal, cardiovascular, and lymphatic systems and special senses.

10510102 // 3 credits
Health Insurance and Reimbursement
Introduces the learner to Federal, state, and private health insurance plans and managed care systems; and surveys the coding, submission, and processing cycle of claims, as well as reimbursement methods used by payers. It provides application of information to ambulatory settings, pharmacies, hospitals, and long-term care.

10536110 // 3 credits
Pharmaceutical Calculations
Prepares the learner to enlarge and reduce formulas and solve proportions, dilutions, allegations, and other calculations pertinent to the preparation of pharmaceuticals using metric, apothecary, avoirdupois, and household measuring systems.
Condition: Pharmacy Technician 315361 admission requirements met.

10536112 // 4 credits
Pharmacy Business Applications
Prepares the learner to utilize pharmaceutical business terminology, procedures, customer service, record keeping, purchasing procedures, inventory control systems, pricing, merchandising, reference materials, ethics, roles, responsibilities, and relationships with patients and coworkers.
Corequisite: Pharmacy Community Clinical 10536138. Condition: Pharmacy Technician 315361 admission requirements met.

10536115 // 2 credits
Pharmacy Law
Introduces the learner to federal and state regulations that apply to pharmacy practice.
Condition: Pharmacy Technician 315361 admission requirements met.

CURRICULUM

Term		(18 credits)
10501101	Medical Terminology	3
10501102	Health Insurance and Reimbursement	3
10536110	Pharmaceutical Calculations	3
10536113	Pharmacy Business Applications	3
10536115	Pharmacy Law	2
10536120	Fundamentals of Reading Prescriptions	1
10536122	Pharmacology	3

Term		(18 credits)
10536125	Pharmacy Drug Distribution Systems	2
10536126	Pharmacy Parenteral Admixtures	3
10536139	Pharmacy Community Clinical	3
10536141	Pharmacy Computer Lab	2
10536143	Pharmacy Hospital Clinical	2
10801196	Oral/Interpersonal Communication	3
10809198	Intro to Psychology	3

Total Credits 36

Please Note:
- The Pharmacy Technician program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

Pharmacy Services Management program (Associate Degree in Applied Science) is at Lakeshore Technical College. Contact LTC with any questions.

10536120 // 1 credit
Fundamentals of Reading Prescriptions
Prepares the learner to work in a community or hospital pharmacy by exploring the role of a pharmacy technician within the health care team, examining each step in the prescription filling process, and identifying the top 200 drugs by brand and generic name and therapeutic class.
Condition: Pharmacy Technician 315361 admission requirements met.

10536122 // 3 credits
Pharmacology
Enhances the learner's ability to act and react appropriately in the pharmacy by learning how drugs work through examination of the anatomy, physiology, pathophysiology, and drug therapy for each of the major systems.
Condition: Pharmacy Technician 315361 admission requirements met.

10536124 // 1 credit
Pharmacy Drug Distribution Systems
Is an introductory study of the basic drug distribution systems used in community and institutional pharmacy, including automation technology, pharmacist and pharmacy technician roles, and dispensing considerations.
Condition: Pharmacy Technician 315361 admission requirements met.

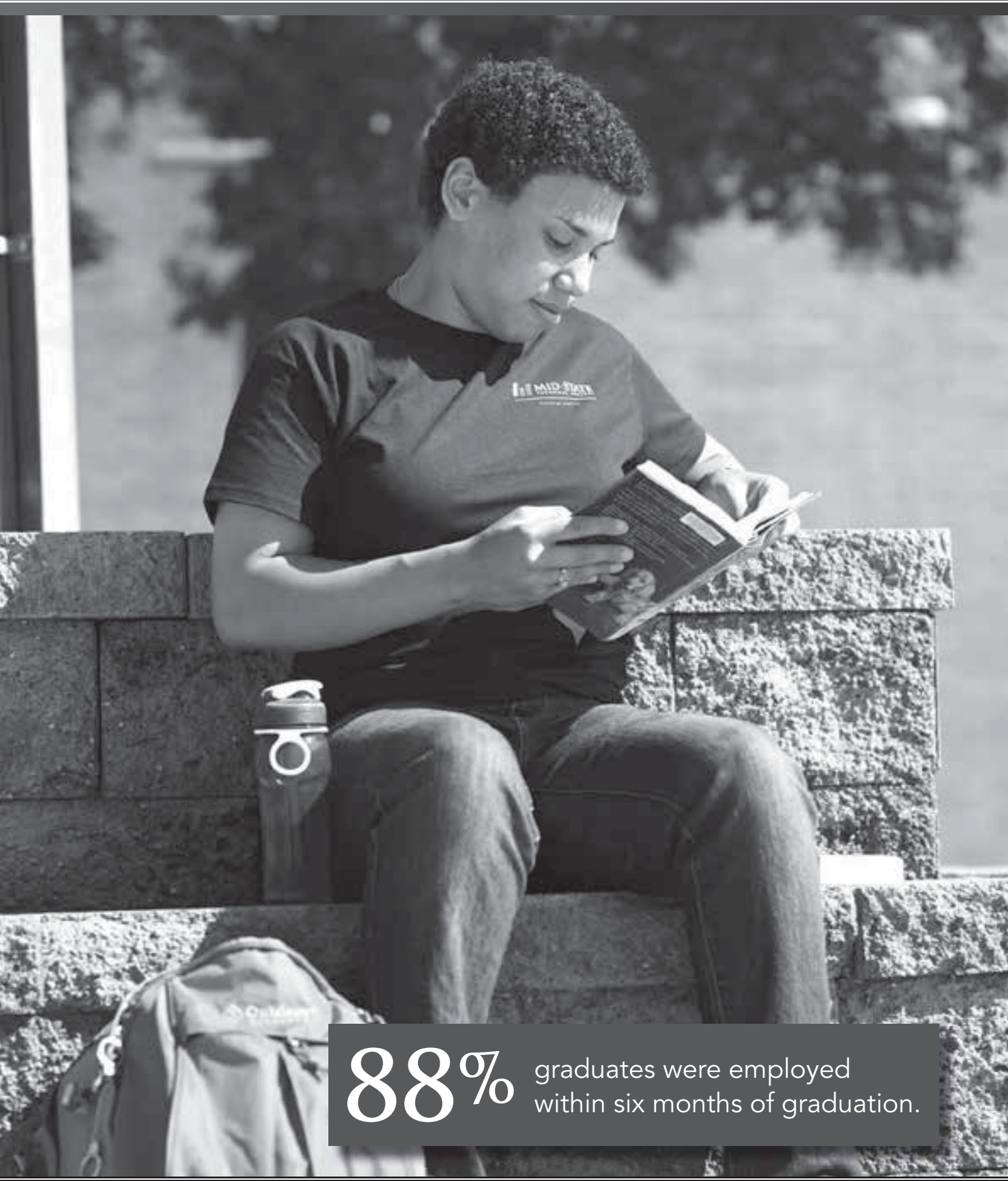
10536126 // 3 credits
Pharmacy Parenteral Admixtures
Provides the learner with the skills to utilize aseptic technique in vertical and horizontal laminar flow hoods for preparation of solutions and medications to be administered intravenously, intramuscularly, subcutaneously, and intradermally to patients.
Prerequisite: Pharmaceutical Calculations 10536110 or Calculations for Working Pharmacy Technicians 10536193. Condition: Pharmacy Technician 315361 admission requirements met.

10536138 // 2 credits
Pharmacy Community Clinical
Provides hands-on experience in a community pharmacy for 108 hours during quarter two. Areas of instruction include interpretation of prescriptions; entering prescriptions on computer; patient profiles; correctly filling and labeling prescriptions; billing patient and third parties; customer service; over-the-counter medications; purchasing; checking in deliveries; and inventory control, compounding, and patient confidentiality.
Corequisites: Fundamentals of Reading Prescriptions 10536120, Pharmacy Business Applications 10536112, Pharmaceutical Calculations 10536110, or Calculations for Working PT 10536193 and Health Insurance & Reimbursement 10501102. Condition: Pharmacy Technician 315361 admission requirements met.

10536140 // 3 credits
Pharmacy Hospital Clinical
Provides the learner with the skills to prepare parenteral admixtures, fill medication carts and unit-dose drawers, control inventory, package medications, and maintain patient records in the hospital setting.
Prerequisites: Pharmacy Community Clinical 10536138, and Pharmacy Calculations 10536110. Corequisites: Hospital Clinical Lab 10536141 and Pharmacy Parenteral Admixtures 10536126. Condition: 315361 Pharmacy Technician admission requirements met.

10536141 // 2 credits
Hospital Clinical Lab
Provides the learner with the skills to utilize aseptic technique in vertical and horizontal laminar flow hoods for preparation of solutions and medications to be administered intravenously, intramuscularly, subcutaneously, and intradermally to patients and provides experience with institutional drug delivery systems including the unit-dose system.
Prerequisites: Pharmacy Community Clinical 10536138. Corequisites: Pharmacy Hospital Clinical 10536140 and Pharmacy Parenteral Admixtures 10536126. Condition: 315361 Pharmacy Technician admission requirements met.

10536142 // 2 credits
Pharmacy Community Clinical-Advanced
Expands the learners ability to support community pharmacy services in areas of diabetes services, immunization programs, durable medical equipment, automated dispensing systems, patient education, and over-the-counter products, in addition to traditional community services. This course involves a hands-on component in a community pharmacy and a research component.


88% graduates were employed within six months of graduation.

PHLEBOTOMY TECHNICIAN

Program Code 30-513-1
2014-2015 Estimated Tuition and Fees: $3,565*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

Phlebotomists are in great demand across the country. The Phlebotomy Technician program teaches blood collecting techniques that include venipuncture, skin punctures, and arterial punctures to provide samples necessary for lab analysis. You will also learn information and skills needed to perform various lab procedures, including specimen processing.

Realizing the great need for well-prepared phlebotomists, Mid-State Technical College, in conjunction with area health care agencies, provides a less-than-one-year diploma program to prepare qualified phlebotomists to meet the needs of laboratories seeking skilled personnel.

This program features a 17-credit preparatory semester at Mid-State Technical College followed by a 3-credit theory course and a 5-credit practicum at a regional health care agency.

The Phlebotomy Technician program is approved by the National Accrediting Agency for Clinical Laboratory Sciences, one of only three approved programs in Wisconsin. Graduates are also prepared to take a national certification exam. However, taking and passing a national exam is not a graduation requirement.

National Accrediting Agency for Clinical Laboratory Sciences
5600 N. River Road Suite 720, Rosemont, IL 60018-5119
773.714.8880
www.naacls.org

The Phlebotomy Technician program is offered at the Marshfield and Stevens Point campuses.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Phlebotomy Technician graduate, to be able to:

- Collect, transport, handle, and process blood and other specimens
- Adhere to infection control and safety policies and procedures
- Demonstrate professional interpersonal skills with patients, family members, and other health care personnel
- Perform within legal and ethical boundaries
- Perform basic laboratory testing procedures under appropriate supervision
- Process requisitions

CAREER OPTIONS

Clinical Laboratories
Emergency Room Services
Extended Care Facilities
Insurance Companies
Metropolitan Phlebotomy Service Agencies
Nursing Homes
Outpatient Services
Veterinary Services

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Phlebotomy Technician program, please complete the following steps submit documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents or select course completion are acceptable alternatives for above scores.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.
4. Submit the Criminal Background Statement of Understanding and Release of Information form.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

CREDIT FOR PRIOR LEARNING

Credit for Prior Learning is available for certain courses in the form of high school advanced standing, transfer credit, test credit, military experience, and experiential credit. Contact the program counselor with any questions you may have regarding this option.

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function as a Phlebotomy Technician is available in the online program orientation. It is the student's responsibility to notify the disability services coordinator in the Student Affairs Office to receive assistance.

CLINICAL-RELATED REQUIREMENTS

Prior to placement at a clinical site, students need to pay for a criminal background check and provide documentation of required healthwork to a private vendor.

Students are responsible for ensuring all requirements remain current during program enrollment.

Clinical sites have the right to refuse a student's placement based on inadequate health records, pending charges, or conviction records. Students with a criminal history may not be able to complete clinical courses. MSTC will make two attempts to place a student in an appropriate clinical experience. If MSTC is unable to place the student after two attempts, the student will be withdrawn from the clinical course and will not be able to advance in the program. Contact the program counselor for more details.

PROGRAM PROGRESSION

In order to maintain a passing status and progress in the program, students must:

- Receive a grade of "C" or better in all courses required for graduation.
- Repeat courses not completed with a grade of "C" or better prior to progressing in core courses or other courses with co- or prerequisites.

Please note that the ability to repeat courses is dependent upon availability in courses. Students may be required to apply for program re-entry in order to repeat courses within the programs instructional area. All first semester courses must be completed with a grade of "C" or better to progress to core classes in the second semester.

Students will receive three attempts to pass any 10-513 course. If a passing grade is not achieved in three attempts, the student will be permanently withdrawn from the program or program waiting list. A withdrawal grade of "W" counts as one attempt for the course. Requests for special consideration should be directed to the Service & Health Associate Dean.

CURRICULUM

Term		(17 credits)
10103106	Microsoft Office-Introduction	3
10501101	Medical Terminology	3
10501109	Medical Law, Ethics, and Professionalism	2
10509102	Human Body in Health and Disease	3
10513101	Basic Clinical Laboratory Techniques	3
10801195	Written Communication	3

Term		(8 credits)
10513116	Principles of Phlebotomy	3
10513117	Phlebotomy Laboratory/ Practicum	5

Total Credits 25

Please Note:

- The Phlebotomy Technician program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

PROGRAM COURSE DESCRIPTIONS

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10501101 // 3 credits
Medical Terminology
Students focus on the component parts of medical terms: prefixes, suffixes, and word roots. Students practice formation, analysis, and reconstruction of terms. Emphasis on spelling, definition, and pronunciation. Introduction to operative, diagnostic, therapeutic, and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

10501109 // 2 credits
Medical Law, Ethics, and Professionalism
Prepares students to display professionalism and perform within ethical boundaries in the health care setting. Students maintain confidentiality, examine legal aspects of the medical record, perform risk management procedures, and examine legal and bioethical issues.

10509102 // 3 credits
Human Body in Health and Disease
Focuses on diseases that are frequently first diagnosed and treated in the medical office setting. Students learn to recognize the causes, signs, and symptoms of diseases of the major body systems as well as the diagnostic procedures, usual treatment, prognosis, and prevention of common diseases.
Corequisite: Medical Terminology 10501101.

10513101 // 3 credits
Basic Clinical Laboratory Techniques
Assists the learner to develop skills in performing basic medical lab procedures. Emphasizes specimen collection and processing, testing methods, quality control, and safety procedures. Correlates laboratory testing to human disease processes. Blood collection is a required part of this class.
Prerequisite: Admission to Phlebotomy Technician 305131 program.

10513116 // 3 credits
Principles of Phlebotomy
Prepares the learner to function as a member of the health care delivery team, performing the role of a phlebotomist. The phlebotomist generally works in a clinical laboratory under the supervision of the appropriate professional. The phlebotomist is responsible for collection procedures in both out-patient clinics and hospital in-patient settings for the purpose of laboratory analysis, including emergency and routine collection procedures from veins, skin puncture areas, and arteries on patients of all ages. Specimen integrity is emphasized as dependent on collection procedures, proper choice of equipment, and knowledge of patient variables. Positive patient identification protocol is an absolute requirement which is stressed throughout. Proper transport and processing of specimens are also included. This theory course is primarily an online course and is designed for the student preparing to enter the laboratory/practicum experience of the phlebotomy program.
Prerequisite: Admission to Phlebotomy Technician 305131 program and completion of first semester courses with a grade of "C" or better.

10513117 // 5 credits
Phlebotomy Laboratory/Practicum
Prepares the learner to function as a staff member in a medical laboratory setting performing venipuncture and other specimen collection procedures, processing and handling of laboratory specimens, and performing related duties. There is no remuneration for students enrolled in this course.
Prerequisite: Principles of Phlebotomy 10513116 with a grade of "C" or better.


YOU + MSTC = GREAT

PRACTICAL NURSING

Program Code 31-543-1
2014-2015 Estimated Tuition and Fees: $4,684*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The Practical Nursing program has a challenging curriculum that prepares students to provide direct care for individuals in long-term care agencies, doctor's clinics, home health agencies, the armed services, and other sites. This program includes lectures, discussions, demonstrations, laboratory practice, and supervised clinical in a variety of settings.

After successfully completing the Practical Nursing (PN) program, the graduate becomes eligible to apply to take the national licensing exam for Practical Nursing. If you pass the examination, you may work as a Licensed Practical Nurse (LPN). As an LPN, you will work in the health care field under the direction of a Registered Nurse (RN).

The admission requirements are the same for the Practical Nursing and the Associate Degree Nursing (ADN) programs to support progression from one program into the next. Practical Nursing graduates are eligible to apply to the ADN program and continue their education to become an RN. Articulation of a PN graduate into the Nursing program is based on seat availability.

MSTC's Practical Nursing program is part of the Wisconsin Technical College System (WTCS) system-wide curriculum. The Practical Nursing program is approved by the Wisconsin Board of Nursing.

The Practical Nursing program is offered at the Marshfield and Wisconsin Rapids campuses.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Practical Nursing graduate, to be able to:

- Implement one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving identity as a nurse committed to caring, advocacy, and quality care while adhering to evidence-based practice
- Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts
- Integrate knowledge of social, mathematical, and physical sciences, pharmacology, and disease processes while participating in clinical decision making
- Provide patient centered care under supervision by participating in the nursing process across diverse populations and health care settings
- Minimize risk of harm to patients, members of the health care team, and self through safe individual performance and participation in system effectiveness
- Collaborate as an active member of the multisdisciplinary health care team to provide effective patient care throughout the lifespan
- Use information and technology to communicate, manage data, mitigate error, and assist with decision making

CAREER OPTIONS

Upon successful completion of licensure examination a Licensed Practical Nurse holds positions such as:

Home Care Nurse
Long-term Care Nurse
Office Nurse
Private Duty Nurse

POTENTIAL FOR ADVANCEMENT

Charge Nurse
Registered Nurse

Potential advancement generally requires further education.

ADMISSION PROCEDURES

To apply to the Practical Nursing program, please complete the following steps and submit documents to the MSTC Admissions Office:

Step 1:

1. Complete an MSTC Application form and return it with the $30 non-refundable application fee.
2. Complete an online or face to face nursing informational session.
3. Complete the Accuplacer or ACT. Minimum scores required:
   - Reading–Accuplacer score of 95
   - Sentence Skills–Accuplacer score of 103
   - Math–Accuplacer score of 79
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.

4. Submit official copy of all academic transcripts, including high school, college or university, and HSED/GED.
5. Submit the Criminal Background Statement of Understanding and Release of Information form.

When the requirements for Step 1 are completed, the student will be admitted to the program and may be eligible to apply for financial aid.

Step 2:
Complete the following prerequisite coursework:

1. One year of high school chemistry or biology or combination with at least a grade of "C" or better both semesters or one semester of college chemistry with a grade of "C" or better.
2. General Anatomy & Physiology with a grade of "B-" or better. This course has a science prerequisite.
3. Submit Functional Abilities form. This form is available at mstc.edu/nursing-admission-procedures.
4. Submit Intent to Enroll form with all required documentation. This form is available at mstc.edu/nursing-admission-procedures.

Step 2 completed packets are accepted at any time. All incomplete packets will be returned. MSTC will accept eight students to the Practical Nursing program each year. Student placement will be determined based on the date the Intent to Enroll form is submitted. If more than one student submits on the same date, placement will be determined by original program application date. Submit packets to MSTC Admissions Office.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

After your Step 2 packet has been submitted, proceed to Step 3.

Step 3:
To be eligible to enroll in Practical Nursing core courses, complete the following requirements:

1. Complete Nursing Assistant prerequisite requirement if needed.
2. Complete the following courses with a grade of "C" or better:

   Required prior to nursing:
   - Developmental Psychology
   - English Composition I or Written Communication

   Recommended prior to Nursing courses:
   - Oral/Interpersonal Communication or Speech
3. Must have a total program GPA of 2.0 or higher.
4. If you have all General Education courses completed and you are within one semester of nursing clinical, you may take the Nursing Fundamentals and Nursing Pharmacology courses. At that time, you will receive an email describing the process.

Nursing Information Line
715.422.5570

CREDIT FOR PRIOR LEARNING

Credit for Prior Learning is available for certain courses in the form of high school advanced standing, transfer credit, test credit, military experience, and experiential credit. Contact the program counselor with any questions you may have regarding this option.

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function as a nurse is available at mstc.edu. It is the student's responsibility to notify the disability services coordinator in Student Affairs to receive assistance.

CURRICULUM

Required Prior to Beginning Nursing Core Courses (10 credits)

10806177	General Anatomy & Physiology	4
10809188	Developmental Psychology	3
10801136	English Composition I **-or-**	
10801195	Written Communication	3

Recommended Prior to Beginning Nursing Core Courses (3 credits)

10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3

Term (9 credits)

10543101	Nursing: Fundamentals	2
10543102	Nursing: Skills	3
10543103	Nursing: Pharmacology	2
10543104	Nursing: Introduction to Clinical Practice	2

Term (10 credits)

10543105	Nursing: Health Alterations	3
10543106	Nursing: Health Promotion	3
10543107	Nursing: Clinical Care Across the Lifespan	2
10543108	Nursing: Intro to Clinical Care Management	2

Total Credits 32

Please Note:
- The Practical Nursing program has an August start date. Students are advised to attend a Question and Answer session. These sessions are offered on a frequent basis.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

CLINICAL-RELATED REQUIREMENTS

Prior to placement at a clinical site, students need to pay for a criminal background check and provide documentation of required healthwork to a private vendor, Certified Background.

Clinical sites have the right to refuse a student's placement based on inadequate health records, pending charges, or conviction records. Students with a criminal history may not be able to complete clinical courses. MSTC will make two attempts to place a student in an appropriate clinical experience. If MSTC is unable to place the student after two attempts, the student will be withdrawn from the clinical course and will not be able to advance in the program. Contact the program counselor for more details.

Prior to beginning a clinical experience in a health care facility, students must:

a) Submit evidence of completed health work

b) Provide evidence of current CPR

c) Obtain the required uniform for clinical experiences

d) Accept responsibility for clinical assignment(s) regardless of time and location, including transportation and other personal arrangements

PROGRAM PROGRESSION AND COMPLETION

In order to progress in and successfully complete the program, students must:

- Receive a grade of "C" or better in all courses required for graduation except General Anatomy & Physiology with a grade of "B-" or better.
- Maintain a program and cumulative GPA of 2.0 or higher.
- If a student is not successful in a Practical Nursing 10543 course, he/she will need to repeat that course prior to progressing in the program. Potential continuation is dependent upon availability in the course/program.

Students will receive two attempts to pass any Practical Nursing 10543 course. If a passing grade is not achieved in two attempts, the student will be withdrawn from the program. A withdrawal grade of "W" counts as one attempt for the course. Requests for special consideration may be directed to the Service & Health Associate Dean for Nursing.

ARTICULATION OPPORTUNITIES

An MSTC graduate from the Practical Nursing (PN) program can articulate with any Nursing Associate Degree program in the Wisconsin Technical College System (WTCS) and expect no duplication of classes. This articulation is based on seat availability and college residency requirements. All WTCS PN graduates can apply and articulate directly into the second year of the Nursing program based on seat availability and completion of general education courses.

ELIGIBILITY REQUIREMENTS FOR LICENSED PRACTICAL NURSE EXAMINATION

1. Graduated from high school or its equivalent as determined by the Wisconsin State Board of Nursing.
2. Wisconsin State Statutes require that the student DOES NOT have an arrest or conviction record for acts or circumstances that relate directly to the clinical practice of the license being requested (e.g. bodily harm/injury; drug or alcohol impairment). Individuals cannot be discriminated against for arrest or conviction records if the precipitating actions do not directly relate to practice.
3. Graduated from a Board of Nursing approved school of nursing.
4. Payment of fees to Mid-State Technical College and the Wisconsin State Board of Nursing.

MAINTAINING A NURSING LICENSE

The State Board of Nursing may revoke, limit, suspend, or deny renewal of license if the person committed any of the following:

1. Fraud in the procuring or renewal of the license.
2. One or more violations of the Nurse Practice Act (Chapter 441) or accompanying Administrative Rules.
3. Acts which show practitioner to be unfit or incompetent.
4. Misconduct or unprofessional conduct.

PROGRAM COURSE DESCRIPTIONS

10543101 // 2 credits
Nursing Fundamentals
This course focuses on basic nursing concepts to provide evidenced-based care to diverse patient populations across the lifespan. Current and historical issues impacting nursing are explored within the scope of nursing practice. The nursing process is introduced as a framework for organizing the care of patients.
Prerequisite: Successful completion of all Step 3 Nursing program required courses and space availability.

10543102 // 3 credits
Nursing Skills
This course focuses on development of evidence-based clinical skills and physical assessment across the lifespan. Content includes mathematical calculations and conversions related to clinical skills. In addition, the course includes techniques related to obtaining a health history and basic physical assessment skills using a body systems approach.
Prerequisite: Successful completion of all Step 3 Nursing program required courses and space availability.

10543103 // 2 credits
Nursing Pharmacology
Introduces the principles of pharmacology, including drug classifications and their effects on the body. Emphasis is on the use of the components of the nursing process when administering medications.
Prerequisite: Successful completion of all Step 3 Nursing program required courses and space availability.

10543104 // 2 credits
Nursing: Intro to Clinical Practice
This introductory clinical course emphasizes basic nursing skills and application of the nursing process in meeting the needs of diverse clients across the lifespan. Emphasis is placed on performing basic nursing skills, the formation of nurse-client relationships, communication, data collection, documentation, and medication administration.
Prerequisite: Successful completion of all Step 3 Nursing program required courses and space availability.
Corequisites: Nursing Fundamentals 10543101, Nursing Skills 10543102, and Nursing Pharmacology 10543103.

10543105 // 3 credits
Nursing Health Alterations
This course elaborates upon the basic concepts of health and illness as presented in Nursing Fundamentals. It applies theories of nursing in the care of patients through the lifespan, utilizing problem solving and critical thinking. This course provides an opportunity to study conditions affecting different body systems and apply evidence-based nursing interventions. It also introduces concepts of leadership and management.
Prerequisites: Nursing Fundamentals 10543101, Nursing Skills 10543102, Nursing Pharmacology 10543103, and Intro to Clinical 10543104.

10543106 // 3 credits
Nursing Health Promotion
This course focuses on topics related to health promotion for individuals and families throughout the lifespan. We will cover nursing care of the developing family, which includes reproductive issues, pregnancy, labor and delivery, post-partum, the newborn, and the child. Recognizing the spectrum of healthy families, we will discern patterns associated with adaptive and maladaptive behaviors applying mental health principles. An emphasis is placed on teaching and supporting healthy lifestyles choices for individuals of all ages. Nutrition, exercise, stress management, empowerment, and risk reduction practices are highlighted. Study of the family will cover dynamics, functions, discipline styles, and stages of development.
Prerequisites: Nursing Fundamentals 10543101, Nursing Skills 10543102, Nursing Pharmacology 10543103, Intro to Clinical Practice 10543104, and Developmental Psychology 10809188.

10543107 // 2 credits
Nursing: Clinical Care Across the Lifespan
Applies nursing concepts and therapeutic interventions to clients across the lifespan. It also provides an introduction to concepts of teaching and learning. Extending care to include the family is emphasized.
Prerequisites: Nursing Fundamentals 10543101, Nursing Skills 10543102, Nursing Pharmacology 10543103, and Intro to Clinical Practice 10543104.

10543108 // 2 credits
Nursing: Intro to Clinical Care Management
Applies nursing concepts and therapeutic nursing interventions to groups of clients across the lifespan. It also provides an introduction to leadership, management, and team building.
Prerequisites: Nursing Fundamentals 10543101, Nursing Skills 10543102, Nursing Pharmacology 10543103, and Intro to Clinical Practice 10543104.

PROCESS & BIOREFINERY TECHNOLOGY

Program Code 10-484-1
2014-2015 Estimated Tuition and Fees: $11,526*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The Process & Biorefinery Technology program prepares technicians to perform operations and maintenance tasks in the expanding biofuel and biogas production and biorefining industries.

The curriculum emphasizes learning and performing the mechanical processes of biofuel production and biorefining, as well as plant operations, systematic troubleshooting, logical problem-solving, and safety.

The Process & Biorefinery Technology program is offered at Wisconsin Rapids Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Process & Biorefinery Technology graduate, to be able to:

- Maintain a safe work environment
- Diagnose, service, and repair machinery and manufacturing equipment using appropriate tools, materials, and methods
- Plan and execute an effective preventive maintenance program for complex manufacturing processes and machinery
- Manage production process
- Maintain product quality program
- Perform order fulfillment
- Continue career development

CAREER OPTIONS

Anaerobic Biodigester Maintenance Technician
Anaerobic Biodigester Operator
Biofuel Plant Maintenance Technician
Biofuel Plant Operator
Biorefinery Technician
Chemical Plant & System Operator
Chemical Process Technician

POTENTIAL FOR ADVANCEMENT

Plant Maintenance Supervisor
Plant Manager
Plant Operations Supervisor
Quality Assurance Technician

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Process & Biorefinery Technology program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options.

   To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

PROGRAM COURSE DESCRIPTIONS

10001148 // 3 credits
People, Resources, and Sustainability
This course explores the relationship between the human population and natural resources over time, and the effect this relationship has on the biosphere. Global resources, environmental concerns, and the human dimensions of resource management are explored from biological and socioeconomic perspectives.

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10103124 // 1 credit
Excel-Intermediate
Develop skill to write and debug macros, create custom menus, perform database functions, and develop graphs.
Prerequisite: Microsoft Office-Introduction 10103106 or Excel-Beginning 10103123.

10462103 // 2 credits
Intro to Mechanical Technology
This course provides a basic introduction to the mechanical principles and components used in industrial machinery and equipment. Learners gain knowledge in safety, mechanical drive components, bearings, hydraulics, and elementary maintenance concepts. Students will demonstrate competence in these areas through the performance of various laboratory and shop activities.

10462107 // 2 credits
Industrial Safety
This course provides an overview of safety, health, and environmental issues as they relate to industry. Various types of hazards and the controls and equipment used to reduce risks from hazards will be discussed. Focus will be placed on understanding the Occupational Safety and Health Administration (OSHA) and its function as well as other regulatory and enforcement agencies associated with industrial safety, health, and the environment.

10462110 // 2 credits
Material Handling
This course introduces the concepts and equipment that transport solid materials in the industrial production process. Various types of equipment including rigging, cranes, mechanical conveyors, pneumatic conveyors, elevators, and lift trucks will be discussed. Practical applications and use guidelines will be presented to promote the safe and efficient utilization of this type of material handling equipment.

10480100 // 2 credits
Alternative Energy Overview
In this course, students investigate the need for renewable energy systems and emerging careers in renewable energy. Students examine the basic design, function, cost, and other considerations associated with various "green" energy systems, including solar photovoltaic, solar thermal, wind, geothermal, and biomass. Students also explore the production and use of alternative transportation fuels.

10480190 // 2 credits
Renewable Energy Internship
Student internships provide an opportunity for career success through supervised on-the-job learning experiences. Through an internship, students apply subject knowledge learned in the program to the workplace under the direction of an experienced technician.
Prerequisite: Completion of 50% of program credits.

CURRICULUM

Term		(17 credits)
10103106	Microsoft Office-Introduction	3
10462103	Intro to Mechanical Technology	2
10484117	Intro to Process Technology	2
10605102	Instrument Mechanics	3
10804118	Intermediate Algebra with Applications	4
10806184	Plant Biology	3
Term		**(16-17 credits)**
10001148	People, Resources, and Sustainability	3
10462110	Material Handling	2
10484110	Bioenergy Production I	2
10605105	Electrical Circuits I	3
	-or-	
10605108	Intro to Electronics	2
10801136	English Composition I **-or-**	
10801195	Written Communication	3
10806134	General Chemistry	4
Term		**(2 credits)**
10480190	Renewable Energy Internship **-or-**	
10480195	Renewable Energy/Energy Conservation - Special Topics	2
Term		**(16 credits)**
10103124	Excel-Intermediate	1
10462107	Industrial Safety	2
10484111	Bioenergy Production II	2
10605100	Process Measurements I	4
10806197	Microbiology	4
10809198	Intro to Psychology	3
Term		**(17 credits)**
10480100	Alternative Energy Overview	2
10484112	Bioenergy Production III	2
10484190	Biorefinery Process Control	3
10623110	Quality Assurance Concepts & Techniques	3
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3
10809143	Microeconomics **-or-**	
10809144	Macroeconomics	3
	Elective	1

Total Credits 68-69

Please Note:
- The Process & Biorefinery Technology program has an August start date. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10480195 // 2 credits
Renewable Energy/Energy Conservation - Special Topics
Selected hands-on project in renewable energy/energy conservation requiring students to apply subject knowledge learned in the program.
Prerequisite: Completion of 50% of program credits.

10484110 // 2 credits
Bioenergy Production I
This course provides training on fuel/energy production techniques relating to feed stock preparation, process chemicals and procedures, fuel quality improvements, fuel storage and transportation, fuel use and engine performance, safety, and waste handling.
Prerequisite: Intro to Process Technology 10484117.

10484111 // 2 credits
Bioenergy Production II
This course builds on Bioenergy Production I to provide training on fuel/energy production techniques relating to feed stock preparation, process chemicals and procedures, fuel quality improvements, fuel storage and transportation, fuel use and engine performance, safety, and waste handling.
Prerequisite: Bioenergy Production I 10484110.

10484112 // 2 credits
Bioenergy Production III
This course builds on Bioenergy Production II to provide advanced training in fuel/energy production techniques relating to feed stock preparation, process chemicals and procedures, fuel quality improvements, fuel storage and transportation, fuel use and engine performance, safety, and waste handling.
Prerequisite: Bioenergy Production II 10484111.

10484117 // 2 credits
Intro to Process Technology
This course provides basic orientation for operators in the biorefining industry. The course introduces terms that are encountered in the workplace. Topics include operator roles, responsibilities, and basic plant equipment. Simulation labs on process control and product testing will be included.
Prerequisite: Admission to Process & Biorefinery Technology 104841 program.

10484190 // 3 credits
Biorefinery Process Control
This capstone course examines process control systems and software common to the biorefining industry. Troubleshooting of processes will be emphasized.
Prerequisite: Fourth semester Process & Biorefinery Technology program student.

10605100 // 4 credits
Process Measurements I
Reviews basic principles and calibration standards and practices developed in Instrument Mechanics. Common sensing devices and components employed for the measurement of pressure, temperature, flow, level, and their related phenomena are studied.
Prerequisite: Instrument Mechanics 10605102 with a grade of "C" or better.

10605102 // 3 credits
Instrument Mechanics
An introductory course into instrumentation emphasizing a functional and mathematical approach to the use and study of various pneumatic instruments and principles. Identifies the duties and functions of instruments and their components. Calculations of springs, force balance, moment balance, and an introduction to pressure measurement and controllers.
Corequisite: Intermediate Algebra with Applications 10804118.

10605105 // 3 credits
Electrical Circuits I
An introduction to AC/DC electricity and the physical laws that apply to electronic circuits. Direct Current (DC) covers basic definitions of voltage, current, and resistance and analysis of series and parallel resistive circuits. Alternating Current (AC) includes an introduction to AC generation, capacitors, inductors, and transformers and their applications in electronic circuits. Approximately 50% of the course is spent in the laboratory applying the principles and theory presented in the classroom.
Corequisite: Intermediate Algebra with Applications 10804118.

10605108 // 2 credits
Intro to Electronics
This course presents a survey of electricity and electronics which includes lab activities and is designed for persons wishing to learn some of the basics of electricity and electronics. It is an excellent refresher course to get back into electronics or improve a skills list. The course is intended for persons where electronics has become a part of their regular occupation and a need exists to identify various electronic components and perform basic tests using test equipment such as multimeters and oscilloscopes. The course covers concepts and applications of DC and AC electricity, semiconductor components, and digital devices using basic math skills.

10623110 // 3 credits
Quality Assurance Concepts & Techniques
Quality organizations and programs, analysis under unstable conditions, criteria and methods of control charting means, comparison of various sampling plans, statistical process control methods, codes, specifications, safe applications of equipment, and qualifications of personnel are covered.
Prerequisite: Intermediate Algebra with Applications 10804118.


98%
of graduates say they are satisfied with the education and training they receive at MSTC.

RENEWABLE ENERGY SPECIALIST

Program Code 10-482-3
2014-2015 Estimated Tuition and Fees: $11,109*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The Renewable Energy Specialist program will prepare students to design an integrated portfolio of renewable and traditional energy producing systems. Students perform site assessments and recommend appropriate renewable energy technologies, sell and/or market renewable energy technologies, and manage renewable energy installation projects. Renewable Energy Specialists have a working knowledge of "green" building concepts and energy efficient design principles.

The Renewable Energy Specialist program is offered at Wisconsin Rapids Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Renewable Energy Specialist graduate, to be able to:

- Perform site assessments for solar photovoltaic, solar thermal, and small wind systems
- Conduct feasibility studies regarding installation of renewable energy systems
- Design an integrated portfolio of renewable energy systems
- Respond to customer inquiries
- Manage renewable energy system installation projects
- Sell renewable energy systems

CAREER OPPORTUNITIES

Customer Service Representative
Engineer/Design Technician
Installation Assistant
Project Manager
Renewable Energy Specialist
Sales Representative
Site Assessor
Solar Applications Technician

POTENTIAL FOR ADVANCEMENT

Architectural Designer
HVAC Designer
Mechanical Leader
Project Engineer

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Renewable Energy Specialist program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

PROGRAM COURSE DESCRIPTIONS

10102101 // 3 credits
Intro to Business
An introduction to what a business is, how it operates, and how it is managed. Students will identify forms of ownership and the processes used in production and marketing, finance, personnel, and management in business operations.

10102147 // 3 credits
Principles of Management
This course introduces the student to the job of management in organizations. An understanding of the roles and tasks of all levels of management in the functions of organizational planning, controlling, staffing, leading, and controlling is developed.

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10103124 // 1 credit
Excel-Intermediate
Develop skill to write and debug macros, create custom menus, perform database functions, and develop graphs.
Prerequisite: Microsoft Office-Introduction 10103106 or Excel-Beginning 10103123.

10104105 // 3 credits
Selling Principles
Helps students develop the kind of sales techniques that encourage customers to believe in the integrity of the salesperson and the product. Subjects include handling customers' tangible and intangible needs, attitude conversion, sales strategies for a variety of conditions, and the changing form of selling techniques. Focuses on the need for a sales personality and the importance of psychology and creativity in selling.

10480101 // 4 credits
Intro to Renewable Energy Systems
In this course, students investigate the need for renewable energy systems and emerging careers in renewable energy. Students examine the basic design, function, cost, and other considerations associated with solar photovoltaic, solar thermal, wind, geothermal, and biomass renewable energy systems. Students will also explore energy efficiency and conservation methods.

10481110 // 3 credits
Building Science, Performance, & Evaluation
Students learn the tools and techniques use in the analysis of building shell integrity, focused on how to use an infrared camera to detect insulation, air, and water problems in a building, complemented by blower door testing. These concepts and skills are taught through extensive lab hours working directly with the tools of the trade. Students also investigate building ductwork leakage, building envelope tightness, and combustion efficiency.
Prerequisite: Construction Fundamentals 10482107.

CURRICULUM

Term		(16 credits)
10102101	Intro to Business	3
10103106	Microsoft Office-Introduction	3
10480101	Intro to Renewable Energy Systems	4
10483120	Heating & Plumbing Fundamentals **-or-**	
10605108	Intro to Electronics	2
10623100	Problem Solving & Critical Thinking	1
10804107	College Mathematics	3

Term		(17 credits)
10103124	Excel-Intermediate	1
10482107	Construction Fundamentals	2
10482110	Photovoltaic System Design & Installation 1	3
10483110	Solar Heating System Design & Installation 1	3
10483115	Heat Load Estimation & Modeling	3
10483122	Ventilation, Cooling, and Refrigeration Fundamentals **-or-**	
10623106	Intro to AutoCAD	2
10801195	Written Communication	3

Term		(17 credits)
10481110	Building Science, Performance, & Evaluation	3
10482101	Solar Site Assessment & Evaluation	3
10482140	Planning, Design, & Project Management I	2
10607166	Construction Estimating & Management	3
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3
10809143	Microeconomics **-or-**	
10809144	Macroeconomics	3

Term		(18 credits)
10102147	Principles of Management **-or-**	
10104105	Selling Principles	3
10481140	Energy Use & Investment Analysis	2
10482141	RE-Planning, Design, & Project Management II	2
10806112	Principles of Sustainability	3
10809122	Intro to American Government	3
10809196	Intro to Sociology	3
	Elective	2

Total Credits 68

Continued on next page

CURRICULUM

Continued from the previous page

Please Note:

- The Renewable Energy Specialist program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10481140 // 2 credits
Energy Use & Investment Analysis
This course provides an overview of energy, process, and building systems common to commercial facilities with an emphasis on improving energy efficiency and cost savings. Topics include day-lighting, lighting systems and controls, compressed air systems, heat recovery, chillers/ cooling towers, hydronic pumping systems, geothermal systems, motors, commercial HVAC systems and controls, indoor air quality, boilers and steam systems, and commercial energy audits.

10482101 // 3 credits
Solar Site Assessment & Evaluation
Students learn the steps to perform solar electric and solar water heating site assessments of a home or business. Class content covers solar window determination, load analysis, site selection, system types, system sizing and efficiency measures, and energy output estimation. The course also covers an overview of existing renewable electric incentive programs.
Prerequisite: Intro to Renewable Energy Systems 10480101.

10482107 // 2 credits
Construction Fundamentals
Students study the concepts associated with the theory, materials, and methods used in construction to include footings and foundations, walls, floors, roofs and roof materials, exterior finishes, interior walls, ceiling and floor finishes, insulation types, vapor and air infiltration, and sound protection. Additionally, students will become familiar with blueprint reading and examine all the trades associated with construction, including electrical, HVAC, and plumbing. The safe use of the appropriate tools for each trade is also covered.

10482110 // 3 credits
Photovoltaic System Design & Installation 1
Students learn the details involved in the mechanical and electrical integration of a PV system. Topics include system components, product specifications, product integration, racking system design capabilities and limits, system diagramming, configurations, safety, common design mistakes and solutions, and installation techniques. This course will involve students in the installation of a photovoltaic system.
Prerequisite: Intro to Renewable Energy Systems 10480101.

10482140 // 2 credits
Planning, Design, & Project Management I
Students in this capstone course design an integrated portfolio of energy systems, incorporating renewable energy options into a conventional system. Each learner will write a project proposal, work with project teams, sequence project tasks, develop project budgets, and identify project resources.
Prerequisite: Solar Heating System Design & Installation I 10483110.

10482141 // 2 credits
RE-Planning, Design, & Project Management II
This class is a continuation of Renewable Energy – Planning, Design, & Project Management I. Students create a capstone project that incorporates traditional and renewable energy systems with an overall goal of peak energy efficiency.
Prerequisite: Planning, Design, & Project Management I 10482140.

10483110 // 3 credits
Solar Heating System Design & Installation 1
This course involves students in the installation and design of a solar hot water system. Topics include safety, system design and layout, component selection, mounting collectors, plumbing and insulating copper pipe, and installing a storage tank, heat exchanger, circulation pump, and other system components.
Prerequisite: Intro to Renewable Energy Systems 10480101.

10483115 // 3 credits
Heat Load Estimation & Modeling
This course teaches the student how to use "Manual J" from ACCA. The student will develop the skills to do residential heating and cooling heat loads. Students will calculate heat loss and also losses or gains due to infiltration, sun loads, etc. The student will do calculations on actual buildings using ACCA industry standard form J-1. The student will also estimate energy upgrades such as insulation and window improvements; and calculate payback and fuel savings.
Prerequisite: College Mathematics 10804107. Corequisite: Excel-Intermediate 10103124.

10483120 // 2 credits
Heating & Plumbing Fundamentals
Heating system topics include introduction to heat principles, temperature measurement, fuels and other sources of heat, combustion, basic heating systems, basic furnace design, gas furnace design and operation, venting of furnaces, chimney or exhaust gases, and system controls. Plumbing system topics include fluid dynamics (pressure, resistance, and flow), basic system design, water heating, and operation of standard plumbing fixtures.
Prerequisite: Admission to Renewable Energy Specialist 104823, Solar Electric Technician 104822, or Sustainable Heating & Cooling Technician 104831 programs.

10483122 // 2 credits
Ventilation, Cooling, and Refrigeration Fundamentals
Topics covered include air conditioning principles and terms, physical principles of air movement, air filtering and humidity, and methods of conditioning air for comfort and health. In addition, the proper use of psychrometers, dry bulb thermometers, hygrometers, and the reading and interpretation of psychrometric charts and scales are covered, along with ASHRAE and BPI ventilation standards for residential units. Descriptions of new products, and maintenance and operations for residential and commercial cooling systems, are also covered, emphasizing energy conservation and efficiency options for new and existing equipment.

10605108 // 2 credits
Intro to Electronics
This course presents a survey of electricity and electronics which includes lab activities and is designed for persons wishing to learn some of the basics of electricity and electronics. It is an excellent refresher course to get back into electronics or improve a skills list. The course is intended for persons where electronics has become a part of their regular occupation and a need exists to identify various electronic components and perform basic tests using test equipment such as multimeters and oscilloscopes. The course covers concepts and applications of DC and AC electricity, semiconductor components, and digital devices using basic math skills.

10607166 // 3 credits
Construction Estimating & Management
Goals and performance of quantity takeoff, cost estimation, resource leveling, estimating labor, and contract interpretation are presented. Project bidding, construction techniques, and equipment capabilities are evaluated.
Prerequisites: Microsoft Office-Introduction 10103106, Problem Solving and Critical Thinking 10623100, and Intro to AutoCAD 10623106.

10623100 // 1 credit
Problem Solving & Critical Thinking
Introductory course in problem setup, organization, and solution. Identification of given and unknown values, equation setup, unit conversions, and use of significant figures. Introduction to physical science; working with units of force, area, volume, time, and distance in metric and imperial systems. This course is designed to help you be successful in technical and engineering classes and should be taken during your first semester of enrollment.

10623106 // 2 credits
Intro to AutoCAD
This is an introductory course in computer aided drafting (CAD) using AutoCAD software. It provides foundation skills in using CAD software to create and print two dimensional technical drawings. This course is available to students in any program. Computer skills and prior knowledge of drawing/drafting techniques is recommended.

RESPIRATORY THERAPIST

Program Code 10-515-1
2014-2015 Estimated Tuition and Fees: $10,224*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

Always in need of qualified practitioners, respiratory care is an allied health specialty used under medical direction in evaluation, treatment, and care of patients with cardiopulmonary problems. Learn the therapeutic use of medical gases and related equipment, humidifiers, aerosols, and other environmental control systems. You will also receive instruction in medication, ventilatory support, bronchopulmonary drainage, rehabilitation, airway management, and long-term home care.

Students receive both classroom instruction and clinical experience. The clinical portion of the program is held at various local hospitals and agencies. In the clinical sessions, you have the opportunity to apply what you have learned in the classroom to actual patients and equipment. Travel for this program is required.

Respiratory therapists in Wisconsin and many other states are licensed professionals. The Respiratory Therapist program is accredited by:

Commission on Accreditation for Respiratory Care (CoARC)
1248 Harwood Road, Bedford, TX 76021-4244
817.283.2835
www.coarc.com

The Respiratory Therapist program is offered at Marshfield Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Respiratory Therapist graduate, to be able to:

- Apply advanced-level respiratory therapy concepts to patient care situations
- Demonstrate technical proficiency required to fulfill the role of an advanced-level Respiratory Therapist
- Practice respiratory therapy according to established professional and ethical standards

CAREER OPTIONS

Cardiopulmonary Technician
EKG Technician
Hemodynamic Monitory Technician
Home-Care Therapist
Hospital-Based Therapist
Polysomnography Technician
Pulmonary Function Technician
Respiratory Care Practitioner
Respiratory Rehabilitation Therapist
Respiratory Therapist

POTENTIAL FOR ADVANCEMENT

Cardiopulmonary Technologist
Class B Physician's Assistant
Perfusionist
Pulmonary Function Technologist
Respiratory Therapy Educator
Respiratory Therapy Manager

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Respiratory Therapy (RT) program, please submit documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.
4. Submit the Criminal Background Statement of Understanding and Release of Information form.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function as a Respiratory Therapist is available in the online program orientation. It is the student's responsibility to notify the disability services coordinator in the Student Affairs Office to receive assistance.

CLINICAL-RELATED REQUIREMENTS

Prior to placement at a clinical site, students need to pay for a criminal background check and provide documentation of required healthwork to a private vendor.

Students are responsible for ensuring all requirements remain current during program enrollment.

Clinical sites have the right to refuse a student's placement based on inadequate health records, pending charges, or conviction records. Students with a criminal history may not be able to complete clinical courses. MSTC will make two attempts to place a student in an appropriate clinical experience. If MSTC is unable to place the student after two attempts, the student will be withdrawn from the clinical course and will not be able to advance in the program. Contact the program counselor for more details

PROGRAM PROGRESSION

In order to progress in and successfully complete the program, students must:

- Repeat courses not completed with a grade of "C" or better prior to progressing in core courses or other courses with co- or prerequisites.
- Receive a grade of "C" or better in all courses required for graduation.

Please note that the ability to repeat courses is dependent upon availability in courses. Students may be required to apply for program re-entry in order to repeat courses within the program's instructional area.

PROGRAM COURSE DESCRIPTIONS

10501101 // 3 credits
Medical Terminology
Students focus on the component parts of medical terms: prefixes, suffixes, and word roots. Students practice formation, analysis, and reconstruction of terms. Emphasis on spelling, definition, and pronunciation. Introduction to operative, diagnostic, therapeutic, and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

10515100 // 1 credit
Student Success in Respiratory Therapist
Learners explore success strategies for the Respiratory Therapist program including time management, study skills, test preparation and test taking skills, planning, and stress management.
Prerequisite: Admission to Respiratory Therapist 105151 program.
Corequisite: Respiratory Survey 10515111.

10515101 // 1 credit
Respiratory Therapist Test Prep
Learners explore strategies for preparing for respiratory therapist professional examinations including study skills, test preparation, and test taking skills. The course includes a basic review of content related to the examinations.
Prerequisite: Respiratory Clinical 4 10515182.

10515111 // 3 credits
Respiratory Survey
Examines the role of the Respiratory Therapist within the health care community. Reviews the ethical, legal, and regulatory principles that guide practice across diverse populations. Introductory patient assessment and critical thinking processes used in the development of respiratory care plans are explored.
Prerequisite: Admission to Respiratory Therapy 105151 program.
Corequisite: Medical Terminology 10501101.

CURRICULUM

Term		(17 credits)
10501101	Medical Terminology	3
10515100	Student Success in Respiratory Therapist	1
10515111	Respiratory Survey	3
10515171	Respiratory Therapeutics 1	3
10801136	English Composition I **-or-**	
10801195	Written Communication	3
10806177	General Anatomy & Physiology	4

Term		(16 credits)
10515172	Respiratory Therapeutics 2	3
10515173	Respiratory Pharmacology	3
10515174	Respiratory/Cardiac Physiology	3
10806197	Microbiology	4
10809196	Intro to Sociology	3

Term		(5 credits)
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3
10515175	Respiratory Clinical 1	2

Term		(17 credits)
10515112	Respiratory Airway Management	2
10515113	Respiratory Life Support	3
10515176	Respiratory Disease	3
10515178	Respiratory Clinical 2	3
10515179	Respiratory Clinical 3	3
10809122	Intro to American Government **-or-**	
10809172	Introduction to Diversity Studies	3

Term		(15 credits)
10515101	Respiratory Therapist Test Prep	1
10515180	Respiratory Neo/Peds Care	2
10515181	Respiratory/Cardio Diagnostics	3
10515182	Respiratory Clinical 4	3
10515183	Respiratory Clinical 5	3
10809198	Intro to Psychology	3

Total Credits 70

Please Note:
- The Respiratory Therapist program has an August start date. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10515112 // 2 credits
Respiratory Airway Management
Provides a comprehensive exploration of airway management concepts and skills.
Prerequisite: Respiratory Clinical 1 10515175.

10515113 // 3 credits
Respiratory Life Support
Focuses on management of adult ventilatory support.
Prerequisites: Respiratory Therapeutics 2 10515172 and Respiratory Clinical 1 10515175. Corequisite: Respiratory Airway Management 10515112.

10515171 // 3 credits
Respiratory Therapeutics 1
Introduces the topics of medical gas administration and humidity and aerosol therapy. The learner will apply physics, math, and patient assessment concepts to oxygen, aerosol, and humidity therapy.
Corequisites: Respiratory Survey 10515111, Medical Terminology 10501101, and General Anatomy & Physiology 10806177.

10515172 // 3 credits
Respiratory Therapeutics 2
Introduces therapeutic procedures including arterial puncture, bronchial hygiene, lung expansion therapy, and pulmonary rehabilitation.
Prerequisites: Respiratory Therapeutics 1 10515171, Respiratory Survey 10515111, and General Anatomy & Physiology 10806177.

10515173 // 3 credits
Respiratory Pharmacology
Examines basic pharmacology principles, drug dosage, and calculations. Medications for inhalation including mucolytics, bronchodilators, and anti-inflammatories. Also includes cardiac drugs, anesthetic drugs, neuromuscular blockers, and antimicrobials.
Prerequisites: Respiratory Survey 10515111, Respiratory Therapeutics 1 10515171, and General Anatomy & Physiology 10806177.

10515174 // 3 credits
Respiratory/Cardiac Physiology
Provides the student with an in-depth knowledge of the structure and function of the respiratory and circulatory systems necessary to function as a competent respiratory therapist.
Prerequisites: General Anatomy & Physiology 10806177, Respiratory Survey 10515111, and Respiratory Therapeutics 1 10515171.

10515175 // 2 credits
Respiratory Clinical 1
Introduces respiratory therapy practice in the hospital setting. Includes the development of skills such as basic therapeutics, patient assessment, medical record review, safety practices, patient interaction, and communication.
Prerequisites: Respiratory Survey 10515111, Respiratory Therapeutics 1 10515171, Respiratory Therapeutics 2 10515172, Respiratory Pharmacology 10515173, Respiratory/Cardiac Physiology 10515174, and Microbiology 10806197.

10515176 // 3 credits
Respiratory Disease
Exploration of signs, symptoms, causes, progression, and treatment of obstructive, restrictive, and infectious diseases or disorders of the body that affect the respiratory system.
Prerequisites: Respiratory Survey 10515111, General Anatomy & Physiology 10806177, and Microbiology 10806197.

10515178 // 3 credits
Respiratory Clinical 2
Continued development of respiratory therapy clinical skills including respiratory therapeutics. Focuses on monitoring, analyzing, and interpreting data to make appropriate modifications in patient care.
Prerequisite: Respiratory Clinical 1 10515175.

10515179 // 3 credits
Respiratory Clinical 3
Continued development of respiratory therapy clinical skills including respiratory therapeutics. Focuses on monitoring, analyzing, and interpreting data to make appropriate modifications in patient care.
Corequisite: Respiratory Clinical 2 10515178.

10515180 // 2 credits
Respiratory Neo/Peds Care
Provides a comprehensive orientation to the field of neonatal and pediatric respiratory care to include fetal development, birth, neonatal physiology, pulmonary dynamics, abnormal cardiopulmonary conditions, diseases, noninvasive, and invasive therapeutic interventions.
Prerequisite: Respiratory Life Support 10515113 and Respiratory Clinical 3 10515179.

10515181 // 3 credits
Respiratory/Cardio Diagnostics
Advanced invasive and noninvasive diagnostic cardiopulmonary procedures including pulmonary function, hemodynamics, and rescue medicine.
Prerequisite: Respiratory Clinical 3 10515179.

10515182 // 3 credits
Respiratory Clinical 4
Continued development of respiratory therapy clinical skills including respiratory therapeutics. Focuses on monitoring, analyzing, and interpreting data to make appropriate modifications in patient care.
Prerequisites: Respiratory Clinical 3 10515179 and Respiratory Life Support 10515113.

10515183 // 3 credits
Respiratory Clinical 5
Focuses on the completion of respiratory therapy competencies and transition to employment.
Prerequisite: Respiratory Clinical 4 10515182.

HANDS-ON LEARNING

SOLAR ELECTRIC TECHNICIAN

Program Code 10-482-2
2014-2015 Estimated Tuition and Fees: $10,689*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The Solar Electric Technician program prepares technicians to design, install, operate, and maintain solar and wind electricity generating systems for both residential and light commercial applications.

Technicians perform site assessments and integrate new renewable electricity systems with current existing energy sources. Renewable electricity technicians may be involved in the sale or marketing of solar PV and wind energy technologies.

The Solar Electric Technician program is offered at Wisconsin Rapids Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Solar Electric Technician graduate, to be able to:

- Work safely with renewable electric systems
- Install subsystems and components at the site
- Perform a system checkout and inspection
- Maintain and troubleshoot a system
- Select a system design
- Adapt the mechanical design
- Adapt the electrical design
- Conduct a solar photovoltaic site assessment

CAREER OPTIONS

Condition Monitoring Technician
Controls Technician
Customer Service Representative
Electrical Workers/Laborers
Measurement Technician
Photovoltaic System Installation, Maintenance, and Service Technician
Photovoltaic System Sales Representative
Service Technician
Solar PV Site Assessor
Wind Farm Service Technician
Wind System Installation, Maintenance, and Service Technician
Wind System Sales Representative

POTENTIAL FOR ADVANCEMENT

Electrical Construction Superintendent
Energy Analyst
Journeyperson: Electrician
Lead Installer
Master Technician
Project Development Engineer
Project Manager
System Designer

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Solar Electric Technician program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

PROGRAM COURSE DESCRIPTIONS

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10103124 // 1 credit
Excel-Intermediate
Develop skill to write and debug macros, create custom menus, perform database functions, and develop graphs.
Prerequisite: Microsoft Office-Introduction 10103106 or Excel-Beginning 10103123.

10150101 // 3 credits
Network Fundamentals
This CISCO Academy based course develops skill in PC hardware and software troubleshooting including installation of hardware components and problem determination and correction of malfunctioning hardware and software.
Corequisite: Windows Operating Systems 10103102 or Microsoft Office-Introduction 10103106.

10462114 // 3 credits
Metals & Machining
A two-part class which introduces the basics of metal science and machine shop practice. Metallurgical concepts of steel and iron production, properties of metals, testing of metals, carbon and its rule, heat-treating, steel designations, and cast iron and non-ferrous metals are introduced. Students will participate in lab exercises examining the properties of metal, an introduction to machine shop practices of safety, measurement, and machining through the use of hand tools, drilling machines, saws, and engine lathes. Students will be introduced to these concepts by both classroom presentation and hands-on shop experiences.
Prerequisite: Admission to Automotive Technician 324042, Diesel & Heavy Equipment Technician 324121, Industrial Mechanical Technician 104621, Instrumentation & Controls Engineering Technology 106054, Solar Electric Technician 104822, or Welding 314421 programs.

10462116 // 3 credits
Metal Fabrication
An introduction to structural steel and plate fabrication, sheet metal fabrication, and basic electric arc and oxyacetylene welding. Fabrication techniques, metal selection, layout, cutting, bending, drilling, threading, and joining will be presented. Information will be presented to the student followed by lab activities to provide a hands-on experience. The emphasis will be placed on developing an understanding of the tools, techniques, safe work habits, and the application of metal fabrication skills.
Prerequisite: Admission to Automotive Technician 324042, Diesel & Heavy Equipment Technician 324121, Industrial Mechanical Technician 104621, Instrumentation & Controls Engineering Technology 106054, Machine Tool Technician 324201, Solar Electric Technician 104822, Sustainable Heating & Cooling Technician 104831, or Welding 314421 programs.

CURRICULUM

Term		(17-18 credits)
10103106	Microsoft Office-Introduction	3
10480101	Intro to Renewable Energy Systems	4
10605105	Electrical Circuits I	3
	-or-	
10605108	Intro to Electronics	2
10623106	Intro to AutoCAD	2
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3
10804107	College Mathematics	3

Term		(17 credits)
10462114	Metals & Machining **-or-**	
10462116	Metal Fabrication	3
10482105	Intermediate Electrical Theory & Applications	3
10482107	Construction Fundamentals	2
10482110	Photovoltaic System Design & Installation 1	3
10801136	English Composition I **-or-**	
10801195	Written Communication	3
10809196	Intro to Sociology	3

Term		(17 credits)
10103124	Excel-Intermediate	1
10150101	Network Fundamentals	3
10482101	Solar Site Assessment & Evaluation	3
10482111	Photovoltaic System Design & Installation 2	3
10482115	Grid-Tied Renewable Electric Systems	2
10482120	Wind Energy System Design and Installation	3
	Elective	2

Term		(16 credits)
10482116	Stand-Alone Renewable Electric Systems	2
10482150	Advanced Renewable Electric Systems	2
10605117	Programmable Logic Controllers - Beginning	3
10806112	Principles of Sustainability	3
10809122	Intro to American Government	3
10809143	Microeconomics **-or-**	
10809144	Macroeconomics	3

Total Credits 67-68

Continued on next page

CURRICULUM

Continued from the previous page

Please Note:

- The Solar Electric Technician program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10480101 // 4 credits
Intro to Renewable Energy Systems
In this course, students investigate the need for renewable energy systems and emerging careers in renewable energy. Students examine the basic design, function, cost, and other considerations associated with solar photovoltaic, solar thermal, wind, geothermal, and biomass renewable energy systems. Students will also explore energy efficiency and conservation methods.

10482101 // 3 credits
Solar Site Assessment & Evaluation
Students learn the steps to perform solar electric and solar water heating site assessments of a home or business. Class content covers solar window determination, load analysis, site selection, system types, system sizing and efficiency measures, and energy output estimation. The course also covers an overview of existing renewable electric incentive programs.
Prerequisite: Intro to Renewable Energy Systems 10480101.

10482105 // 3 credits
Intermediate Electrical Theory & Applications
Provides students with the information and knowledge necessary to accurately diagnose and solve electrical system faults. Main topics include safety and hazard awareness, electrical fundamentals, circuits and components, motors, wiring diagrams, common electrical service configurations, and troubleshooting.
Prerequisite: Intro to Electronics 10605108.

10482107 // 2 credits
Construction Fundamentals
Students study the concepts associated with the theory, materials, and methods used in construction to include footings and foundations, walls, floors, roofs and roof materials, exterior finishes, interior walls, ceiling and floor finishes, insulation types, vapor and air infiltration, and sound protection. Additionally, students will become familiar with blueprint reading and examine all the trades associated with construction, including electrical, HVAC, and plumbing. The safe use of the appropriate tools for each trade is also covered.

10482110 // 3 credits
Photovoltaic System Design & Installation 1
Students learn the details involved in the mechanical and electrical integration of a PV system. Topics include system components, product specifications, product integration, racking system design capabilities and limits, system diagramming, configurations, safety, common design mistakes and solutions, and installation techniques. This course will involve students in the installation of a photovoltaic system.
Prerequisite: Intro to Renewable Energy Systems 10480101.

10482111 // 3 credits
Photovoltaic System Design & Installation 2
This course is a continuation of Photovoltaic System Design and Installation 1 and includes an in-depth focus of the electrical integration of a PV system. Topics include system design capabilities and limits, system diagramming, wiring configurations, safety, National Electrical Code, common design mistakes and solutions, wiring techniques, and installation techniques. System maintenance principles and commissioning are covered.
Prerequisite: Photovoltaic System Design & Installation I 10482110.

10482115 // 2 credits
Grid-Tied Renewable Electric Systems
This course covers Wisconsin's utility interconnect standard, net metering policies, and how they relate to photovoltaic and wind installations. This course provides an overview of electrical power distribution and transmission networks along with metering techniques. Class consists of both bench-top and field maintenance grid-tied renewable electric systems.
Prerequisite: Photovoltaic System Installation II 10482111. Corequisite: Intro to Electronics 10605108.

10482116 // 2 credits
Stand-Alone Renewable Electric Systems
This course will cover stand-alone systems for both wind and PV renewable electric systems. Topics include battery types and their specific uses, battery bank sizing and configuration, along with safety, maintenance, and components related to stand-alone systems.
Prerequisite: Photovoltaic System Design & Installation 1 10482110.

10482120 // 3 credits
Wind Energy System Design and Installation
Students learn the steps to perform wind site assessments of a home or business. Class content covers measuring wind energy potential, site selection, system types, and energy output estimation. This course involves students in the installation of a tilt-up tower. Topics include proper use of tools and rigging systems, system design, layout, and turbine performance as well as electrical integration of a wind system, wiring, and installation techniques.
Prerequisite: Intro to Renewable Energy Systems 10480101.

10482150 // 2 credits
Advanced Renewable Electric Systems
This course explores advanced renewable electric system designs including hybrid renewable electric systems, bimodal renewable electric systems, and micro hydro systems along with integration and interaction of multiple system types. Students complete a capstone project during the course.
Prerequisite: Successful completion of 12 credits of Renewable Electric (10482) coursework.

10605105 // 3 credits
Electrical Circuits I
An introduction to AC/DC electricity and the physical laws that apply to electronic circuits. Direct Current (DC) covers basic definitions of voltage, current, and resistance and analysis of series and parallel resistive circuits. Alternating Current (AC) includes an introduction to AC generation, capacitors, inductors, and transformers and their applications in electronic circuits. Approximately 50% of the course is spent in the laboratory applying the principles and theory presented in the classroom.
Corequisite: Intermediate Algebra with Applications 10804118.

10605108 // 2 credits
Intro to Electronics
This course presents a survey of electricity and electronics which includes lab activities and is designed for persons wishing to learn some of the basics of electricity and electronics. It is an excellent refresher course to get back into electronics or improve a skills list. The course is intended for persons where electronics has become a part of their regular occupation and a need exists to identify various electronic components and perform basic tests using test equipment such as multimeters and oscilloscopes. The course covers concepts and applications of DC and AC electricity, semiconductor components, and digital devices using basic math skills.

10605117 // 3 credits
Programmable Logic Controllers-Beginning
An overview of programmable logic controllers (PLCs) which provides a foundation of knowledge of the programming techniques, operation, and maintenance of PLCs used in typical industrial automation.

10623106 // 2 credits
Intro to AutoCAD
This is an introductory course in computer aided drafting (CAD) using AutoCAD software. It provides foundation skills in using CAD software to create and print two dimensional technical drawings. This course is available to students in any program. Computer skills and prior knowledge of drawing/drafting techniques is recommended.

SUPERVISORY MANAGEMENT

Program Code 10-196-1
2014-2015 Estimated Tuition and Fees: $12,585*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The Supervisory Management program prepares participants for a career in management or supervision and enhances the skills of individuals actively employed in a supervisory/management career.

The program develops technical and interpersonal skills to enable individuals to lead the operations of a business from a supervisory or managerial perspective. Skills in planning, finance, human resources, leadership, safety, team building, project management, decision making, and software are developed.

The Supervisory Management program is offered at the Adams County Center and the Marshfield, Stevens Point, and Wisconsin Rapids campuses.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Supervisory Management graduate, to be able to:

- Analyze the job of the supervisor in an organization
- Develop and nurture an effective work environment
- Establish plans to accomplish goals and achieve organizational objectives
- Supervise the work group
- Organize the work group
- Analyze financial information
- Maintain a safe work environment
- Lead the work group
- Staff the work group
- Make effective decisions
- Manage change
- Manage projects

CAREER OPTIONS

Coordinator
Director
Foreperson
Frontline Manager
Group Leader
Manager
Superintendent
Supervisor
Team Leader

POTENTIAL FOR ADVANCEMENT

Business Manager
Operations Manager
Production Manager

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Supervisory Management program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.
4. Employment Verification form.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

PROGRAM COURSE DESCRIPTIONS

10102101 // 3 credits
Intro to Business
An introduction to what a business is, how it operates, and how it is managed. Students will identify forms of ownership and the processes used in production and marketing, finance, personnel, and management in business operations.

10102103 // 3 credits
Business Law & Ethics
This course introduces the student to basic ethical theories and value systems. Students will apply these perspectives to moral issues, problems, and situations which arise within the business environment. Emphasis will be placed on how the applicable laws are being interpreted.

10102117 // 3 credits
Business Finance
This course introduces the basic concepts needed for firms to efficiently control the flow of money within a business to balance profitability with risk. Students will determine the financial impact of quality programs on a company, analyze financial statements using ratio analysis and industry comparison data, determine break-even points and leverage for a company, compare alternatives for short and long-term financing, explore options for global financing, and prepare a cash budget and pro forma financial statements for a firm.
Prerequisite: Accounting I 10101111.

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10105160 // 3 credits
Business Law
Examines the classifications of law, elements of legal contracts, and business applications. Negotiable instruments, sales and bailment contracts, principal-agent relations, and real estate law are also explained. Ethical practices are emphasized rather than narrow, legal definitions.

10196134 // 3 credits
Legal Issues for Supervisors
The learner applies the skills and tools necessary for a supervisor to effectively function in today's legal work environment. Learners apply legal practices in union and nonunion environments, analyze the impact of U.S. employment laws on the global economy, use the appeal process to settle disputes, manage legal charges, document the hiring and firing process, manage harassment and privacy issues, and summarize the legal issues facing contemporary supervisors.

10196136 // 3 credits
Safety in the Workplace
The learner applies the skills and tools necessary to provide a safe and secure work environment. Learners practice safety awareness; comply with federal/state/local safety regulations; investigate and document safety incidents; conduct safety inspections; analyze risks; manage workplace violence, substance abuse, and health hazards; administer first aid and CPR; and prepare for emergencies.

CURRICULUM

Term		(15 credits)
10102101	Intro to Business	3
10103106	Microsoft Office-Introduction	3
10196191	Supervision	3
10196192	Managing for Quality	3
10801136	English Composition I **-or-**	
10801195	Written Communication	3

Term		(18 credits)
10102103	Business Law & Ethics **-or-**	
10105160	Business Law	3
10196164	Personal Skills for Supervisor	3
10196189	Team Building & Problem Solving	3
10196190	Leadership Development	3
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3
10809122	Intro to American Government **-or-**	
10809172	Introduction to Diversity Studies **-or-**	
10809196	Intro to Sociology	3

Term		(18-19 credits)
10196134	Legal Issues for Supervisors	3
10196136	Safety in the Workplace	3
10196169	Diversity & Change Management	3
10196193	Human Resource Management	3
10804107	College Mathematics **-or-**	3
10804118	Intermediate Algebra with Applications **-or-**	4
10804189	Introductory Statistics	3
10809144	Macroeconomics	3

Term		(18 credits)
10102117	Business Finance	3
10196168	Organizational Development	3
10196188	Project Management	3
10809143	Microeconomics	3
10809188	Developmental Psychology **-or-**	
10809198	Intro to Psychology	3
	Elective	3

Total Credits 69-70

Please Note:
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10196164 // 3 credits
Personal Skills for Supervisor
The learner applies skills and tools necessary to enhance personal professional success through the use of time and stress management and assertive behavior. Learners use time management techniques, conduct personal planning, engage in life-long learning, value the rights of others, communicate effectively, display assertive behavior, and manage stress.

10196168 // 3 credits
Organizational Development
The learner develops skill to assist organizations to achieve greater effectiveness, including increased financial performance and improved quality of work life. Skills developed include collecting, analyzing, and diagnosing organization development data; developing plans to enhance human processes, organization structure, and employee involvement, work design, human resources, and organization environment; and leading and managing the implementation of these plans.

10196169 // 3 credits
Diversity & Change Management
The learner applies the skills and tools necessary to implement and maintain a diverse work environment. Learners assess the current extent of diversity in the workplace; analyze the effect of perceptions, attitudes, biases, and organization culture on diversity; remove barriers; apply change management strategy, process, and reactions; and measure progress and celebrate success.

10196188 // 3 credits
Project Management
The learner applies the skills and tools necessary to design, implement, and evaluate formal projects. Each learner will write a project proposal, work with project teams, sequence project tasks, develop project budgets, identify project resources, implement the project, chart project progress, deal with variations, evaluate the project, and use various technology in these processes.

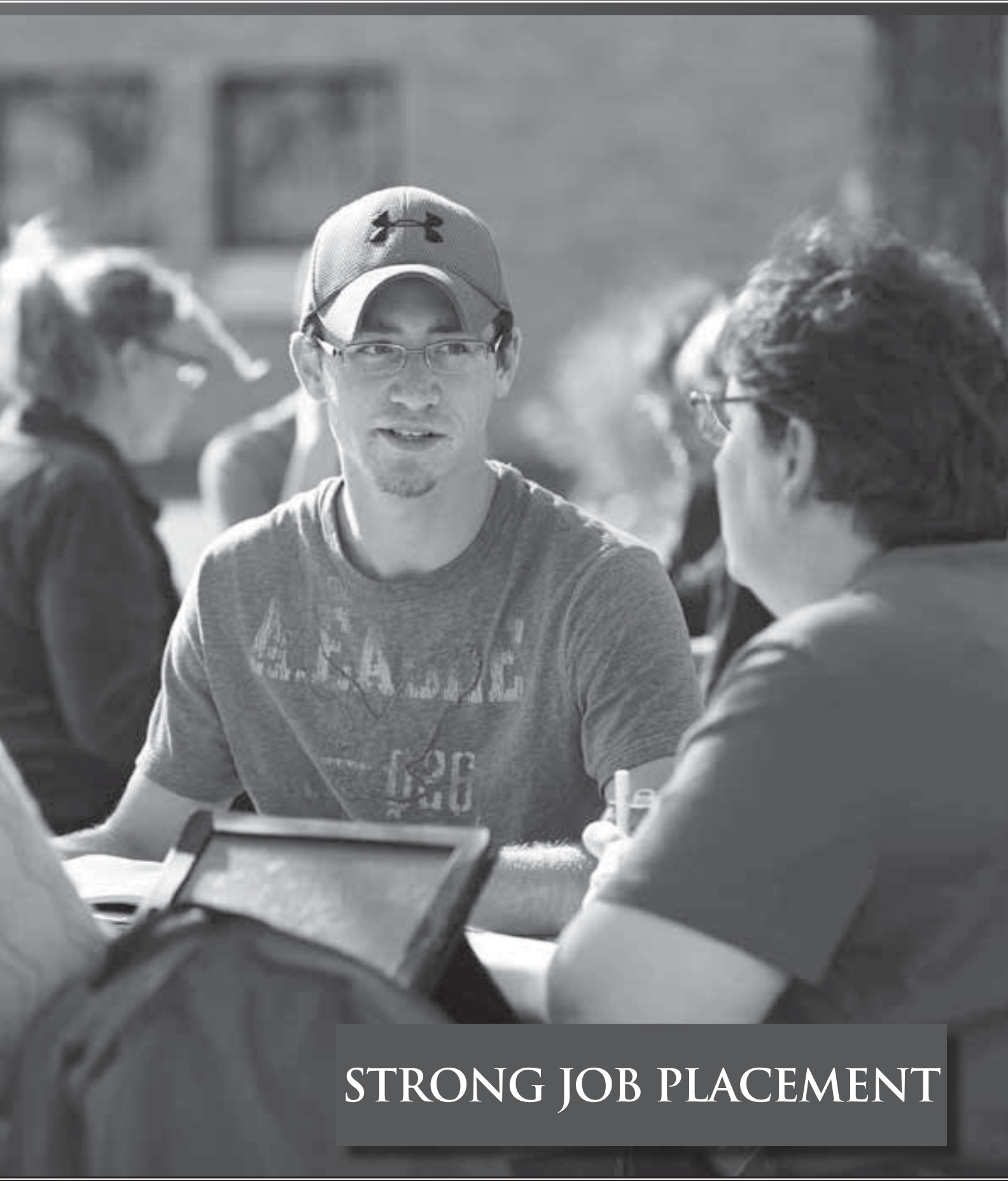
10196189 // 3 credits
Team Building & Problem Solving
The learner applies the skills and tools necessary to facilitate problem solving in a team environment. Each learner will assume the roles and responsibilities of team leadership in the stages of team development, use a systematic problem solving process, and employ consensus building and conflict management strategies.

10196190 // 3 credits
Leadership Development
The learner applies the skills and tools necessary to fulfill his/her role as a modern leader. Each learner will evaluate personal leadership effectiveness, use individual and group motivation strategies, implement mission and goals, demonstrate ethical behavior, adapt personal leadership style to worker readiness, use power, facilitate employee development, coach, manage change, and resolve conflict.

10196191 // 3 credits
Supervision
The learner applies the skills and tools necessary to perform the functions of a contemporary frontline leader. Students engage in operational planning, analyze organizational structures, review the staffing process, employ techniques to enhance employee personal and group effectiveness, and develop control techniques to measure effectiveness in the above areas.

10196192 // 3 credits
Managing for Quality
The learner applies the skills and tools necessary to implement and maintain a continuous improvement environment. Each learner will demonstrate the application of a personal philosophy of quality, identify stakeholder relationships, identify ways to meet/exceed customer expectations, apply a systems-focused approach, use quality models and tools, manage a quality improvement project, and measure effectiveness of continuous improvement activities.

10196193 // 3 credits
Human Resource Management
The learner applies the skills and tools necessary to perform human resource functions in an organization. Each learner will demonstrate skill in following EEOC laws; writing job descriptions; recruiting, selecting, and orienting employees; developing policies and procedures; developing and conducting training; designing performance appraisal plans; developing employee development plans; and selecting compensation and benefit strategies.



STRONG JOB PLACEMENT

SURGICAL TECHNOLOGIST

Program Code 31-512-1
2014-2015 Estimated Tuition and Fees: $6,484*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

This program provides you with knowledge and skills to qualify for a position as a surgical technologist. As part of the surgical team, you will be working in operating rooms under the supervision of surgeons and registered nurses. You will be required to participate in surgical procedures by providing instruments and supplies to the surgeon. Skills and techniques used in central service with instrument processing are also learned. Surgical technology involves minimal patient contact.

Web-enhanced classroom instruction, lab, and clinical experience are part of the curriculum. Clinical experiences include surgery, ambulatory surgery, central service, and related areas. Upon graduation, one becomes eligible to apply for the Certified Surgical Technologist certifying exam.

The Mid-State Technical College Surgical Technologist program is accredited by the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC/STSA), under the auspices of:

Commission on Accreditation of Allied Health Education Programs
1361 Park Street Clearwater, FL 33756
727.210.2350
www.caahep.org

The Surgical Technologist program is offered at Marshfield Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Surgical Technologist graduate, to be able to:

- Apply health care and technological science principles to the perioperative environment
- Maintain principles of sterile technique in the surgical environment
- Provide a safe, efficient, and supportive environment for the patient
- Prepare the patient, operating roo, and surgical team for the preoperative phase
- Perform intraoperative case management in the scrub role
- Perform postoperative case management
- Function as an ethical, legal, and professional member of the health care team as determined by governing bodies

CAREER OPTIONS

Ambulatory Surgery Aide/Technician
Cath Lab Surgical Technologist
Central Service Technician
Dental Office Assistant
Emergency Room Technician
Material Management
Obstetrics Assistant
Podiatric Assistant
Surgical Office Assistant
Surgical Technician
Surgical Technologist
Veterinary Surgery Assistant

POTENTIAL FOR ADVANCEMENT

Physician Assistant
Registered Nurse
Surgical First Assistant

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Surgical Technologist program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.
4. Submit the Criminal Background Statement of Understanding and Release of Information form.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

FUNCTIONAL ABILITIES

A list of specific physical, emotional, and mental tasks needed to function as a Surgical Technologist is available in the online program orientation. It is the student's responsibility to notify the disability services coordinator in the Student Affairs Office to receive assistance.

CLINICAL-RELATED REQUIREMENTS

Prior to placement at a clinical site, students need to pay for a criminal background check and provide documentation of required healthwork to a private vendor.

Students are responsible for ensuring all requirements remain current during program enrollment.

Clinical sites have the right to refuse a student's placement based on inadequate health records, pending charges, or conviction records. Students with a criminal history may not be able to complete clinical courses. MSTC will make two attempts to place a student in an appropriate clinical experience. If MSTC is unable to place the student after two attempts, the student will be withdrawn from the clinical course and will not be able to advance in the program. Contact the program counselor for more details.

PROGRAM PROGRESSION AND COMPLETION

In order to progress in and successfully complete the program, students must

- Repeat courses not completed with a grade of "C" or better prior to progressing in core courses or other courses with co- or prerequisites.
- Receive a grade of "C" or better in all courses required for graduation.

Please note that the ability to repeat courses is dependent upon availability in courses. Students may be required to apply for program re-entry in order to repeat courses within the program's instructional area.

CURRICULUM

Term		**(6-7 credits)**
10501101	Medical Terminology	3
10509102	Human Body in Health and Disease	3
	-or-	
10806177	General Anatomy & Physiology	4

Term		**(16-18 credits)**
10501123	Student Success in Allied Health	1
10806197	Microbiology	4
	-or-	
31806311	Applied Microbiology	2
31512327	ST: Introduction to Surgical Technology	4
31512328	ST: Fundamentals 1	4
31512329	ST: Fundamentals 2	2
31512330	ST: Clinical 1	3

Term		**(15 credits)**
10801136	English Composition I **-or-**	
10801195	Written Communication **-or-**	
10801196	Oral/Interpersonal Communication	3
31512331	ST: Surgical Procedures	4
31512332	ST: Clinical 2	4
31512334	ST: Clinical 3	4

Total Credits 37-40

Please Note:

- The Surgical Technologist program has an August start. Please note that first term classes listed in the catalog must be completed before beginning core Surgical Technologist courses (those with numbers beginning with 315123XX). We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

PROGRAM COURSE DESCRIPTIONS

10501101 // 3 credits
Medical Terminology
Students focus on the component parts of medical terms: prefixes, suffixes, and word roots. Students practice formation, analysis, and reconstruction of terms. Emphasis on spelling, definition, and pronunciation. Introduction to operative, diagnostic, therapeutic, and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

10501123 // 1 credit
Student Success in Allied Health
Learners explore success strategies for allied health programs including time management, study skills, test preparation and test taking skills, planning, and stress management.
Prerequisite: Admission to Central Service 305341 or Surgical Technologist 315121 programs.

10509102 // 3 credits
Human Body in Health and Disease
Focuses on diseases that are frequently first diagnosed and treated in the medical office setting. Students learn to recognize the causes, signs, and symptoms of diseases of the major body systems as well as the diagnostic procedures, usual treatment, prognosis, and prevention of common diseases.
Corequisite: Medical Terminology 10501101.

31512327 // 4 credits
ST: Introduction to Surgical Technology
Includes the basic clinical skills needed by the surgical technologist in the scrub role. Learners develop skills in disinfection, sterilization, identifying basic instrumentation, supplies, drains, catheters, dressings, and sponges. Includes practice experience in creating a sterile field, draping, passing instruments and supplies, performing counts, and preparing supplies.
Prerequisites: Admission to Surgical Technologist 315121 program; Medical Terminology 10501101, Human Body in Health and Disease 10509102 or General Anatomy & Physiology 10806177.

31512328 // 4 credits
ST: Fundamentals 1
Includes the basic clinical skills needed by the surgical technologist in the scrub role. Learners develop skills in disinfection, sterilization, identifying basic instrumentation, supplies, drains, catheters, dressings, and sponges. Includes practice experience in creating a sterile field, draping, passing instruments and supplies, performing counts, and preparing supplies.
Prerequisites: Admission to Surgical Technologist 315121 program; Medical Terminology 10501101, Human Body in Health and Disease 10509102 or General Anatomy & Physiology 10806177.

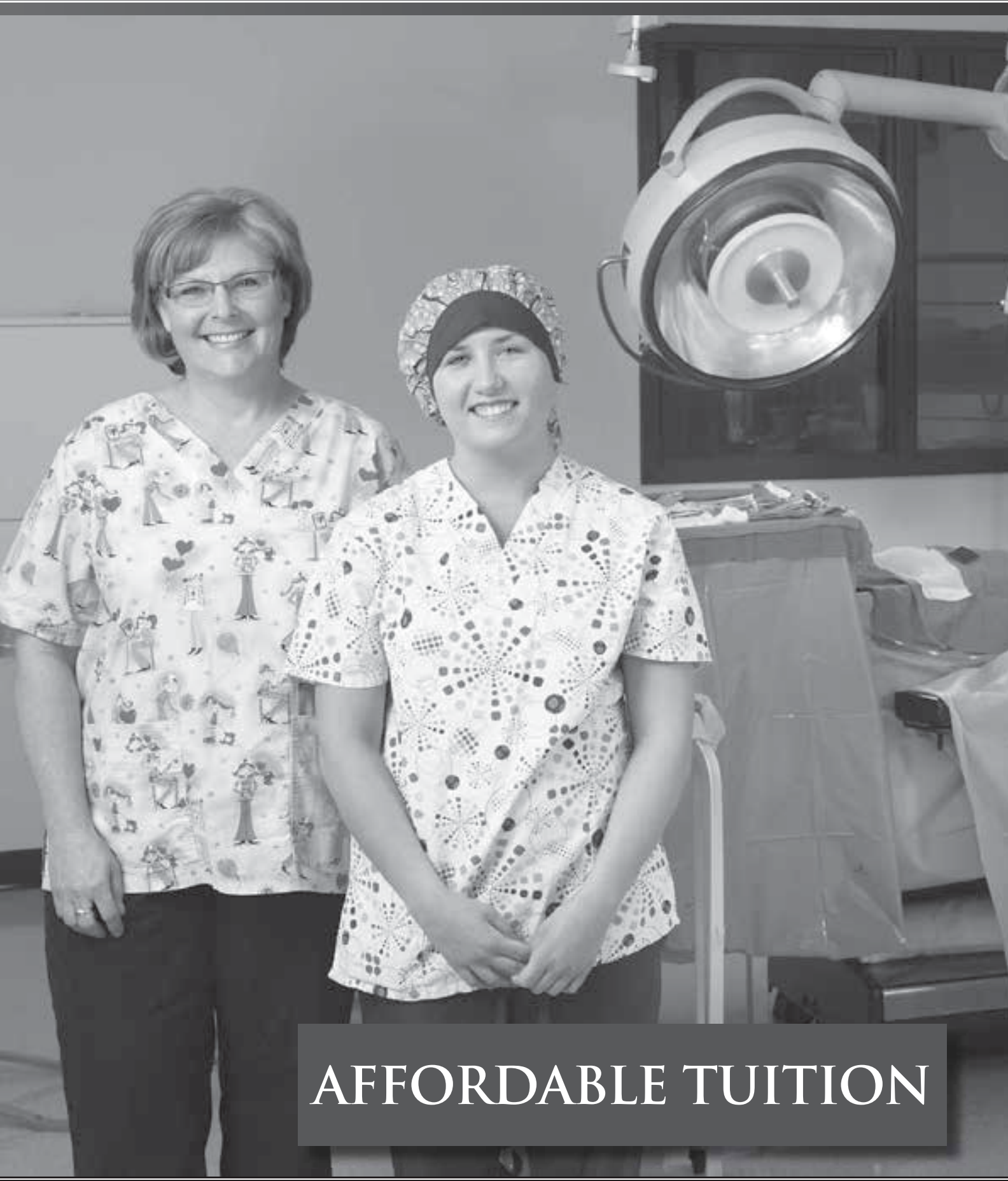
31512329 // 2 credits
ST: Fundamentals 2
Builds upon and reinforces the role of the Surgical Technologist as a member of the operating room team. Discusses care of the patient before, during, and after surgery with emphasis on surgical wounds, wound closure materials, and vital signs.
Prerequisites: Introduction to Surgical Technology 31512327 and Fundamentals 1 31512328.

31512330 // 3 credits
ST: Clinical 1
Apply basic surgical theories, principles, and procedural techniques in the operating room. Students begin to function as team members under the guidance of the instructor and authorized clinical personnel. Surgical rotation case requirements are documented.
Prerequisites: Introduction to Surgical Technology 31512327, Fundamentals 1 31512328, and CPR certification.

31512331 // 4 credits
ST: Surgical Procedures
Provides the foundational knowledge of surgical core and specialty procedures. Examines the pathophysiology diagnostic interventions, and surgical interventions for a variety of surgical procedures. Incorporates integration of basic health sciences and technical knowledge to complete a plan of action for a surgical procedure.
Prerequisites: ST: Fundamentals 2 31512329 and Clinical 1 31512330.

31512332 // 4 credits
ST: Clinical 2
Further experience in a clinical setting allows the student to continue to improve technical skills while accepting more responsibilities during surgical procedures. Surgical rotation case requirements are documented.
Prerequisites: ST: Clinical 1 31512330 and ST: Fundamentals 2 31512329.
Corequisite: ST: Surgical Procedures 31512331.

31512334 // 4 credits
ST: Clinical 3
Enhances the student's technical experience and employee skills. Serves as a transition between student and employee. Application of advanced skills for the entry-level surgical technologist in the clinical setting. Surgical rotation case requirements are documented.
Prerequisite: ST: Clinical 2 31512332.
Corequisite: ST: Surgical Procedures 31512331.



AFFORDABLE TUITION

SUSTAINABLE HEATING AND COOLING TECHNICIAN

Program Code 10-483-1
2014-2015 Estimated Tuition and Fees: $10,835*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The Sustainable Heating and Cooling Technician program prepares technicians to design, install, operate, and maintain Heating, Ventilation, and Air Conditioning/ Refrigeration (HVAC/R) systems in residential and commercial applications.

The program places a strong emphasis on the most modern and efficient techniques, such as solar thermal, geothermal, biomass, radiant, and low temperature heat delivery systems, and high efficiency furnaces and boilers. Students will gain hands on experience in the installation of both traditional HVAC/R systems and this cutting edge equipment.

The Sustainable Heating and Cooling Technician program is offered at Wisconsin Rapids Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Sustainable Heating and Cooling Technician graduate, to be able to:

- Work safely with HVAC/R, solar thermal, geothermal and biomass systems
- Install solar thermal collectors
- Install geothermal heat pumps
- Install boilers and furnaces
- Install piping, pipe insulation, and pipe supports
- Install ductwork and ventilation components
- Install water heaters and solar storage tanks
- Install electrical control systems
- Analyze heating and cooling system performance
- Select and adapt a HVAC/R system design
- Configure heating and cooling system performance for optimum efficiency
- Conduct a renewable energy site assessment
- Perform a system checkout and inspection
- Estimate a heating and cooling load

CAREER OPTIONS

Controls Technician
Geothermal Installation, Maintenance, and Service Technician
Heat Load Estimator
HVAC/R Installation, Maintenance, and Service Technician
Pre-Apprentice/Laborer
Renewable Energy Site Assessor
Solar Thermal Installation, Maintenance, and Service Technician
Technical Sales Representative

POTENTIAL FOR ADVANCEMENT

Energy Analyst
Journeyperson: Plumber, Steamfitter
Master Technician
Project Development Engineers
Project Manager
System Designer

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Sustainable Heating and Cooling Technician program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

PROGRAM COURSE DESCRIPTIONS

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10462114 // 3 credits
Metals & Machining
A two-part class which introduces the basics of metal science and machine shop practice. Metallurgical concepts of steel and iron production, properties of metals, testing of metals, carbon and its rule, heat-treating, steel designations, and cast iron and non-ferrous metals are introduced. Students will participate in lab exercises examining the properties of metal, an introduction to machine shop practices of safety, measurement, and machining through the use of hand tools, drilling machines, saws, and engine lathes. Students will be introduced to these concepts by both classroom presentation and hands-on shop experiences.
Prerequisite: Admission to Automotive Technician 324042, Diesel & Heavy Equipment Technician 324121, Industrial Mechanical Technician 104621, Instrumentation & Controls Engineering Technology 106054, Solar Electric Technician 104822, or Welding 314421 programs.

10462116 // 3 credits
Metal Fabrication
An introduction to structural steel and plate fabrication, sheet metal fabrication, and basic electric arc and oxyacetylene welding. Fabrication techniques, metal selection, layout, cutting, bending, drilling, threading, and joining will be presented. Information will be presented to the student followed by lab activities to provide a hands-on experience. The emphasis will be placed on developing an understanding of the tools, techniques, safe work habits, and the application of metal fabrication skills.
Prerequisite: Admission to Automotive Technician 324042, Diesel & Heavy Equipment Technician 324121, Industrial Mechanical Technician 104621, Instrumentation & Controls Engineering Technology 106054, Machine Tool Technician 324201, Solar Electric Technician 104822, Sustainable Heating & Cooling Technician 104831, or Welding 314421 programs.

10480101 // 4 credits
Intro to Renewable Energy Systems
In this course, students investigate the need for renewable energy systems and emerging careers in renewable energy. Students examine the basic design, function, cost, and other considerations associated with solar photovoltaic, solar thermal, wind, geothermal, and biomass renewable energy systems. Students will also explore energy efficiency and conservation methods.

CURRICULUM

Term		(16-17 credits)
10103106	Microsoft Office-Introduction	3
10480101	Intro to Renewable Energy Systems	4
10483120	Heating & Plumbing Fundamentals	2
10483121	Piping Fundamentals	2
10605105	Electrical Circuits I	3
	-or-	
10605108	Intro to Electronics	2
10804107	College Mathematics	3

Term		(18 credits)
10462116	Metal Fabrication	3
10482107	Construction Fundamentals	2
10483110	Solar Heating System Design & Installation 1	3
10483122	Ventilation, Cooling, & Refrigeration Fundamentals	2
10623106	Intro to AutoCAD	2
10801136	English Composition I **-or-**	
10801195	Written Communication	3
10801196	Oral/Interpersonal Communication **-or-**	
10801198	Speech	3

Term		(18 credits)
10481110	Building Science, Performance, & Evaluation	3
10482101	Solar Site Assessment & Evaluation	3
10483111	Solar Heating System Design & Installation 2	3
10483130	HVACR Circuits & Controls	3
10809143	Microeconomics **-or-**	
10809144	Macroeconomics	3
10809196	Intro to Sociology	3

Term		(16 credits)
10483115	Heat Load Estimation & Modeling	3
10483131	HVACR Installation & Service	2
10483161	Advanced Renewable Thermal Systems	2
10605117	Programmable Logic Controllers - Beginning	3
10806112	Principles of Sustainability	3
10809122	Intro to American Government	3

Total Credits 68-69

Continued on next page

CURRICULUM

Continued from the previous page

Please Note:

- The Sustainable Heating and Cooling Technician program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10481110 // 3 credits
Building Science, Performance, & Evaluation
Students learn the tools and techniques use in the analysis of building shell integrity, focused on how to use an infrared camera to detect insulation, air, and water problems in a building, complemented by blower door testing. These concepts and skills are taught through extensive lab hours working directly with the tools of the trade. Students also investigate building ductwork leakage, building envelope tightness, and combustion efficiency.
Prerequisite: Construction Fundamentals 10482107.

10482101 // 3 credits
Solar Site Assessment & Evaluation
Students learn the steps to perform solar electric and solar water heating site assessments of a home or business. Class content covers solar window determination, load analysis, site selection, system types, system sizing and efficiency measures, and energy output estimation. The course also covers an overview of existing renewable electric incentive programs.
Prerequisite: Intro to Renewable Energy Systems 10480101.

10482107 // 2 credits
Construction Fundamentals
Students will study the concepts associated with the theory, materials, and methods used in construction to include footings and foundations, walls, floors, roofs and roof materials, exterior finishes, interior walls, ceiling and floor finishes, insulation types, vapor and air infiltration, and sound protection. Additionally, students will become familiar with blueprint reading and examine all the trades associated with construction, including electrical, HVAC, and plumbing. The safe use of the appropriate tools for each trade will also be covered.

10483110 // 3 credits
Solar Heating System Design & Installation 1
This course involves students in the installation and design of a solar hot water system. Topics include safety, system design and layout, component selection, mounting collectors, plumbing and insulating copper pipe, and installing a storage tank, heat exchanger, circulation pump, and other system components.
Prerequisite: Intro to Renewable Energy Systems 10480101.

10483111 // 3 credits
Solar Heating System Design & Evaluation 2
This course is a continuation of Solar Water Heating System Installation I and will focus on system integration and advanced installations. It also addresses solar space heating, solar pool heating, and solar cooling systems.
Prerequisite: Solar Heating System Design & Evaluation I 10483110.

10483115 // 3 credits
Heat Load Estimation & Modeling
This course teaches the student how to use "Manual J" from ACCA. The student will develop the skills to do residential heating and cooling heat loads. Students will calculate heat loss and also losses or gains due to infiltration, sun loads, etc. The student will do calculations on actual buildings using ACCA industry standard form J-1. The student will also estimate energy upgrades such as insulation and window improvements; and calculate payback and fuel savings.
Prerequisite: College Mathematics 10804107. Corequisite: Excel-Intermediate 10103124.

10483120 // 2 credits
Heating & Plumbing Fundamentals
Heating system topics include introduction to heat principles, temperature measurement, fuels and other sources of heat, combustion, basic heating systems, basic furnace design, gas furnace design and operation, venting of furnaces, chimney or exhaust gases, and system controls. Plumbing system topics include fluid dynamics (pressure, resistance, and flow), basic system design, water heating, and operation of standard plumbing fixtures.
Prerequisite: Admission to Renewable Energy Specialist 104823, Solar Electric Technician 104822, or Sustainable Heating & Cooling Technician 104831 programs.

10483121 // 2 credits
Piping Fundamentals
This course presents the theory of basic methods of plumbing and piping installation practices. Laboratory activities provide students with basic pipe joining processes associated with the plumbing field.
Prerequisite: Intro to Renewable Thermal Systems 10483100.

10483122 // 2 credits
Ventilation, Cooling, and Refrigeration Fundamentals
Topics covered include air conditioning principles and terms, physical principles of air movement, air filtering and humidity, and methods of conditioning air for comfort and health. In addition, the proper use of psychrometers, dry bulb thermometers, hygrometers, and the reading and interpretation of psychrometric charts and scales are covered, along with ASHRAE and BPI ventilation standards for residential units. Descriptions of new products, and maintenance and operations for residential and commercial cooling systems, are also covered, emphasizing energy conservation and efficiency options for new and existing equipment.

10483130 // 3 credits
HVACR Circuits & Controls
Topics in this course include an introduction to AC/DC electricity and the physical laws that apply to electronic circuits. Direct Current (DC) covers basic definitions of voltage, current, and resistance and analysis of series and parallel resistive circuits. Alternating Current (AC) includes an introduction to AC generation, capacitors, inductors, and transformers and their applications in electronic circuits. Additional topics include control circuits, symbols, diagrams, protection devices, relays, thermostats, single-phase motors, control components, and troubleshooting ACR system wiring diagrams.
Prerequisite: Electrical Circuits I 10605105 or Intro to Electronics 10605108.

10483131 // 3 credits
HVACR Installation & Service
This course addresses residential and light commercial heating, cooling, and refrigeration systems. Emphasis is placed on the diversity of heating and cooling systems and how they operate. Students will participate in the installation of a variety of HVACR systems and will troubleshoot and service systems.
Prerequisite: Intro to Electronics 10605108.

10483161 // 2 credits
Advanced Renewable Thermal Systems
This course explores advanced designs of renewable thermal systems including geothermal, wood gasification boilers, hydronic cooling, and integrated systems. This course also includes a project based learning experience. Students will complete a capstone project of their choosing.
Prerequisite: Successful completion of 12 credits of Sustainable Heating & Cooling (483) coursework.

10605105 // 3 credits
Electrical Circuits I
An introduction to AC/DC electricity and the physical laws that apply to electronic circuits. Direct Current (DC) covers basic definitions of voltage, current, and resistance and analysis of series and parallel resistive circuits. Alternating Current (AC) includes an introduction to AC generation, capacitors, inductors, and transformers and their applications in electronic circuits. Approximately 50% of the course is spent in the laboratory applying the principles and theory presented in the classroom.
Corequisite: Intermediate Algebra with Applications 10804118.

10605108 // 2 credits
Intro to Electronics
This course presents a survey of electricity and electronics which includes lab activities and is designed for persons wishing to learn some of the basics of electricity and electronics. It is an excellent refresher course to get back into electronics or improve a skills list. The course is intended for persons where electronics has become a part of their regular occupation and a need exists to identify various electronic components and perform basic tests using test equipment such as multimeters and oscilloscopes. The course covers concepts and applications of DC and AC electricity, semiconductor components, and digital devices using basic math skills.

10605117 // 3 credits
Programmable Logic Controllers-Beginning
An overview of programmable logic controllers (PLCs) which provides a foundation of knowledge of the programming techniques, operation, and maintenance of PLCs used in typical industrial automation.

10623106 // 2 credits
Intro to AutoCAD
This is an introductory course in computer aided drafting (CAD) using AutoCAD software. It provides foundation skills in using CAD software to create and print two dimensional technical drawings. This course is available to students in any program. Computer skills and prior knowledge of drawing/drafting techniques is recommended.

URBAN FORESTRY TECHNICIAN

Program Code 10-001-5
2014-2015 Estimated Tuition and Fees: $9843*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The Urban Forestry Technician program is truly unique. Rewarding jobs from employers throughout the country seek MSTC graduates with a degree in this exciting field. This program prepares students for careers in arboriculture, landscape management, and urban forestry.

Skills learned include fundamentals of pruning, plant health care, tree planting and maintenance, plant identification, tree risk assessment, and landscape installation and management. The Wisconsin Pesticide Certification Exam is given in class.

An aerial component is included in the curriculum to prepare students for working safely aloft. Elective courses include a series of aerial tree pruning and rigging courses. These courses feature both rope and saddle climbing techniques and working with aerial lifts, along with operating brush chippers and other industry equipment.

The Urban Forestry Technician program is offered at Wisconsin Rapids Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as an Urban Forestry Technician graduate, to be able to:

- Explain proper tree care to clients
- Identify and diagnose tree diseases and pests
- Identify trees by common and scientific name
- Plant and maintain commercial and residential landscapes
- Properly prune, plant, maintain, and remove trees and shrubs

CAREER OPTIONS

Arborist in utility, commercial, and municipal/government tree care programs
Golf Course Arborist
Landscape Contractor/Grounds Technician
Nursery Technician
Plant Healthcare Technician

POTENTIAL FOR ADVANCEMENT

Arborist Manager
Commercial Tree Care or Consulting Company Manager or Owner
Landscape Contractor Manager
Nursery Manager, Grower, or Owner

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Urban Forestry Technician program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.

   Written Communication, mathematics courses, and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

Tool and Equipment Kit

While the College provides much of the equipment you'll be working with in the hands-on training, there are some items each student is personally responsible for.

MSTC works with industry vendors to get discount prices on professional-grade tools. The equipment kit will cost approximately $250 - $300. Students accepted into the program will get specific details about purchasing the equipment.

PROGRAM COURSE DESCRIPTIONS

10001102 // 2 credits
Plant Health Care Applicator
The focus of this class is training to successfully pass the Wisconsin Department of Agriculture and Consumer Protection's pesticide applicator exam (which will be proctored in this class). Additionally, students are familiarized with chemical handling, mixing, calibration, and application via field exercises.

10001103 // 2 credits
Arboriculture
Will gain familiarity with several techniques, tools, and pieces of equipment used in the management of trees and tree populations. This course also serves to create an awareness of arboricultural careers as applied to commercial, municipal, and utility employers.
Prerequisites: Urban Tree Maintenance 10001173 and Tree Biology 10001110.

10001104 // 2 credits
Applied Landscape Architecture
Introduces the student to the landscape design process, a structured approach for shaping outdoor settings for human use and enjoyment. Development of skills in graphic techniques to communicate your landscaping ideas in plan drawings and sketches. Gain experience in presenting your ideas before large and small groups.
Prerequisites: Admission to Urban Forestry Technician 100015 program and Landscape Plant Identification 10001118.

10001105 // 3 credits
Dendrology and Silvics
This course provides the student with an understanding of how trees interact with their environment and with one another, at different spatial and temporal scales. This course builds on concepts from botany and ecology with an emphasis on woody plant systematics and silvics. Tree identification is a major component of this course.
Prerequisites: Landscape Plant Identification 10001118 and Plant Biology 10806184.

10001110 // 2 credits
Tree Biology
An overview of the tree system with an emphasis on growth and development, compartmentalization of wounds, and how the tree adapts to the urban environment.
Prerequisites: Admission to Urban Forestry Technician 100015 program and Introduction To Plant Biology 10001147.

10001111 //3 credits
Intro to Horticulture
This course provides an overview of the science and profession of horticulture. Its role and importance throughout history, current trends, and careers are covered. Particular attention is given to horticultural crops, their use and interrelationships among the environment, plant growth, and plant development.

10001113 // 3 credits
Ornamental Plant Health Care
Classification and identification of important ornamental plant insects, diseases, and abiotic agents are presented, emphasizing their modes of plant damage. Diagnostics, damage assessment, sample preparation, and control strategies are introduced.
Prerequisites: Landscape Plant Identification 10001118 and Plant Health Care Applicator 10001102.

10001118 // 2 credits
Landscape Plant Identification
This course introduces students to woody trees/shrubs and herbaceous plants commonly used in residential and commercial landscapes in Wisconsin. The three plan groups covered in this course are woody trees/shrubs, herbaceous perennial plants, and herbaceous annual plants. Identification, installation, and maintenance are covered for each plant group.

10001124 // 2 credits
Fundamentals of Aerial Tree Work
Introduces students to the basic safety requirements, equipment, and techniques employed by arborists who work aloft. Topics include applied rope-and-saddle and aerial lift usage, electrical hazard recognition, and common knots used in the industry.

Corequisites: Urban Tree Maintenance 10001173 and Chain Saw Safety and Operation 10001133.

CURRICULUM

Term		(17 credits)
10001118	Landscape Plant Identification	2
10001124	Fundamentals of Aerial Tree Work	2
10001133	Chain Saw Safety and Operation	2
10001173	Urban Tree Maintenance	2
10801136	English Composition I **-or-**	
10801195	Written Communication	3
10804107	College Mathematics	3
10806184	Plant Biology	3

Term		(16 credits)
10001102	Plant Health Care Applicator	2
10001110	Tree Biology	2
10001111	Intro to Horticulture	3
10001148	People, Resources, and Sustainability	3
10806134	General Chemistry	4
	Elective	2

Term		(18 credits)
10001104	Applied Landscape Architecture	2
10001105	Dendrology and Silvics	3
10001138	Landscape & Turf Management I	2
10001199	Intro to Fisheries, Forestry, & Wildlife Resources	3
10801196	Oral/Interpersonal Communication	3
10809144	Macroeconomics	3
	Elective	2

Term		(17 credits)
10001103	Arboriculture	2
10001113	Ornamental Plant Health Care	3
10001139	Landscape & Turf Management II	2
10001149	Ecological Basis for Natural Resource Management	3
10001198	Intro to Soil & Water Resources	3
10809198	Intro to Psychology	3
	Elective	1

Total Credits 68

Please Note:
- The Urban Forestry Technician program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10001125 // 2 credits
Aerial Tree Work Practicum 1
This course emphasizes implementation of the basic requirements and techniques employed by arborists who work aloft. Students perform independent study activities and participate as members of a working crew, gaining introductory experience in tree pruning, rigging, hardware installation, electrical hazard awareness, aerial rescue, ground work, and work site management.
Prerequisites: Fundamentals of Aerial Tree Work 10001124, Urban Tree Maintenance 10001173, and Chainsaw Safety and Operation 10001133.

10001126 // 2 credits
Aerial Tree Work Practicum 2
This course builds on the knowledge and skills learned in Aerial Tree Work Practicum 1, including independent study activities of a progressively more comprehensive nature. Students assume roles of crewleader as they participate in tree pruning, rigging, hardware installation, electrical hazard awareness, aerial rescue, ground work activities, and work site management.
Prerequisites: Aerial Tree Work Practicum 110001125.

10001127 // 2 credits
Aerial Tree Work Practicum 3
This course builds on the knowledge and skills learned in Aerial Tree Work Practicum 2, including independent study activities of a progressively more comprehensive nature. Students assume roles of sales arborist/operations manager as they participate in tree pruning, rigging, hardware installation, electrical hazard awareness, aerial rescue, and ground work activities.
Prerequisites: Aerial Tree Work Practicum 2 100001126 or valid First Aid card or equivalent college coursework.

10001133 // 2 credits
Chain Saw Safety and Operation
This course familiarizes students with common chainsaw practices within the urban forestry industry. Personal protective equipment, safe operation, routine maintenance, and common cutting techniques in accordance with current industry standards is emphasized. Students operate chainsaws in a variety of field exercises that simulate tree removal operations. Additional exposure to relevant pieces of industry equipment is included.

10001136 // 2 credits
Nursery & Garden Center Management I
This course provides an overview of landscape nursery production and retail garden center operations. Special attention is given to basic business strategies and fall-season plant management practices.
Prerequisite: Urban Tree Maintenance 10001173.

10001137 // 2 credits
Nursery & Garden Center Management II
Production of trees, shrubs, perennial plants, and annual plants is the focus of this course. Students study specific cultural practices associated with indoor and outdoor growing of landscape plants. Plant growth requirements, labor considerations, and equipment/facility needs are stressed.

10001138 // 2 credits
Landscape & Turf Management I
Students learn all aspects of landscape and turf management during the fall season. Emphasis is on planning and installation of living and non-living landscape materials and turf. Estimating and time management are also key components of this course.
Prerequisites: Landscape Plant Identification 10001118 and Urban Tree Maintenance 10001173.

10001139 // 2 credits
Landscape & Turf Management II
Students learn all aspects of landscape and turf management during the spring season. Emphasis is on planning and installation of living and non-living landscape materials and turf. Estimating and time management are also key components of this course.
Prerequisite: Landscape & Turf Management I 10001138.

10001147 // 1 credit
Advanced Studies in Plant Biology
This course builds on Plant Biology with emphasis on growth, reproduction, and cellular morphological and physiological processes. In combination with the three-credit Plant Biology course 10806184. This will satisfy UW-Stevens Point's Plant Biology requirement for transfer.
Prerequisite: Plant Biology 10806184.

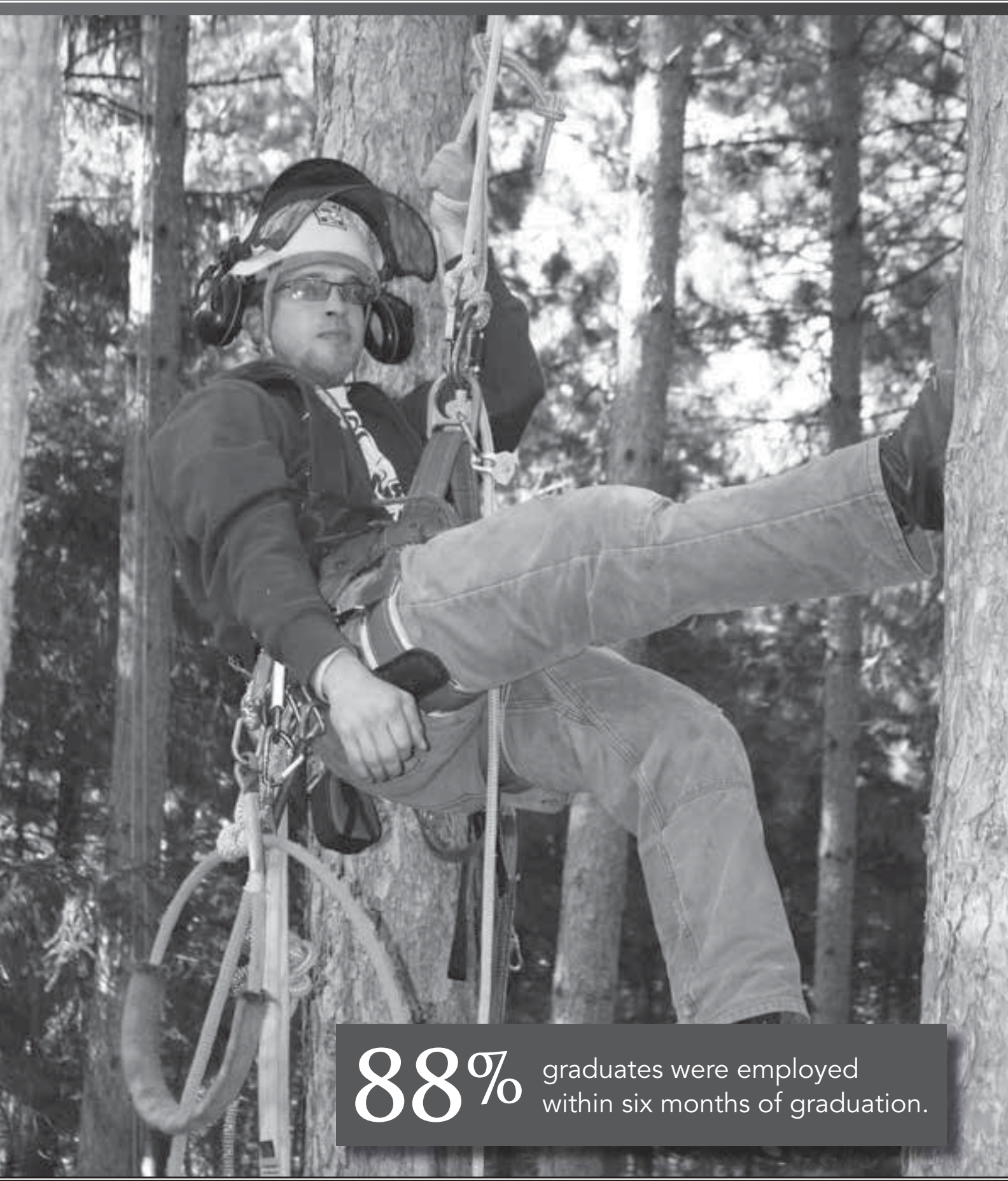
10001148 // 3 credits
People, Resources, and Sustainability
This course explores the relationship between the human population and natural resources over time, and the effect this relationship has on the biosphere. Global resources, environmental concerns, and the human dimensions of resource management are explored from biological and socioeconomic perspectives.

10001149 // 3 credits
Ecological Basis for Natural Resource Management
This course introduces the basic principles of ecology and their application to management of natural resources. The scientific method and interactions between and among species are examined. Lab exercises are designed to give hands-on experience with measurement and data collection, preparation of technical reports, use of library resources, use of computer models, and development of critical thinking skills.
Prerequisite: Plant Biology 10806184.

10001173 // 2 credits
Urban Tree Maintenance
The art and science of tree pruning are the primary objectives of this course. Young tree training and mature tree maintenance are practiced. Proper pruning cuts and techniques specified in the ANSI A300 Pruning Standard are taught throughout this class.

10001198// 3 credits
Intro to Soil & Water Resources
Introduces the student to integrated concepts of soil and water resources at the landscape level. Physical, chemical, and biological interactions relating to watershed processes and response to land use and management.
Prerequisites: General Chemistry 10806134 and Plant Biology 10806184.

10001199// 3 credits
Intro to Fisheries, Forestry, & Wildlife Resources
Integrated introduction to principles and practices of fisheries, forestry, and wildlife management, including production of goods and services while maintaining ecosystem integrity and functions. Emphasis on contemporary issues.


88% graduates were employed
within six months of graduation.

WELDING

Program Code 31-442-1
2014-2015 Estimated Tuition and Fees: $6,617*
Median Salary Six Months After Graduation: mstc.edu/programsalaries

The Welding program prepares you for a wide variety of jobs as a welder in production, maintenance, construction, manufacturing, or servicing occupations.

You will study a number of welding processes including shielded metal arc, gas tungsten arc, gas metal arc, submerged arc, oxyacetylene cutting and brazing, plasma arc, and arc-air cutting. You will also become familiar with various types of metals, fabrication of metals, and welding under codes such as the American Welding Society Code.

When you successfully complete this program, you will be prepared to take welding certification tests.

The Welding program is offered at Wisconsin Rapids Campus.

* Includes tuition and material/activity fees; books and other fees not included. For more details, go to mstc.edu/payingforcollege

PROGRAM OUTCOMES

Employers will expect you, as a Welding graduate, to be able to:

- Demonstrate appropriate safe work habits when operating oxyfuel and electric welding equipment
- Use terminology associated with welding to communicate effectively with co-workers, supervisors, customers, inspectors, engineers, and vendors
- Perform welding operations with appropriate process on various metals and situations
- Interpret blueprint welding symbols to fabricate components
- Analyze given procedures to simulate state weld tests
- Display manipulative skills with various welding processes to assure adequate weld integrity and appearance
- Operate thermal cutting equipment

Protective Clothing
Students are required to provide their own protective clothing and equipment. Details of the requirements and where they may be purchased are provided by the program instructor at the beginning of each semester.

CAREER OPTIONS

Brazer
Combination Welder
Construction Welder
Counterperson in Distributorship
Fabricator
Maintenance Welder
MIG Welder
Pipeline Welder
Production Line Welder
Shipyard Welder
Structural Welder
TIG Welder
Welder, Fitter
Welding Repair

POTENTIAL FOR ADVANCEMENT

Certified Welder
Layout Person
Owner of Fabrication Shop
Set-Up Welder
Tool and Die Welder
Weld Shop Supervisor
Weld Tester
Welding Dealer, Distributor, Demonstrator
Welding Engineer
Welding Inspector
Welding Instructor
Welding Repair Shop Owner
Welding Technician

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the Welding program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the $30 non-refundable application fee.
2. Complete the Accuplacer or ACT test. Minimum scores required:
   - Reading-Accuplacer score of 55
   - Sentence Skills-Accuplacer score of 60
   - Math-Accuplacer score of 34
   - ACT equivalents for above scores are acceptable.

   You may take the Accuplacer again if you did not meet the required scores. Additional options, including coursework and tutoring, are also available to assist you. Contact the Student Affairs Office on your local campus to learn about your options. To schedule an Accuplacer test, contact your local Campus Office.
3. Submit an official copy of all academic transcripts, including high school, college or university, and HSED/GED.

Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494

PROGRAM COURSE DESCRIPTIONS

10442100 // 1 credit
Intro to Welding
Students gain knowledge of general welding shop procedures and safety, arc welding principles and equipment setup, and metal fabrication equipment use. Students work with a lab instructor to begin developing skills with the GMAW and GTAW welding processes by completing simple welding and fabricating tasks in preparation for further exploration in welding and fabricating.

10442101 // 2 credits
Basic GTAW (TIG)
This course is an introduction to the gas tungsten arc welding (GTAW) process commonly known as TIG. The necessary safety and care of equipment and supplies are learned. The student develops skills with the common production welding joints and materials.
Prerequisite: Intro to Welding 10442100.

10442102 // 2 credits
Intermediate GTAW (TIG)
In this course, students weld in the horizontal and vertical positions on stainless steel and aluminum. Pulsed current is applied to stainless steel weldments. Complete penetration groove welds in stainless steel is practiced and evaluated.
Corequisite: Basic GTAW (TIG) 10442101.

10442103 // 2 credits
Advanced GTAW (TIG)
This course involves complete penetration stainless steel pipe welds in the 5G and 6G positions.
Corequisite: Intermediate GTAW (TIG) 10442102.

10442110 // 3 credits
Gas Metal Arc Welding (GMAW)
In this course you develop skills of welding on steel sheet metals and plates using the GMAW process. Emphasis is placed on axial spray, pulse spray, and short circuit mode of transfer. Upon completion of this course, the student is able to weld in several positions, read basic weld symbols, and have an understanding of written welding procedures.
Corequisite: Intro to Welding 10442100.

10442111 // 3 credits
Intermediate GMAW/FCAW
In this course students build their skills with the GMAW process and perform welds on stainless steel and aluminum sheet metal and plate. The student will be able to differentiate, select proper electrodes, shielding gases, and properly adjust parameters. Emphasis is placed on axial spray, pulse spray, and short circuit mode of transfer depending on base metal. Students will also learn about and practice the FCAW process including types of electrodes, fluxes, and shielding gases used in these processes. Upon completion of this course, the student is able to weld in several positions, read some basic weld symbols, and have a basic understanding of written welding procedures.
Prerequisite: Intro to Welding 10442100.

10442115 // 2 credits
Welding Fabrication Techniques
In this course, students fabricate parts from prints and weld assemblies with a specified welding process. Cutting and forming may be required prior to assembly. Depending on the size and complexity of the project, students may be asked to work in a team to complete an assignment.
Prerequisites: Admission to Welding 314421 program and Intermediate GTAW (TIG) 10442102.

CURRICULUM

Term		(15-16 credits)
10442100	Intro to Welding	1
10442110	Gas Metal Arc Welding (GMAW)	3
10442130	Shielded Metal Arc Welding (SMAW)	2
10442132	Metal Cutting Welding	2
10442163	Weld Inspections and Testing	1
10462107	Industrial Safety	2
31421388	Blueprint Reading-Welding	2
10804107	College Mathematics	3
	-or-	
32420320	Math for Manufacturing	2

Term		(17-19 credits)
10442101	Basic GTAW (TIG)	2
10442102	Intermediate GTAW (TIG)	2
10442111	Intermediate GMAW/FCAW	3
10442103	Advanced GTAW (TIG)**-or-**	
10442115	Welding Fabrication Techniques	2
10462114	Metals & Machining	3
10623100	Problem Solving & Critical Thinking	1
	-or-	or
10623106	Intro to AutoCAD	2
10801199	Employment Strategies	3
	-or-	
31801351	Occupational Communication	2
32420312	Metals Science	2

Total Credits 32-35

Please Note:
- The Welding program has an August start date. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

10442130 // 2 credits
Shielded Metal Arc Welding (SMAW)
This course begins to build the knowledge and skills of the SMAW process commonly known as stick welding. Upon completion of this course, the student is able to weld in several positions, read some basic weld symbols, and have a basic understanding of written welding procedures.
Corequisite: Intro to Welding 10442100.

10442132 // 2 credits
Metal Cutting Welding
This course covers oxy-fuel cutting, plasma arc cutting, air-carbon arc cutting, mechanical cutting, and non-traditional cutting. Individual parts are produced using automatic and manual equipment. Both shop and field applications are practiced. The parts may be joined, by welding, to complete an assembly. Students may work in a team environment to complete assignments. This course is available to Welding program students only.
Corequisite: Intro to Welding 10442100.

10442163 // 1 credit
Weld Inspections and Testing
This course emphasizes measurement of weld defects and assessment of weld quality conformance to common welding codes. Students conduct etch tests, bend tests, and break tests on welds. Visual Inspection, dye penetrant testing, and magnetic particle testing are practiced.
Prerequisite: Intro to Welding 10442100.

10462107 // 2 credits
Industrial Safety
This course provides an overview of safety, health, and environmental issues as they relate to industry. Various types of hazards and the controls and equipment used to reduce risks from hazards will be discussed. Focus will be placed on understanding the Occupational Safety and Health Administration (OSHA) and its function as well as other regulatory and enforcement agencies associated with industrial safety, health, and the environment.

10462114 // 3 credits
Metals & Machining
A two-part class which introduces the basics of metal science and machine shop practice. Metallurgical concepts of steel and iron production, properties of metals, testing of metals, carbon and its rule, heat-treating, steel designations, and cast iron and non-ferrous metals are introduced. Students will participate in lab exercises examining the properties of metal, an introduction to machine shop practices of safety, measurement, and machining through the use of hand tools, drilling machines, saws, and engine lathes. Students will be introduced to these concepts by both classroom presentation and hands-on shop experiences.
Prerequisite: Admission to Automotive Technician 324042, Diesel & Heavy Equipment Technician 324121, Industrial Mechanical Technician 104621, Instrumentation & Controls Engineering Technology 106054, Solar Electric Technician 104822, or Welding 314421 programs.

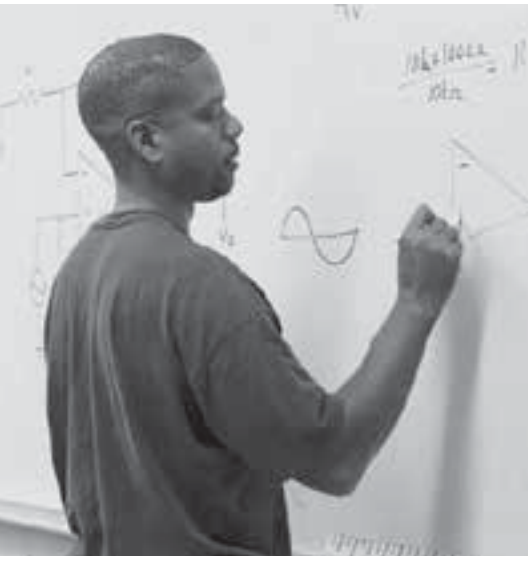
10623100 // 1 credit
Problem Solving & Critical Thinking
Introductory course in problem setup, organization, and solution. Identification of given and unknown values, equation setup, unit conversions, and use of significant figures. Introduction to physical science; working with units of force, area, volume, time, and distance in metric and imperial systems. This course is designed to help you be successful in technical and engineering classes and should be taken during your first semester of enrollment.

10623106 // 2 credits
Intro to AutoCAD
This is an introductory course in computer aided drafting (CAD) using AutoCAD software. It provides foundation skills in using CAD software to create and print two dimensional technical drawings. This course is available to students in any program. Computer skills and prior knowledge of drawing/drafting techniques is recommended.

31421388 // 2 credits
Blueprint Reading-Welding
Introduces the use and reading of a blueprint, includes interpretation from orthographic projection; reviews the meaning of lines, dimensions, notes, and symbols; and covers the use of special views and assembly drawing and stresses actual blueprint reading.

32420312 // 2 credits
Metals Science
Students are introduced to the field of metallurgy. Includes the following topics: sources of common metals including both ferrous and non-ferrous methods of ore extraction and refining and classification of these metals and the alloy systems. The heat treatment of various metals and properties of metals are studied including lab work on shear, compression, tensile strength, and corrosion.

32420320 // 2 credits
Math for Manufacturing
This course includes the study of machine tool problems involving calculations with fractions, decimals, and percentage. Includes work with the metric system, measurement conversion, geometry, trigonometry of right triangles, and use of a scientific calculator. Formulas with application to the trades are also studied.
Prerequisite: Admission into Machine Tool Technician 324201 or Welding 314421 programs or consent of instructor.



APPRENTICESHIP

Apprenticeship is a training strategy that combines supervised, structured on-the-job learning with related instruction and is sponsored by employers, employer associations, or labor/management groups that have the ability to hire and train in a working environment. The related instruction is theoretical and technical, and is usually provided by the Wisconsin Technical College System. The apprenticeship program is governed by the Bureau of Apprenticeship Standards (BAS), www.dwd.wisconsin.gov, in cooperation with the local Joint Apprenticeship Committee (JAC).

Most apprenticeship training programs are three to six years in length. Apprentices work on-the-job in their trade under the supervision of qualified journeymen. As an apprentice, students are trained under a written training agreement called an indenture. While indentured, the employer agrees to teach the student the skills of the trade and the apprentice agrees to learn the skills involved.

Applicants must be at least 18 years of age, have a high school diploma or equivalent, and be physically able to perform the trade. Entry requirements vary by employer. MSTC has skilled faculty to deliver high-quality instruction for apprenticeship programs.

APPRENTICESHIP BENEFITS THE APPRENTICE AND THE EMPLOYER

- Apprentices earn while they learn. They learn a skilled trade while earning a good wage and have a sense of job security.
- Apprenticeship training reduces turnover and apprentices are usually highly productive workers.
- The skills apprentices learn are transferable from one employer to another and generally from one area to another.
- Apprentices are among the most technologically up-to-date workers.
- The program provides employers with a pool of highly-skilled workers from which future managers may be selected.
- Employers' costs in the beginning of an apprenticeship program are minimal.
- Apprenticeship provides state and national recognition.
- Apprenticeship often serves as an entry point into a career that would otherwise be closed to an individual due to lack of experience.

APPRENTICESHIP OCCUPATIONS

An apprenticeship occupation involves manual, mechanical, or technical skills and knowledge that requires a minimum of 2,000 hours of on-the-job work experience. It also requires an average of 400 hours of related classroom instruction to supplement the on-the-job training. Related instruction offered at MSTC is available for the following occupations.

ABC Electrician
ABC Heavy Equipment Operator
Carpenter
Electric Metering Technician
Ironworker
Maintenance Mechanic/Millwright
Plumber
Steamfitter
Steamfitter Service

For additional information about apprenticeship programs and benefits, call 715.389.7045 or email apprenticeship@mstc.edu.

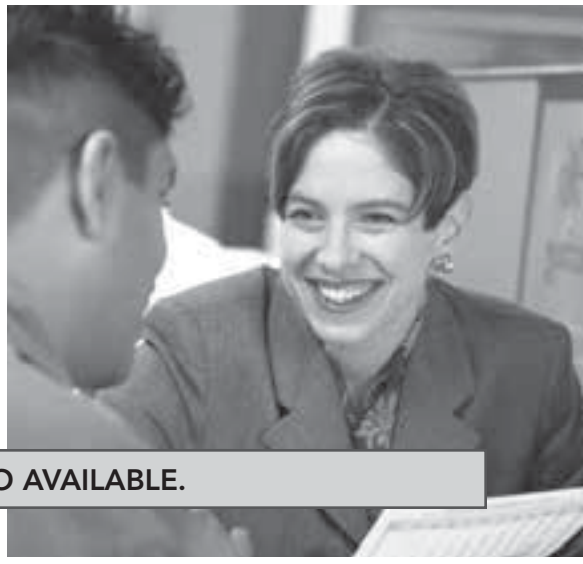
INDIVIDUALIZED TECHNICAL STUDIES ASSOCIATE IN APPLIED SCIENCE DEGREE (AAS)

Students currently employed and possessing a specific career objective that cannot be met by MSTC's existing degree programs can work with an MSTC counselor to custom design their own associate of applied science degree by combining approved courses from two or more MSTC areas of study with general education credits.

CERTIFICATES

MSTC offers a wide variety of short-term certificates to improve skills and employability. Certificates provide options for individuals who want training in specific areas. They include a grouping of courses essential for specific or emerging occupations. Some certificates may also be used to complete requirements of a technical diploma or an associate degree program. In addition, employers increasingly find these certificates useful since they give evidence of specific and valuable skills possessed by the learner.

Contact Mid-State Technical College for solutions to your workforce education needs!
Email your request to Enrollment Advising: enrollment@mstc.edu
Call the college toll free: 888.575.6782
Visit us on the web: mstc.edu



CUSTOMIZATION OF CERTIFICATES IS ALSO AVAILABLE.

BUSINESS & INFORMATION TECHNOLOGY

ADVANCED BUSINESS MANAGEMENT

This certificate is designed to expand the management toolkit developed in the Business Management Certificate. Develop skills to supervise employees for peak performance, conform to laws governing employment, analyze financial management practices, and use analytical tools for effective management and strategic decision-making. Completion of the certificate will prepare you for entry-level employment in a variety of management related occupations including supervisor, small business ownership, and management trainee.

BASIC OFFICE SKILLS

Get the foundational office skills necessary to update your skills or to seek employment in today's modern office environments.

BUSINESS ADMINISTRATION

Get a broad and practical foundation in business administration. Analyze the basic concepts and issues related to business operations and developments; gain skills and knowledge in financial accounting; analyze the human resource management function that staffs the business, develops its employees, and administers human resource plans; and analyze the four Ps (product, price, promotion and place) in the marketing function. Completion of the certificate prepares you for a career transition to a position that requires business knowledge or prepares you to launch your own enterprise.

BUSINESS-CUSTOMIZED

Students may package any number of courses in the certificate, but to earn the certificate they must successfully complete at least 12 credits of business classes. Business classes include classes in 101 (Accounting), 102 (Business Management), 103 (Computer Software), 104 (Marketing), 105 (Related Business), 106 (Business Technology), 145 (Small Business), 150 (IT Networking), 152 (Software Developer), 154 (IT Customer Support), 194 (Real Estate), and 196 (Supervisory Management).

BUSINESS MANAGEMENT

Develop a management toolkit, including the key concepts, vocabulary, and basic skills for effective business management. Analyze the basic concepts and issues related to business operations and developments; the management functions of planning, organizing, leading, and coordinating of resources; the legal and ethical environment in which business operates; the internal and external customer service management of a business; and the human resource management function to staff the business, develop employees, and administer human resource plans. Completion of the certificate will prepare you for entry-level employment in a variety of management-related occupations including small business ownership and management trainee.

ENTREPRENEURSHIP

Learn the principles and practices of entrepreneurship/small business management for individuals who own a business or are thinking of starting a business. Explore the components of small business ownership; develop a business plan to govern the operation of your business and to present for financing; develop a marketing plan that identifies product, price, promotion, and place; develop skills for required recordkeeping and fiscal management; and develop leadership skills and strategies for internal and external customer service.

HEALTHCARE MANAGEMENT

In the dynamic health care environment, managers need to be competent in not only the traditional practices of management and leadership but also competent, knowledgeable, and strategic in the approach they take in adapting to the ever-changing health care landscape. Completion of the Healthcare Management Certificate will provide the learner a general health care management foundation, integrated with a solid business curriculum framework.

LEADERSHIP

Develop your leadership potential to the fullest! Assess current leadership qualities and traits and develop your own approach for their enhancement; apply the skills and tools necessary to lead, problem solving in a team environment; design, lead and evaluate formal projects; and develop and lead a diverse work environment that values change.

MARKETING & GRAPHICS SPECIALIST

Focuses on the conceptual and technical aspects of print and electronic marketing by coupling application software skills with marketing concepts and the fundamentals of graphics design. You will explore the essentials of producing production-ready print documents and publication-ready websites. This certificate provides the skills needed to create print- and web-based marketing materials for various business applications.

MARKETING SPECIALIST

Learn the skills to make informed media decisions to buy and sell advertising. General business concepts serve as a foundation for the marketing skills used in media marketing. A thorough understanding of how media is measured, managed, priced, and placed provides you with the ability to make advertising buying decisions for a small business or represent a media company in advertising sales and marketing.

MOBILE APPLICATION DEVELOPMENT

Provides instruction in mobile application development to individuals holding an associate degree, bachelor degree, or equivalent work experience in the discipline of software development. The certificate consists of three classes: one three-credit introductory course, one four-credit intermediate course, and one three-credit project course. These courses prepare successful completers of the certificate with the knowledge and skills necessary to develop applications in the native language of the mobile device and meet business programming needs in the mobile environment.

NETWORK HARDWARE SUPPORT

Develops the basic technical skills necessary to manage and support a small network. System architecture concepts and troubleshooting techniques are key elements of this certificate. The skill sets involved provide training for individuals who install, maintain, upgrade, and repair PC hardware.

NETWORK PROTECTION

This certificate is designed for people who are currently employed as network administrators or who have taken courses in network administration. Address the concepts and techniques for safeguarding a network against threats while securing the network from outside intrusion. Also covered are PC operating system installation and upgrades.

NETWORK SOFTWARE SUPPORT

Develop the fundamentals of managing and supporting a small network through operating system installation, programming skills used in scripting, and an understanding of the Systems Development Life Cycle. This certificate provides training for individuals who install, maintain, and upgrade PC software. Team building skills and communication are emphasized as part of the support function.

ORGANIZATIONAL LEADERSHIP

Develop your leadership potential to the fullest! Learn and apply the skills and tools necessary for a supervisor to function effectively in today's legal environment; develop plans to enhance organizational structure and processes, the employee involvement, and work design; apply the skills and tools to implement, maintain, and support a diverse work environment; and develop an understanding of the human resource functions in an organization.

PROCESS QUALITY MANAGEMENT

Learn to design, improve, and monitor business processes in order to maximize effectiveness and efficiency. Successful completion of this certificate prepares you for a Six Sigma Green Belt Certificate exam.

QUALITY IMPROVEMENT MANAGEMENT

Get the skills to design, improve, and monitor business processes in order to maximize effectiveness and efficiency. Successful completion of this certificate prepares you for a Six Sigma Green Belt Certificate exam.

QUALITY MANAGEMENT

Apply the skills and tools necessary to lead problem solving in a team environment; design, lead, and evaluate formal projects; and learn the skills and tools to implement and maintain a continuous improvement environment.

SMALL BUSINESS ACCOUNTING
Learn the tools required to manage the finances of a small business. Develop a working knowledge of payroll legislation and payroll records, financial statements, and the accounting cycle.

SMALL BUSINESS MARKETING
Explore basic concepts and practices in communicating information about your small business to potential audiences. Get an overview of the four Ps (product, price, promotion and place) of marketing, the communication process to reach the customer through personal selling, and the use of various forms of media to reach that audience.

SUPERVISION
Develop or enhance your knowledge and skills to direct a workforce at any level, in any business. Learn skills in time management, assertiveness, and stress management to meet the challenges of supervision; develop skills to supervise employees for peak performance; apply the skills and tools necessary to facilitate employee development, manage change, and resolve conflict; and engage in operational planning and organizational analysis, review the staffing process, and learn techniques to enhance employee performance. Completion of the certificate will benefit individuals moving into a supervisory role, those recently promoted to supervisory roles, and current supervisors who wish to enhance their leadership skills and increase their effectiveness.

SUPERVISORY PRINCIPLES
Develop or enhance your knowledge and skills to direct a workforce at any level, in any business. Learn skills in time management, assertiveness, and stress management to meet the challenges of supervision; develop skills to supervise employees for peak performance; apply the skills and tools necessary to lead problem solving in a team environment and effectively function in today's legal work environment; and assess current leadership qualities and traits, and develop your own approach for their enhancement. Completion of the certificate will benefit individuals moving into a supervisory role, those recently promoted to supervisory roles, and current supervisors who wish to enhance their leadership skills and increase their effectiveness.

TAXATION ACCOUNTING
Want to make your resume more appealing for roles in public accounting and related jobs? Get your MSTC Taxation Accounting Certificate in less than one year! This certificate is also a powerful add-on for individuals who have already earned or are currently seeking degrees in other fields of study. Already working in the accounting field? Get a quick refresher/upgrade without committing to a full-time degree program.

WEB-BASED MARKETING
Focus on the conceptual and technical aspects of electronic commerce. Explore revenue models, business strategies and the infrastructure of web-based businesses. Learn the skills to make informed decisions regarding strategic planning, development, and maintenance of a web-based business.

HEALTH

HEALTHCARE CUSTOMER SERVICE-FOUNDATIONS
This certificate prepares learners for entry-level customer service positions within the health care industry. Specific training related to computer software, medical records, electronic health records, and administrative procedures common in health care agencies help students prepare for administrative opportunities. Customer service components of the certificate prepares students for front-line positions in a variety of organizations within the health arena.

HEALTHCARE CUSTOMER SERVICE-SPECIALIST
This certificate prepares learners for administrative health care careers that require knowledge of anatomy, disease processes, and pharmacology. In addition, learners gain experience with law, ethics, and professionalism as it relates to work in health care. Students enrolling in this certificate are encouraged to complete the Healthcare Customer Service-Foundations certificate first.

SERVICE

EARLY CHILDHOOD ADMINISTRATOR
This certificate is designed to enhance management skills of early childhood educators in quality care settings. Get a broad foundational overview of early childhood educational administration and gain skills essential to effective program design, delivery, and supervision. This certificate applies to individuals seeking to develop early childhood program supervision skills. If you are considering an associate degree in the future but need to secure a good working baseline education about administrative processes, consider this certificate.

ENTRY-LEVEL EARLY CHILDHOOD EDUCATOR
This certificate exceeds educational requirements for entry-level early childhood educators. Get a broad foundational overview of early childhood education and its important relationship to implementing developmentally appropriate activities in early childhood classrooms. Guidance strategies essential for enhancing early childhood learning environments are integrated in to facilitate effective classroom management. If you wish to meet and exceed entry-level work requirements, or are considering pursuing an associate degree, you can secure a good working baseline education through this certificate. If you have completed credit courses to meet entry-level standards, you can take a few more courses to achieve this certificate while simultaneously meeting ongoing continuing education requirements.

FORENSIC INVESTIGATOR

This advanced technical certificate is designed to provide advanced training in the field of forensic investigations. The program consisits of six three-credit courses for a total of 18 credits.

TECHNICAL & INDUSTRIAL

ARBORIST TECHNICIAN

In response to urban forestry industry needs for trained employees, MSTC offers an advanced certificate for arborists. This certificate provides individual's presently employed on the technical level in the field to advance their careers.

BASIC ELECTRONICS

The ability to understand and troubleshoot electrical and electronic circuits found in modern applications of technology is a valuable skill. The types of work environments that use the skills of electronics technicians include telecommunications service providers, TV and satellite service organizations, computer network sales, and entertainment industries. This is a self-paced, independent study certificate. You will have the skills to diagnose and troubleshoot both DC and AC electrical circuits, work with different types of equipment like multimeters, signal generators, oscilloscopes, and power supplies. Study transistors, diodes, and rectifiers and their use in amplifier, rectification, and filter circuits.

STAINLESS STEEL WELDING BASICS GTAW

This certificate is designed to help students develop entry-level skills needed to gain employment in this high-demand career. Learn the basics from experienced instructors using the latest technology. This certificate introduces the student to basic welds, fabrication, print reading, and more so no experience is required. This certificate is designed to allow the student to learn at their own pace and with flexible lab times to fit most schedules. MSTC offers monthly start dates with a new class starting the first week of each month. All courses in the Stainless Steel Welding Basics GTAW certificate directly transfer to the Welding Technical Diploma. Students must be at least 18 years of age to enroll in Stainless Steel Welding Basics GTAW.

FIRE

MSTC meets the needs of local fire departments and private employers by providing state certified firefighting courses, FEMA approved courses, numerous safety and leadership courses, and custom tailored courses. Within the MSTC service area, 38 fire departments provide fire protection service to the residents of Wood, Portage, and Adams counties.

MSTC currently offers evening and weekend courses throughout the calendar year. Students have the opportunity to earn a wide-array of IFSAC fire certifications, including Firefighter I, Firefighter II, Fire Officer I, Fire Inspector, and Emergency Services Instructor. Training sites are located at Wisconsin Rapids Campus and through the joint training center with the Marshfield Fire and Rescue Department. Outdoor training facilities include two splashboards within the district, two live fire training simulators (burn building), and various other training props to simulate real-world situations.

For more information, contact Barb Jascor at barb.jascor@mstc.edu or 715.422.5512.

ONLINE COURSES

Take online courses on MSTC, home, or office computers that have access to the Internet. You must have basic computer literacy skills to be successful in online courses. Once you've registered for an online course, you'll receive a letter explaining how to access the course. Your instructor will contact you prior to the start of class with specific instructions. Online courses begin the first day of the semester and required assignments are completed by specific dates. Online courses are not self-paced. Online course registrations are not accepted after the first week of a semester.

For more information about online courses, visit our website at mstc.edu.

MID-STATE TECHNICAL COLLEGE

PERSONAL & PROFESSIONAL ENRICHMENT COURSES
Whether you want to develop or enhance skills for a career, keep current in your field, or just learn for the pleasure of personal enrichment, MSTC has something for you to explore.

103 COMPUTER SOFTWARE

Excel-Beginning
47103423
Introduces students with little or no computer experience to the components of a computer system, computer software, and computer terminology. Develops skill in the use of a mouse; the control of window appearances; the use of Program Manager; the use of Windows control mechanisms such as menus, dialog boxes, and toolbars; the use of Help; and the use of File Manager to organize files. Completion of Microcomputer Operation/Windows 47-103-400 is recommended prior to enrolling in Excel Beginning.

Introduction to Digital Imaging Software
47103499
This course introduces the student in the use of point-and-shoot and the digital camera. Fundamentals of correct camera settings, photo editing, storage, and presentation is addressed. Students learn to think and express themselves in visual terms. Classes are comprised of theory and presentation, plus indoor and outdoor photo shooting opportunities. Students need their own digital camera and a USB storage device with at least 8GB storage.

Microcomputer Operations/Windows
47103400
Introduces students with little or no computer experience to the components of a computer system, computer software, and computer terminology. Develops skill in the use of a mouse; the control of window appearances; the use of Program Manager; the use of Windows control mechanisms such as menus, dialog boxes, and toolbars; the use of Help; and the use of File Manager to organize files. Completion recommended for enrollment in microcomputer software courses.

Outlook-Beginning
47103481
Learn the basics of searching on the Web and email in this course. Completion of Microcomputer Operations/Windows 47-103-400 is recommended prior to enrolling in Outlook Beginning.

Using & Maintaining Tablet Devices
47103498
This course introduces the student to the proper use and maintenance of popular mobile tablet devices. Topics covered include device orientation, use of physical components, hardware and software settings, security settings, downloading and installing apps, using the camera, using the accelerometer/GPS/mapping capabilities, ecommerce with tablets, and correct methods for cleaning and care of the devices. Classes are comprised of lecture and hands-on learning exercises.

Word-Beginning
47103413
Develops skill to create, modify, and save documents. Students will also delete and move blocks of text as well as boldfacing, underlining, and lists. Search for text and spell checking are also covered. Popular word processing applications include generation and better management of letters, memos, and other forms of written documents. Completion of Microcomputer Operations/Windows 47-103-400 is recommended prior to enrolling in Word Beginning.

Word-Intermediate
47103414
Students will create columns, lists, indexes, footnotes, endnotes, and table of contents. Outlines, paragraph numbering, mail merges, sorts, macros, thesaurus, and graphics are also covered.
Prerequisite: Beginning Word (103-413).

307 EARLY CHILDHOOD EDUCATION

Fundamentals of Family Child Care
47307434
Provides essential information about establishing a family child care that is in accordance with Wisconsin's state law.

Fundamentals of Infant & Toddler Care
47307433
Provides requirements and practices for entry-level childcare providers who are or will work with infants and toddlers. Course fulfills requirements as specified by Wisconsin's State Law. Wisconsin day-care regulations require that individuals working with infants and toddlers must complete infant and toddler training within six months of assuming a position.
Prerequisite: Introduction to the Child Care Profession (307-430).

Introduction to Child Care Profession-Certified
47307435
Provides entry-level knowledge and skills for individuals as they begin to or intend to care for children in group or family child care. Learners explore rules and regulations governing group and family child care and the responsibilities of child care providers. This course is "Module A" of the state's child care curriculum and is one of two courses required for individuals seeking county child care certification.

Introduction to the Child Care Profession 2013
47307436
Provides entry-level knowledge and skills for individuals as they begin to or intend to care for children in group or family child care. Learners explore rules and regulations governing group and family child care and the responsibilities of child care providers. This course fulfills introductory non-credit course requirements as specified in DCF Chapters 250 and 251 for family and group child care in Wisconsin's Administrative Code.

Skills and Strategies for the Child Care Teacher
47307431
Focuses on skills and strategies for the child care teacher with emphasis on selecting developmentally appropriate activities, planning lessons, and facilitating children's activities. This course meets Wisconsin's requirements for Child Care Teacher.
Prerequisite: Introduction to the Child Care Profession (307-430).

413 ELECTRICITY

National Electrical Code Update
47413494
Course covers revisions in the latest National Electrical Code. Includes new articles on equipment, new regulation, and changes in the existing code regulations.

455 SUPERVISION-MANAGMENT

Transition to Trainer
47455455
Transition to Trainer is designed for apprentices who are approaching the end of their apprenticeship, as well as journey level workers who are or may train future apprentices.

502 BARBERING/ COSMETOLOGY

Cosmetology Continuing Education: Licensure Update
47502185
This update course, developed in 2013, covers new laws governing the cosmetology profession and establishments as well as safety, sanitation, and infection control. The course fulfills the Wisconsin Department of Safety and Professional Services' four hours of continuing education licensure renewal requirements for 2015. Cosmetology licensed practitioners, managers, and salon owners are the intended audience for this update.

503 FIRE TECHNOLOGY

Certified Fire Officer I
47503763
This is certified fire officer course intended for the firefighter seeking certification as a Fire Officer. Participants should either be an officer on their respective department or seek fire officer duties. This is not a tactics class; rather a class which prepares the student for day to day officer operations at a fire department. Upon successful completion of the course students desiring certification as a fire officer can participate in both the written and practical certification exam.
Prerequisite: Firefighter II

Emergency Services Instructor I
47503436
Prerequisite: Those persons seeking to certify as a Fire Instructor I must be a certified Firefighter II.

Entry Level Fire Officer
47503760
This is an entry-level fire officer course intended for the firefighter currently working for a volunteer or career department who wishes to acquire additional training in officer duties. This is an entry-level course and does not result in certification. Students wishing to pursue Fire Officer certification will need to take the Fire Officer 1 course in its entirety even if this course is completed.
Prerequisite: Entry Level Firefighter (60 hours).

Entry Level Firefighter (60 hours)
47503710
This class meets the state requirement established in Comm 30 for a new firefighter. Included in the course content are the JPR's necessary to prepare the learner to serve as a firefighter in the state of Wisconsin. Students must complete a Live Burn as part of course completion. If a student seeks Firefighter I certification they would need to complete course 47-503-721.

Firefighter I (36 hour)
47503721
This 36-hour class prepares the student for the state written and practical skill certification exam for Firefighter 1. Fees are paid by the state for members of fire departments.
Prerequisite: Successful completion of Entry Level Firefighter 47503710.

Haz-Mat Operations
47503780
Participants are prepared to perform the minimum hazardous material incident operations associated with firefighting functions at an advanced nationally recognized level under general supervision. This course is designed to provide the Fire Fighter II candidate with the information needed to meet the operational level competencies for the hazardous material first responder.

Specialized Fire Topics
47503479
This class is designed to allow topic specific fire training under the title of one course. Within this course a sub-set of firefighter specific training will be addressed. All training's conducted to meet the guidelines of NFPA Standards and taught by IFSAC Certified Fire Instructors.
Prerequisite: Participants must be affiliated with a fire department to enroll in this course.

504 CRIMINAL JUSTICE

Concealed Carry Firearm Safety
42504401
This model curriculum has been developed to support implementation of 2011 Wisconsin Act 35. This course provides an overview of handgun safety practices and concealed carry considerations. It is designed as a safety course, not a training course.

Electronic Control Devices
47504402
Students learn theory and receive practical training necessary to effectively safely and effectively operate an electronic control device (ECD). You will identify how ECDs affect the sensory and motor functions of a combative subject, learn about the device itself, and how to deploy the ECD in accordance with acceptable standards. The course includes a review of the Disturbance Resolution Model and explain how ECDs and Oleoresin Capsicum (OC), as control devices, fall under Control Alternative Tactics/ Tools. The course addresses "medically significant behaviors" that an officer may witness and how best to respond to them.

Jail Officer Recruit Training
47504496
The Jail Officer Academy prepares candidates for entry-level positions as Corrections Officers working for a County Sheriff's Department in the State of Wisconsin. The program adheres to the uniform student performance objectives as established by the Wisconsin Department of Justice Bureau of Training and Standards. The program is certified by the Wisconsin Department of Justice. Admission is restricted to those who qualify under the Administrative Code of the Wisconsin Law Enforcement Standards Board.

531 EMERGENCY MEDICAL SERVICE

ACLS Provider Course
47531443
Designed for health care providers (medical, nursing, paramedics, or allied health personnel) whose daily occupations or volunteer activities demand proficiency in the knowledge and skills of advanced cardiac life support resuscitation and who are authorized by State law to perform some or all of these functions. American Heart Association curriculum and training materials.
Prerequisite: Must hold current Basic Cardiac Life Support card.

ACLS Provider Renewal
47531444
Offers the ACLS provider the opportunity to refresh and update the knowledge and skills acquired in the A.H.A. ACLS Provider course. Although ACLS retraining is not required more frequently than every 2 years, it should occur yearly for individuals who do not perform resuscitation frequently. American Heart Association Curriculum and materials.
Prerequisite: Must hold current Basic Cardiac Life Support AND Advanced Cardiac Life Support cards.

Emergency Medical Responder
47531400
This 70-hour course uses the U.S. Department of Transportation National Highway Traffic Safety Administration (NHTSA) National Standard Curriculum with approved Wisconsin additions, to provide training in all aspects of emergency medical care required at the scene of an accident or sudden illness. It includes advanced skills approved for the First Responder, and the American Heart Association Health Care Provider Basic Life Support CPR course. The National Registry of EMT's - Registered First Responder Exam is available as an option after successful completion of this course.

Emergency Medical Responder Refresher
47531402
This 24-hour refresher course is based upon the US DOT National Standard Curriculum, but contains additional skills and competencies used by Medical First Responders in Wisconsin. This course includes, advanced skills approved for the Medical First Responder, and the American Heart Association Health Care Provider Basic Life Support CPR renewal.

Emergency Response for Law Enforcement
47531472
In this course, students learn how to perform an initial medical assessment for injury or medical condition, how to provide immediate treatment for a variety of injuries and conditions, and how to perform cardiopulmonary resuscitation (CPR) and use an automatic emergency defibrillator.

EMT Refresher
47531421
This 30-hour course reviews aspects of emergency care and presents new techniques that have been developed since the completion of the initial EMT course. This course is mandatory for WI EMT-B license renewal. Uses U.S. Department of Transportation /N.H.T.S.A. curriculum.
Prerequisite: Wisconsin EMT-Basic Licensure.

First Aid For Common Emergencies
42531442
Designed for general public, employee training at businesses, or other entities. Adult first aid and environmental emergencies included. No CPR. No infant training included.

Health Care Provider CPR/AED
47531407
American Heart Association curriculum is used to teach 1 and 2 rescuer skills in adult, child and infant CPR, first-aid for foreign body airway obstruction (choking); and use of barrier devices and bag valve mask. Instruction in use of an automatic external defibrillator (AED) is included (10 hours). Usually offered in three 3-hour classes. Uses BLS for Health care Provider textbook. On successful completion of written and skills exam a certification card is issued. (Previously called CPR Course "C".)

Health Care Provider CPR/AED Renewal
47531408
For health care providers who have taken the Health Care Provider CPR course within the past two years. Successful completion of this course renews certification for an additional two years. Basic Life Support (BLS) for Health care Providers. Adult and pediatric CPR (including 2-rescurer scenarios and use of the bag mask). Foreign-body airway obstruction. Use of automated external defibrillation with CPR test.

HS AED/CPR/CHOKING AD/CH/ INFANT
42531405
Designed for general public, employee training at businesses, or other entities. Adult/Child/Infant AED/CPR with mask and adult/child and infant choking included in the class.

HS CPR AED CHOKING AD/CH NO INF
42531406
Designed for general public, employee training at businesses or other entities. Adult/Child no infant AED/CPR with mask and adult/child choking included in the class.

HS First Aid AED/CPR AD/CH NO INF
42531440
Designed for general public, employee training at businesses, or other entities. Adult/Child AED/CPR with mask and adult/child choking, adult first aid, and environmental emergencies included. No infant training included.

HS PED First Aid CPR AED ACI
42531444
For those involved in child care such as child care workers, teachers, foster care provider, camp counselors, youth organizations, and coaches for childrens' sports organizations. Class includes Pediatric first aid, asthma care training, environmental emergencies, and CPR/AED for adults, children, and infants using masks.

PALS Provider Renewal
47531463
Pediatric Advanced Life Support Provider Renewal is recommended every two years. The course will refresh providers skills and update them on recent scientific developments that impact pediatric advanced life support.

543 NURSING

Nursing Assistant Refresher
47543408
A 12-hour interactive course combining lecture with hands-on practice of certification testing skills. Content focuses on updating nursing assistants for the Wisconsin Nurse Aide Registry written and skills exams.
Prerequisite: Completion of a State-approved nursing assistant course.

607 CIVIL ENGINEERING TECHNOLOGY

Surveying For Construction Trades
47607453
Covers basic principles and operations of the surveyor's transit. Includes laying out and establishing angles, straight lines, elevations, and grades needed in the construction process. Emphasizes basic measuring principles and instrument care rather than legal land surveying principles and procedures.

815 ART

Beginning Oil Painting
60815648
Develops an understanding of the basic principles of art, the use of materials used in oil paintings, techniques of art, and the development of creativity and originality.

816 MOTORCYCLE/MOPED DRIVER ED

Basic Rider Course
42816414
This is an organized 16-hour long program for beginning and experienced motorcyclists who want to operate their motorcycles safely and efficiently. Classroom (6 hours) and "hands-on" range riding experiences (10 hours) are conducted by experienced and certified rider coaches who have been trained by the Motorcycle Safety Foundation. Motorcycles are supplied by local dealerships. Upon successful completion of the Basic Rider Course, you will receive a waiver for the Motorcycle Skills Test for Class M (motorcycle) operator's license.

Basic Rider Course 2
42816418
This course is for riders who already possess basic riding skills and are either returning to riding or are seeking a refresher course to practice and renew basic riding skills. The course includes three hours of lecture and five hours of on-cycle riding experience.

Scooter Basic RiderCourse
42816415
This course is the best place for new scooter riders to start once they have made the decision to begin riding. This course is based upon the Motorcycle Safety Foundation curriculum for scooter. The course includes six hours of classroom and 10 hours of scooter riding exercises.

818 GROUP DYNAMICS FOR TRAFFIC SAFETY

Group Dynamics - O.W.I.
42818418
Explores the problem of driving after consuming alcohol. Designed for motorists who do not have a serious drinking problem but for motorists who choose to use alcohol in an unsafe manner while driving an automobile. The thrust is toward modifying the drinking and driving behavior with a realistic personal plan.

LEGEND

MTSC course descriptions are listed here and are organized by subject. If you are in a program or planning to start a program soon, please check with your department, advisor or counselor to find out which courses you are required to take for your program. The descriptions in this document are accurate as of press time. For the most-up-to-date description please see the MSTC website or check with your department office.

WHAT DO THE NUMBERS MEAN? 10001102

- The first two numbers, 10, indicate the course approval code by Wisconsin Technical College system.
- The next three numbers, 001, indicate course is a horticulture course.
- The sixth number, 1, indicates it is an associate degree course.
- The last two numbers, 02, mean this course is Plant Health Care Applicator.

PREREQUISITES AND COREQUISITES

Prerequisite: A course that must be successfully completed before taking the next course in the sequence.
Corequisite: A course that must be taken at the same time as another course and be successfully completed before taking the next course in that sequence.

001 HORTICULTURE

10001102 // 2 credits
Plant Health Care Applicator
The focus of this class is training to successfully pass the Wisconsin Department of Agriculture and Consumer Protection's pesticide applicator exam (which will be proctored in this class). Additionally, students are familiarized with chemical handling, mixing, calibration, and application via field exercises.

10001103 // 2 credits
Arboriculture
Will gain familiarity with several techniques, tools, and pieces of equipment used in the management of trees and tree populations. This course also serves to create an awareness of arboricultural careers as applied to commercial, municipal, and utility employers.
Prerequisites: Urban Tree Maintenance 10001173 and Tree Biology 10001110.

10001104 // 2 credits
Applied Landscape Architecture
Introduces the student to the landscape design process, a structured approach for shaping outdoor settings for human use and enjoyment. Development of skills in graphic techniques to communicate your landscaping ideas in plan drawings and sketches. Gain experience in presenting your ideas before large and small groups.
Prerequisites: Admission to Urban Forestry Technician 100015 program and Landscape Plant Identification 10001118.

10001105 // 3 credits
Dendrology and Silvics
This course provides the student with an understanding of how trees interact with their environment and with one another, at different spatial and temporal scales. This course builds on concepts from botany and ecology with an emphasis on woody plant systematics and silvics. Tree identification is a major component of this course.
Prerequisites: Landscape Plant Identification 10001118 and Plant Biology 10806184.

10001110 // 2 credits
Tree Biology
An overview of the tree system with an emphasis on growth and development, compartmentalization of wounds, and how the tree adapts to the urban environment.
Prerequisites: Admission to Urban Forestry Technician 100015 program and Introduction To Plant Biology 10001147.

10001111 //3 credits
Intro to Horticulture
This course provides an overview of the science and profession of horticulture. Its role and importance throughout history, current trends, and careers are covered. Particular attention is given to horticultural crops, their use and interrelationships among the environment, plant growth, and plant development.

10001113 // 3 credits
Ornamental Plant Health Care
Classification and identification of important ornamental plant insects, diseases, and abiotic agents are presented, emphasizing their modes of plant damage. Diagnostics, damage assessment, sample preparation, and control strategies are introduced.
Prerequisites: Landscape Plant Identification 10001118 and Plant Health Care Applicator 10001102.

10001118 // 2 credits
Landscape Plant Identification
This course introduces students to woody trees/shrubs and herbaceous plants commonly used in residential and commercial landscapes in Wisconsin. The three plan groups covered in this course are woody trees/shrubs, herbaceous perennial plants, and herbaceous annual plants. Identification, installation, and maintenance are covered for each plant group.

10001124 // 2 credits
Fundamentals of Aerial Tree Work
Introduces students to the basic safety requirements, equipment, and techniques employed by arborists who work aloft. Topics include applied rope-and-saddle and aerial lift usage, electrical hazard recognition, and common knots used in the industry.
Corequisites: Urban Tree Maintenance 10001173 and Chain Saw Safety and Operation 10001133.

10001125 // 2 credits
Aerial Tree Work Practicum 1
This course emphasizes implementation of the basic requirements and techniques employed by arborists who work aloft. Students perform independent study activities and participate as members of a working crew, gaining introductory experience in tree pruning, rigging, hardware installation, electrical hazard awareness, aerial rescue, ground work, and work site management.
Prerequisites: Fundamentals of Aerial Tree Work 10001124, Urban Tree Maintenance 10001173, and Chainsaw Safety and Operation 10001133.

10001126 // 2 credits
Aerial Tree Work Practicum 2
This course builds on the knowledge and skills learned in Aerial Tree Work Practicum 1, including independent study activities of a progressively more comprehensive nature. Students assume roles of crewleader as they participate in tree pruning, rigging, hardware installation, electrical hazard awareness, aerial rescue, ground work activities, and work site management.
Prerequisites: Aerial Tree Work Practicum 110001125.

10001127 // 2 credits
Aerial Tree Work Practicum 3
This course builds on the knowledge and skills learned in Aerial Tree Work Practicum 2, including independent study activities of a progressively more comprehensive nature. Students assume roles of sales arborist/operations manager as they participate in tree pruning, rigging, hardware installation, electrical hazard awareness, aerial rescue, and ground work activities.
Prerequisites: Aerial Tree Work Practicum 2 100001126 or valid First Aid card or equivalent college coursework.

10001133 // 2 credits
Chain Saw Safety and Operation
This course familiarizes students with common chainsaw practices within the urban forestry industry. Personal protective equipment, safe operation, routine maintenance, and common cutting techniques in accordance with current industry standards is emphasized. Students operate chainsaws in a variety of field exercises that simulate tree removal operations. Additional exposure to relevant pieces of industry equipment is included.

10001136 // 2 credits
Nursery & Garden Center Management I
This course provides an overview of landscape nursery production and retail garden center operations. Special attention is given to basic business strategies and fall-season plant management practices.
Prerequisite: Urban Tree Maintenance 10001173.

10001137 // 2 credits
Nursery & Garden Center Management II
Production of trees, shrubs, perennial plants, and annual plants is the focus of this course. Students study specific cultural practices associated with indoor and outdoor growing of landscape plants. Plant growth requirements, labor considerations, and equipment/facility needs are stressed.

10001138 // 2 credits
Landscape & Turf Management I
Students learn all aspects of landscape and turf management during the fall season. Emphasis is on planning and installation of living and non-living landscape materials and turf. Estimating and time management are also key components of this course.
Prerequisites: Landscape Plant Identification 10001118 and Urban Tree Maintenance 10001173.

10001139 // 2 credits
Landscape & Turf Management II
Students learn all aspects of landscape and turf management during the spring season. Emphasis is on planning and installation of living and non-living landscape materials and turf. Estimating and time management are also key components of this course.
Prerequisite: Landscape & Turf Management I 10001138.

10001147 // 1 credit
Advanced Studies in Plant Biology
This course builds on Plant Biology with emphasis on growth, reproduction, and cellular morphological and physiological processes. In combination with the three-credit Plant Biology course 10806184. This will satisfy UW-Stevens Point's Plant Biology requirement for transfer.
Prerequisite: Plant Biology 10806184.

10001148 // 3 credits
People, Resources, and Sustainability
This course explores the relationship between the human population and natural resources over time, and the effect this relationship has on the biosphere. Global resources, environmental concerns, and the human dimensions of resource management are explored from biological and socioeconomic perspectives.

10001149 // 3 credits
Ecological Basis for Natural Resource Management
This course introduces the basic principles of ecology and their application to management of natural resources. The scientific method and interactions between and among species are examined. Lab exercises are designed to give hands-on experience with measurement and data collection, preparation of technical reports, use of library resources, use of computer models, and development of critical thinking skills.
Prerequisite: Plant Biology 10806184.

10001173 // 2 credits
Urban Tree Maintenance
The art and science of tree pruning are the primary objectives of this course. Young tree training and mature tree maintenance are practiced. Proper pruning cuts and techniques specified in the ANSI A300 Pruning Standard are taught throughout this class.

10001198// 3 credits
Intro to Soil & Water Resources
Introduces the student to integrated concepts of soil and water resources at the landscape level. Physical, chemical, and biological interactions relating to watershed processes and response to land use and management.
Prerequisites: General Chemistry 10806134 and Plant Biology 10806184.

10001199// 3 credits
Intro to Fisheries, Forestry, & Wildlife Resources
Integrated introduction to principles and practices of fisheries, forestry, and wildlife management, including production of goods and services while maintaining ecosystem integrity and functions. Emphasis on contemporary issues.

080 PRODUCTION AGRICULTURE

10080101 // 1 credit
Soils
Soil formation and how it is managed is the basis of farming. This course deals with the development of soil, the major types of soil in Wisconsin, the role of organic matter, the effect of proper tillage, and water and soil conservation practices and their role in economic crop production. USDA soil survey maps are used to look at capabilities of different soils.

10080102 // 2 credits
Soil Fertility & Nutrient Management
Soil is the foundation on which farming is based. Studying soil testing, fertility, fertilizers, and their economical use in crop production are a major portion of this course. Nutrient Management Plans are explored along with how they are used to record and help determine fertility and conservation needs for a farm.

10080105 // 3 credits
Soil Science
Learn basic soil types and how to identify them. Also the science behind testing soils for agricultural usage and environmental impact.
Prerequisite: Beginning Lab Science 10506101.

10080110 // 1 credit
Animal Health
The student will learn basic knowledge about disease identification, prevention, and treatment. Other topics include understanding animal health terminology, digestive, and nutritional disorders; cow/calf management systems; bio-security; and best management practices of animal health.

10080111 // 2 credits
Animal Reproduction
The student will learn and explain the proper management and care for a dairy herd to maximize profits and production. Emphasis is on the breeding of dairy cattle, with both genetic improvement and conception considered. Methods to prevent and treat reproductive diseases are discussed.

10080120 // 2 credits
Ruminant Animal Nutrition
This course deals with the practical day to day feeding of dry and lactating dairy cows, dairy heifers, and dairy steers. The development of the digestion system and its function in nutrient metabolism and ration formulation is examined. Emphasis is placed on the role of quality forages in these rations.

10080140 // 3 credits
Farm Financial Analysis
This course identifies farm record keeping skills and provides the student opportunities to develop these necessary business skills for operating a successful farm business. These skills include recording livestock and crop information, calculating depreciation and capital gains, gathering federal and state tax form information, calculating inventories, developing budgets, formulating yearly credit needs, and conducting a financial farm business analysis.

31080309 // 1 credit
Milk & Milk Products
Quality milk production, means of producing quality milk, and methods of determining quality are considered. Utilizing milk in various dairy products and consumer demands and choices are studied.

31080310 // 2 credits
Raising Dairy Replacements & Dairy Beef
Selection, feeding, housing, disease control, and other recommended practices in raising dairy replacements are studied. Stresses the economics of dairy beef production, and how feeding and management of dairy beef differs from raising dairy replacements.

31080316 // 1 credit
Livestock Production
Swine feeding, breeding, housing, and management are studied. The breeding herd, feeder pigs, and market hogs are considered for each of the above. The beef enterprise is studied from selection and breeding of the cow herd to marketing the finished animal.

31080318 // 1 credit
Farm Accounting
Introduces students to computerized accounting methods for effective farm operation.

31080320 // 2 credits
Farm Maintenance
Troubleshooting and problem solving the various maintenance issues that arise in farming operations, to include electrical, plumbing, fencing, machinery, and building maintenance and repair.

31080322 // 1 credit
Farm Business Planning
Students develop a comprehensive business plan for a farm operation. To include labor plan, job descriptions, financial plan, and insurance requirements.

31080347 // 1 credit
Farm Chemicals
Pest identification (e.g., weeds, insects, plant diseases) and their control both by cultural means and chemical application are considered. Safety in the use of chemicals from a personal view and from an environmental aspect is emphasized.

31080352 // 2 credits
Corn, Grain, & Seed Production
Deals with the production of corn and small grains adapted to the area. Varieties and seed selection, planting and harvesting practices, fertilization, grain storage, and economical marketing of the crop are covered in detail.

31080353 // 2 credits
Forage Crops
Attention to the adaptation, management, and utilization of recommended varieties of grasses, and legumes, the establishment of both temporary and permanent pastures, the value of these crops as soil builders, and their use for feeding various classes of livestock.

31080365 // 1 credit
Farm Law
Procedures and practices to be followed in leasing and purchasing farms, methods of family farm transfer, and common legal problems that concern farmers. Emphasis is on preventing disputes and developing an awareness of when legal assistance is needed.

31080367 // 1 credit
Marketing (Including Co-Ops)
Designed to provide authoritative information on basic principles of marketing for products generally common to members of the class. When, where, and how to market products and related information such as regulation and supervision of marketing specific products, understanding market news, price cycles, and the use of cooperatives for marketing purposes are included.

31080372 // 1 credit
Farm Computers
Introduces the use of computers on the farm utilizing prepared farm programs on management. Identifies considerations as to need for a computer on the home farm and how to select the software and hardware.

31080376 // 1 credit
Economics of Farm Equipment
Machinery selection, needs, and maintenance are discussed. Ownership and operating costs are calculated. Alternatives to ownership such as leasing and custom hire are compared. Includes a unit on safety.

31080380 // 1 credit
Farm Buildings & Dairy Cattle Housing
Arrangements and design of efficient farm buildings, as well as construction requirements. Farmstead planning includes mapping of present facilities as they exist, evaluating how useful they are, and planning long- and short-range goals for changes in the farmstead arrangement to improve economic, labor, and aesthetic values. Environmental needs of dairy cattle are identified. This includes space, ventilation, and insulation needs. Planning the dairy facilities to improve the labor efficiency and the opportunity for future expansion.

31080390 // 1 credit
Communications
Designed to teach or improve students' use of correct principles of writing, speaking, reading, and listening.

090 FARM BUSINESS MANAGEMENT

30090381 // 3 credits
Operating the Farm Business
Emphasizes the management skills and concepts necessary for the first year student to continue farming in today's changing technology and farm business financing. It builds the foundation for the other courses. Special emphasis is given to establishing and recording farm business and family goals. The student will organize and maintain farm business records, and interpret and analyze the records to assist in making sound farm management decisions. All competencies will be assessed using the student's farm or with simulations established by the instructor.

30090382 // 3 credits
Soils Management
Instruction is provided on how to prepare and implement a land use plan, and take and understand soil testing procedures and reports. Students receive instruction to implement fertilizer recommendation and establish budgets. Included is instruction on the application of farm manure, chemicals, soil conservation practices, and the management and safe use of farm machinery and equipment.

30090383 // 3 credits
Crop Management
Instruction is provided on all phases of crop production, management, and economics. Specific topics relate to variety, selection, planning, pest control, harvesting, storage, safety, and marketing. Crop management emphasizes the analysis of the farm business and planning of cropping practices and strategies.

30090384 // 3 credits
Livestock Nutrition
Emphasizes the skills, techniques, and concepts necessary for sound feeding management; determining feed values; economics of feed; nutritional terminology and requirements; feed consumption of livestock, understanding feed tag labels, and feed analysis reports for protein, energy, minerals, and vitamins.

30090385 // 3 credits
Livestock Management
Instruction is provided on the various phases of selection, breeding, herd health, raising of replacement stock, and marketing livestock and livestock products. It includes the selection, operation, and maintenance of milking, feed, ventilation, manure handling, equipment, and farm buildings. In addition, the livestock program is related to the total farm enterprise in a business analysis.

30090386 // 3 credits
Farm Records & Business Analysis
Emphasizes the practical use of a farm record system in managing the farm through farm and financial analysis. Includes the establishment of farm business goals, selection and use of farm credit, farm business arrangements, farm estate planning, and farm income taxes. Instruction is provided on the use of computers and/or computer records and financial analysis of the farm business and finance strategy to meet the students' needs.

30090387 // 1 credit
Farm Business & Production Management Update
Available to students who have completed the course offerings in the Farm Training program. Topics include crop production, dairy management, and financial management issues.

101 ACCOUNTING

10101111 // 4 credits
Accounting I
A beginning course designed especially for majors or those who need a strong foundation in accounting principles. Develops the accounting cycle of journalizing, posting, adjusting, closing, and reporting. It emphasizes service and merchandising sole proprietorships in developing the accounting cycle. Explores issues for accounting for cash, accounts and notes receivable, inventories, and fixed assets.

10101113 // 4 credits
Accounting II
Studies accounting procedures for partnerships and corporations. Issues involving incorporation are reviewed. Accounting procedures for corporate stock, dividends, retained earnings, bonds, and long-term investments are presented. Analysis of financial statements is introduced and statements of cash flows are prepared.
Prerequisite: Accounting I 10101111.

10101115 // 4 credits
Accounting III
Builds on accounting concepts in Accounting I and II, and details the accounting for assets using generally accepted accounting principles, incorporates the time value of money, and defends the role of the Financial Accounting Standards Board.
Prerequisite: Accounting II 10101113.

10101117 // 4 credits
Accounting IV
Examines accounting issues and the application of generally accepted accounting principles to those issues. Some issues examined are liabilities, long-term financing, capital stock issues, revenue recognition, capital leases, deferred taxes, earnings per share, and accounting changes.
Prerequisite: Accounting III 10101115.

10101120 // 3 credits
Payroll Accounting
Develops a working knowledge of payroll legislation, payroll records, and payroll accounting. Payroll accounting is accomplished through manual methods and automated methods.
Corequisites: Accounting I 10101111 and Microsoft Office-Introduction 10103106.

10101123 // 3 credits
Income Tax Accounting
Applies current tax laws in preparing individual tax returns and supporting forms and schedules.

10101124 // 3 credits
Business Taxation
Students will apply current tax law to the preparation of corporate, partnership, S corporation, and other entities. Students will examine income tax laws and regulations as they pertain primarily to businesses. A detailed examination of the special rules that apply to the various business entities will be covered. The preparation of Forms 1065, 1120, 1120S, and 1041 will enable students to have practical experience with these business-related forms. Tax planning will also be covered. Students will be encouraged to attain practical tax experience either as a tax volunteer, or a paid preparer in the local accounting community.

10101125 // 3 credits
Cost Accounting
Accumulates production costs for materials, labor, and overhead for job order or process costing systems. Determines and records variances from standard. Computes various cost-volume-profit relationships for control and decision-making.
Prerequisite: Accounting II 10101113.

10101128 // 3 credits
Managerial Accounting
Develops managerial and finance analytical and decision-making skills. Develops an appreciation of the financial statements as a framework for controlling the activities of a business entity, the ability to do financial statement analysis and forecasting, and make recommendations for appropriate courses of action based on the results. Examines the methodology and develops the skills to manage leverage, working capital, and long-term financing. Examines the American financial system and how the business entity functions within it. Develops an appreciation for the skills needed to determine the time value of money. Prepares cash flow, operating, and capital budgets.
Prerequisite: Accounting II 10101113.

10101129 // 3 credits
Accounting: Computerized
Uses the computer as a tool to reinforce and build on accounting concepts, prepares financial statements and managerial reports, produces business documents, and accounts for service and merchandising business entities. Explores Excel worksheet applications for accountants.
Prerequisites: Accounting I 10101111, and Beginning Excel 10103123 or Microsoft Office-Introduction 10103106.

10101130 // 3 credits
Accounting Systems
Designs management and accounting information systems for service, merchandising, and manufacturing business entities including data collection, data processing, data storage, information distribution, and internal controls; prepares oral and written reports; and produces individual and group projects.
Prerequisite: Accounting II 10101113.

10101131 // 3 credits
Governmental Accounting
The basic concepts, techniques, and terminology of fund accounting as utilized by governmental entities are emphasized. Institutional accounting for educational institutions and hospitals, and the uniqueness of accounting for not-for-profit organizations and agencies are also studied.
Prerequisite: Accounting II 10101113.

10101133 // 1 credit
QuickBooks for Small Business
Introduction to the theory behind and application of QuickBooks software in a small business environment.

10101184 // 3 credits
Business Finance & Budgeting
The learner applies the skills necessary to achieve an understanding of the fiscal/monetary aspects of business. Each learner will demonstrate application of business types, cycles, forecasting, budgeting, expense control, and financial statement interpretation relevant to the supervisor as a non-accountant.

102 BUSINESS ADMINISTRATION

10102101 // 3 credits
Intro to Business
An introduction to what a business is, how it operates, and how it is managed. Students will identify forms of ownership and the processes used in production and marketing, finance, personnel, and management in business operations.

10102103 // 3 credits
Business Law & Ethics
This course introduces the student to basic ethical theories and value systems. Students will apply these perspectives to moral issues, problems, and situations which arise within the business environment. Emphasis will be placed on how the applicable laws are being interpreted.

10102110 // 3 credits
Employment Law
Introduces a broad scope of employment laws and provides the opportunity to apply these laws to the employment arena. Laws relating to anti-discrimination, including the Civil Rights Act, ADEA, and ADA; wage and hour regulation, including FLSA; employer provided pensions, including ERISA; health insurance, including COBRA; and unemployment and worker's compensation insurance will be covered.

10102117 // 3 credits
Business Finance
This course introduces the basic concepts needed for firms to efficiently control the flow of money within a business to balance profitability with risk. Students will determine the financial impact of quality programs on a company, analyze financial statements using ratio analysis and industry comparison data, determine break-even points and leverage for a company, compare alternatives for short and long-term financing, explore options for global financing, and prepare a cash budget and pro forma financial statements for a firm.
Prerequisite: Accounting I 10101111.

10102120 // 3 credits
Customer Service Management
The learner applies the skills and tools necessary to manage and measure the customer service function. Learners practice quality customer service, develop customer service plans, train and develop staff in quality customer service, measure the effectiveness of customer service, and lead continuous improvement of customer service.

10102131 // 3 credits
Entrepreneurial Management
This course is designed to introduce students to the concept of entrepreneurship. Students will study entrepreneurial practices primarily by developing a business plan for a venture of their choice. This will include comparing ways of going into business, and developing marketing, legal, financial, products/services, management, and operations plan for a small business of their choice. Entrepreneurial behavior within companies will also be examined.
Prerequisite: Twelve 10-102 Business Management credits or twelve 10-196 Supervisory Management credits or a combination of 10-102 Business Management and 10-196 Supervisory Management credits that total twelve.

10102147 // 3 credits
Principles of Management
This course introduces the student to the job of management in organizations. An understanding of the roles and tasks of all levels of management in the functions of organizational planning, controlling, staffing, leading, and controlling is developed.

10102160 // 3 credits
Business Decision Making
This course develops skill to enable students to make individual decisions and participate in and facilitate group decisions in pursuit of the goals and objectives of an organization. Students will analyze decision making environments; employ a systematic decision making process; use creative and analytic thinking tools for information gathering and analysis; employ ethical and social standards; contribute in group decision making; and facilitate the group decision making process.
Prerequisite: Twelve 10-102 Business Management credits or twelve 10-196 Supervisory Management credits or a combination of 10-102 Business Management and 10-196 Supervisory Management credits that total twelve.

10102178 // 3 credits
Personal Finance
Emphasizes planning and managing personal finances, formulating strategies for making effective purchasing decisions, understanding the role of insurance in risk management, applying effective investment strategies, and taking steps to control one's financial future.

10102180 // 3 credits
International Business
This course introduces topics concerning international business while illustrating its scope and importance. Topics will include the impact of geography, trade protectionism, culture, legal structure, politics, and currency on business dealings. Students will also research a particular country in depth.

10102181 // 3 credits
Global Business Management
Students will gain knowledge of global business concepts to assist them to work effectively in a business that engages in international trade. Topics will include globalization; global trade environments, investment theories, marketing, and supply chain processes; economic integration; and exporting.

10102183 // 3 credits
Global Supply Chain Management
Students explore methods of foreign market entry, international contracts, INCOTERMS 2000, terms of payment, international commercial documents, international insurance, export packaging, customs clearance, and the global supply chain logistics infrastructure.

10102184 // 3 credits
Global Trade Finance
Students will explore the role of finance in global trade. Foreign exchange markets, fluctuations of the market, development of the Euro, role of International Monetary Fund (IMF) in the global capital market, major determinants in country risk, and risks in export financing will be examined.

10102185 // 3 credits
Global Business Culture
The student will examine the cultural frameworks in which global business operates. Students will analyze various cultures, communication strategies, socio-cultural forces, human resource investment and utilization, and management styles.

10102190 // 3 credits
Personal & Work Group Effectiveness
Develops basic skills to enhance personal, work group, and organizational effectiveness.

10102198 // 2 credits
Core Business Skills
Students build skills in critical core business skills.

10102199 // 3 credits
Business Management Internship
This course integrates Business Management classroom study with specific off-campus occupational experiences at selected training sites. An organized plan of experiences built around business management competencies is planned, supervised, and evaluated by the instructor and cooperating business trainer.
Prerequisite: 12 Business Management or Supervisory Management credits.

103 COMPUTER SOFTWARE

10103102 // 1 credit
Windows Operating Systems
Introduces students to the components of a computer system, computer software, and computer terminology. Develops skill in Windows basics, working with files with Windows, organizing files with Windows Explorer, and customizing Windows for increased productivity. Course also addresses office ergonomics, types of software and copyright issues, and email using Microsoft Outlook.

10103103 // 1 credit
Intro to Microsoft Office
This course is designed to introduce students to Microsoft Office and its capabilities. The student is exposed to Windows, Word, Excel, Access, and PowerPoint software.

10103106 // 3 credits
Microsoft Office-Introduction
Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, and PowerPoint) while reinforcing the students' knowledge of computer concepts, file management, Internet, and MSTC student email usage through demonstrations and lab exercises. Students must possess basic keyboarding, mouse, and Windows skills. Students may develop these skills in Academic Success Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10103107 // 2 credits
Applied Microsoft Office for Health
Develops introductory computer and software application skills using the Windows Operating System and Microsoft Office Suite (Word, Excel, and Access), Outlook, and Internet Explorer through demonstrations and lab exercises. Emphasizes technical skills in Excel workbooks and Access databases for health careers.

10103113 // 1 credit
Word-Beginning
Students learn how to create, modify and save documents. Students also learn to insert, delete, and move blocks of text as well as boldfacing, underlining, and lists. Page formatting, searching for text, and spell checking are also covered. Popular word processing applications include the generation and better management of letters, memos, and other forms of written documents.

10103114 // 1 credit
Word-Intermediate
Students create columns, lists, indexes, footnotes, endnotes, and table of contents. Outlines, paragraph numbering, mail merges, sorts, macros, thesaurus, and graphics are also covered.
Prerequisite: Microsoft Office-Beginning 10103106 or Word-Introduction 10103113.

10103123 // 1 credit
Excel-Beginning
Develop skill to create and modify spreadsheets using commands, functions, and formulas. Popular spreadsheet applications include general ledger, budgets, inventory control, and sales records. Essentially, any data that can be represented in rows and columns is a candidate for an electronic spreadsheet application.

10103124 // 1 credit
Excel-Intermediate
Develop skill to write and debug macros, create custom menus, perform database functions, and develop graphs.
Prerequisite: Microsoft Office-Introduction 10103106 or Excel-Beginning 10103123.

10103133 // 1 credit
Access-Beginning
Students learn to create and modify a database. Students also learn to use commands and formulas to do sorting and indexing applications. Databases enable users to organize large amounts of interrelated data accurately and without redundancy. Popular database applications on a larger scale include personnel filing systems and accounting systems. On a smaller scale, databases can be used for generating mailing lists and keeping track of home recipes.

10103134 // 1 credit
Access-Intermediate
Students develop advanced indexing, logical and decision-making commands, access multiple files, and create menus and command files.
Prerequisite: Microsoft Office-Beginning 10103106 or Access-Introduction 10103133.

10103160 // 1 credit
PowerPoint-Beginning
Prepares the student to use presentation graphic software to develop overhead transparencies and 35mm or electronic slides for manual or electronic presentations; to develop presenter outlines and notes; and to effectively deliver the presentation.

10103192 // 3 credits
Web Principles: HTML/Expression Web
This course provides an introduction to web page development, with a strong focus on hypertext markup language (HTML) and Microsoft Expression Web. The course also addresses design and deployment issues as they relate to web page development, including graphics, fonts, layout, accessibility, and usage.
Corequisite: Windows Operating Systems 10103102 or Microsoft Office-Introduction 10103106.

104 MARKETING

10104102 // 4 credits
Marketing Principles
Students study the practices and methods of manufacturers and distributors in the marketing of goods and services. Product planning, pricing strategies, distribution systems, channel activities, and the role of government, as well as other factors influencing marketing today, are emphasized.

10104105 // 3 credits
Selling Principles
Helps students develop the kind of sales techniques that encourage customers to believe in the integrity of the salesperson and the product. Subjects include handling customers' tangible and intangible needs, attitude conversion, sales strategies for a variety of conditions, and the changing form of selling techniques. Focuses on the need for a sales personality and the importance of psychology and creativity in selling.

10104107 // 3 credits
Social Media Marketing
This course addresses how social media has transformed marketing communications from traditional, mass media to individualized marketing. Using social media tools such as Facebook, YouTube, Twitter, LinkedIn, and more, this class explores the different methodologies for social media marketing. Topics addressed include creating social media, integrating social media as part of a marketing campaign, the concept of viral marketing, the ethical and potential legal concerns that have arisen over these forms of communication, and how organizations and individuals have successfully applied social media marketing.

10104120 // 3 credits
Media Strategies
This course prepares the student to compare, evaluate, and select different advertising mediums. It includes analyzing media purchasing strategies and the design and development of effective advertising for each medium. Additional topics include the evaluation of survey information and pricing methodology for each medium.
Corequisite: Marketing Principles 10104102.

10104125 // 4 credits
Promotion Principles
This course focuses on non-personal communication about product services, image or ideas to influence customer behavior. Topics include advertising, sales and visual promotion, public relations, and managing the promotion function.

10104135 // 3 credits
Marketing Internship
This course integrates classroom study with industry specific occupational experience. It provides the student with practical, on-the-job work experience through competencies that are planned, supervised, and evaluated by the instructor and/or a cooperating industry representative.
Prerequisite: Consent of instructor.

10104160 // 4 credits
Marketing Decision-Making
Examines the marketing function from the manager's perspective. Topics include management functions, decision making in regard to the customer, product planning, pricing strategies, evaluation of distribution channels, and promotional tactics.
Prerequisite: 12 Marketing credits.

10104174 // 3 credits
Marketing Research
Primarily for students with previous business courses or work experience. Introduces techniques of research and research reporting. The study of market behavior is pursued as students undertake several well-ordered research projects in their career fields.
Prerequisite: Marketing Principles 10104102.

10104180 // 3 credits
E-Commerce Principles
This course provides an overview of electronic commerce. Business models underlying these electronic commerce applications are studied from both operational and strategic perspectives. A review is made of worldwide web technology trends including electronic payments and related issues of authentication, security, privacy, intellectual property right, and tax implications.

10104181 // 3 credits
E-Commerce Database Marketing
This course identifies and evaluates e-commerce database marketing applications. Students both create and use relational databases to initiate and sustain marketing programs for web-based businesses, or the web-based component of an existing brick-and-mortar business. This course emphasizes skills for querying existing databases and generating managerial reports.
Prerequisites: Microsoft Office-Introduction 10103106 or Access-Beginning 10103133 and E-Commerce Principles 10104180.

10104185 // 3 credits
Global Business Marketing
Students examine marketing theory and methods as they apply to world markets. Topics examined include the importance of linking international marketing with the overall strategy of the business while examining the impact of cultural, political, and legal issues and the economic differences in global strategies. Emphasis is placed on developing the marketing mix appropriate to various international global environments.

105 RELATED BUSINESS

10105160 // 3 credits
Business Law
Examines the classifications of law, elements of legal contracts, and business applications. Negotiable instruments, sales and bailment contracts, principal-agent relations, and real estate law are also explained. Ethical practices are emphasized rather than narrow, legal definitions.

106 OFFICE SYSTEMS/ TECHNOLOGY

10106130 // 1 credit
Keyboarding
Develops basic keyboarding skills, including alphabetic and numeric keys, symbols, and characters by the touch typing method. This class is designed for those students entering a variety of fields such as data processing, marketing, real estate, personnel or any occupation that uses a keyboard to input information. Successful achievement is 30 WPM.

10106135 // 2 credits
Supervised Field Experience
This course integrates Administrative Professional classroom study with specific off-campus occupational experiences at selected training sites. An organized plan of experiences built around office competencies is planned, supervised, and evaluated by the instructor and cooperating business trainer.
Prerequisite: Completion of at least 24 credits including Computer Software courses (103) and/or Administrative Professional courses (106) or approved by program instructor.

10106140 // 3 credits
Business Information Management
Following commonly used ARMA rules, the student will apply basic filing methods to paper and database filing systems. Methods to permanently archive data are also covered.
Corequisite: Microsoft Office-Introduction 10103106.

10106150 // 3 credits
Administrative Office Procedures
Develops professional skills and attitudes needed in a global business environment. Skills include time management, problem solving, and decision making while working independently and as part of a team. Tasks such as electronic mail, calendaring, meeting and event planning, domestic and international travel, and project management and minute-taking are included. Familiarity with office machines is required.
Corequisites: Written Communication 10801195 and Microsoft Office-Introduction 10103106.

10106157 // 3 credits
Document Formatting
The competencies for this course cover formatting styles of business letters, business and academic reports, memos, tables, business meeting documents, itineraries, legal documents, and business forms. The course also includes drill work for improving keying speed and accuracy. Minimum typing speed of 30 wpm required (alphabetic keys only).
Corequisite: Microsoft Office-Introduction 10103106.

10106160 // 3 credits
Proofreading & Editing
This course is designed to sharpen proofreading and editing skills. Competencies cover detecting and editing errors in keying, spelling, capitalization, plurals, possessives, punctuation, numbers, grammar, sentence structure, and formatting. Documents will also be edited for clarity, conciseness, and completeness.
Corequisite: Microsoft Office-Introduction 10103106.

10106161 // 5 credits
Medical Transcription I
Students develop basic transcription skills needed to translate dictate reports into written form acceptable for use in the patient's medical record. Emphasis is on English grammar and punctuation, accurate use of medical terminology, and ability to use designated reference materials. Follow report style and format guidelines as identified by the Association for Health care Documentation Integrity (AHDI).
Corequisites: Word-Beginning 10103113 or Microsoft Office-Introduction 10103106; Medical Terminology 10510101.

10106162 // 3 credits
Graphics & Print Media
This course develops skill to effectively create graphics and design publications. Students will produce print media, design, and layout print jobs using the most appropriate software package for the job.
Prerequisite: Admission to Administrative Professional 101066 program or instructor consent.

10106163 // 5 credits
Medical Transcription II
Provides concentrated medical dictation experience in transcribing case histories from specialized areas, some to include cardiology, general surgery, orthopedics, pediatrics, and radiology. Emphasis is placed upon accurate production.
Prerequisite: Medical Transcription I 10106161.

10106165 // 3 credits
Functions of Transcription
This course is designed to expose students to transcription practice related to ancillary medical services including surgery, pathology, laboratory, and physical rehabilitation as well as alternative and holistic medicine. Students will transcribe dictation from providers whose native language is not English. Students will build skills by transcribing edited "live" dictation similar to that found in an actual medical facility.
Prerequisite: Medical Transcription I 10106161.

10106170 // 3 credits
Hardware & Software Troubleshooting
Preventive maintenance and troubleshooting of essential business equipment such as the PC, fax, scanner, and printer. Installation of new peripheral devices, such as hard drives, CD-ROM drives, printers, and memory. Upgrading and installing software and drivers are also covered.

10106172 // 3 credits
Digital Communication Technology
The course introduces the student to digital and communication technology used in the office today, including voice recognition, digital cameras, digital video cameras, video conferencing, web conferencing, and teleconferencing. The content focuses on understanding communication technologies and how they impact employees.
Prerequisite: Admission to Administrative Professional 101066 program or instructor consent.

10106180 // 3 credits
Advanced Software Applications
This course integrates multiple advanced software applications by utilizing concepts such as importing/exporting, linking/embedding, and copying/pasting. Students manage information and apply critical-thinking skills to create professional documents simulating real-world projects.
Prerequisites: Microsoft Office-Introduction 10103106, Word-Intermediate 10103114, Excel-Intermediate 10103124, and Access-Intermediate 10103134.

31106301 // 2 credits
Medical Assistant Administrative Procedures
Introduces medical assistant students to office management and business administration in the medical office. Students learn to schedule appointments, perform filing, record keeping, telephone and reception duties, communicate effectively with patients and other medical office staff, and keep an inventory of supplies. Students apply introductory medical coding skills and managed care terminology.

31106307 // 2 credits
Medical Office, Insurance, and Finance
Introduces medical assistant students to health insurance and finance in the medical office. Students perform bookkeeping procedures, apply managed care guidelines, and complete insurance claim forms. Students use medical coding and managed care terminology to perform insurance-related duties.
Prerequisite: Admission to Medical Assistant 315091 program.

141 GLOBAL LANGUAGE & STUDIES

10141160 // 2 credits
Spanish for Service & Health Occupations
Develop Spanish speaking and listening skills through the study of vocabulary and grammar which are commonly used in occupational settings. Previous study of the Spanish language is helpful.

10141170 // 2 credits
Intermediate Spanish for Service & Health Occupations
Provides students with direct instruction in Spanish grammar and vocabulary; demonstrates to students the idiomatic differences between everyday English and everyday Spanish; enables students to practice speaking and reading in Spanish both in the classroom setting and on their own; and helps students raise their confidence level in using Spanish in the workplace and beyond.
Prerequisite: Spanish for Service & Health Occupations 10141160 or consent of instructor.

145 SMALL BUSINESS

10145100 // 3 credits
Small Business Operations
This course provides an overview of small business operations, with an emphasis on current issues and trends, through the exploration of potential for a particular business. Students compare buying versus starting a business; evaluate a franchise opportunity; and use the strategic planning process to develop a business plan composed of products or services, marketing, management, operating, legal, risk management, and financial plans.

10145185 // 3 credits
Organizing Your Small Business
Explores the components of small business ownership by examining a variety of small business startup and operation scenarios. Students will begin to assess their own readiness to begin the entrepreneurial adventure.

10145186 // 3 credits
Financial Management for Your Small Business
Emphasizes the importance of good record keeping systems, reports, and the records necessary for a small business. Financial analysis techniques are explored through hands-on Income Statements and Cash Flow projections for the small business. Financial and other technical support resources are identified throughout the course.

10145187 // 3 credits
Marketing Your Small Business
Enables prospective or existing business owners/managers to implement and evaluate a marketing plan for their small business. Students develop a marketing plan for a selected small business. Components of the plan include market research, customer focus, quality, pricing, and advertising.

10145188 // 3 credits
Entrepreneurial Service Management
Brings together the elements of a successful business with a strategic plan that focuses on servicing customers with a winning attitude, performance, teamwork, and competition.

10145189 // 3 credits
Writing a Business Plan for Your Small Business
Focuses on the business plan as a necessary component to starting and operating a small business. Students prepare a business plan to assist in obtaining financing for a proposed business and/or to guide their strategic business operations.

150 IT NETWORKING AND SECURITY

10150101 // 3 credits
Network Fundamentals
This CISCO Academy based course develops skill in PC hardware and software troubleshooting including installation of hardware components and problem determination and correction of malfunctioning hardware and software.
Corequisite: Windows Operating Systems 10103102 or Microsoft Office-Introduction 10103106.

10150110 // 3 credits
IT Troubleshooting-Beginning
This CISCO Academy based course provides an introduction to networking that includes terminology, basic concepts of planning, designing, implementing, troubleshooting, and administration. Topics included are peer-to-peer versus server-based networks, network topologies, media, interface cards, protocols, and architectures. An in-depth coverage of the OSI model is included.
Prerequisite: Network Fundamentals 10150101.

10150111 // 3 credits
IT Troubleshooting-Intermediate
This CISCO Academy based course expands upon basic network concepts covered in IT Troubleshooting-Beginning. Topics include planning a network upgrade, configuration and management of networking devices, addressing structure, routing, ISP services, and troubleshooting network problems.
Prerequisites: IT Troubleshooting-Beginning 10150110 and Network Fundamentals 10150101.

10150120 // 3 credits
Network Administration-Beginning
This course develops skill in the design, installation, administration, and management of computer networks. Topics include network design, installation and configuration of a commonly used Network Operating System, service packs and updated drivers, user accounts, groups, profiles and policies, file system security, printer management, application software installation, backup, and recovery.
Prerequisite: Network Fundamentals 10150101.

10150121 // 3 credits
Network Administration-Intermediate
This course expands upon the administration skills needed for successful management of a network operating system in a business environment. Topics include installation and configuration of a Network Operating System, monitoring and performance tuning, monitoring and analyzing network traffic, licensing, network devices, DNS, FTP, web services, and directory services.
Prerequisite: Network Administration-Beginning 10150120.

10150130 // 3 credits
Network Operating Systems
This course develops skill in the installation, setup, management, usage, and comparison of various network operating systems and network devices.
Prerequisite: Network Administration-Beginning 10150120.

10150141 // 2 credits
Supervised Field Experience
Integrates networking skill developed in classroom study with specific occupational experiences at local employment sites and develops work behavior appropriate to the computer information systems environment.
Prerequisite: Completion of at least 20 credits in occupational specific IT Network Specialist courses or approval by program instructor.

10150150 // 1 credit
Security Awareness
The course discusses concepts and principles of personal, organizational, and Internet security. Methods of information security attacks and who conducts them will be discussed. The protection of personal data, the legal requirements of the protection of organizational data, and the liability implications of each is discussed. Intellectual property theft and copyright infringement will be analyzed from a legal standpoint. Internet security will be reviewed by assessing the risks of web browsing and the vulnerabilities of e-mail. Best practices in access control through the use of sound password management policies and other basic security measures will also be introduced.

10150151 // 2 credits
Implementing PC Security
The course presents personal computer security awareness concepts, principles, and implementation procedures.
The value of securing personal and organizational data along with local, state, and federal legislation pertaining to privacy is discussed. Liability of individuals and institutions in maintaining data confidentiality and integrity is reviewed. The concepts of risk management, security policies, common threats, and threat countermeasures is introduced. Best practices in access control through password policies and other basic security measures is also introduced.
Prerequisite: Windows Operating Systems 10103102, Microsoft Office-Introduction 10103106, or consent of instructor.

10150160 // 3 credits
Information Security I
This course introduces students to computer network vulnerabilities and threats. Topics include network security terms and concepts, technology organization, and the legal and ethical issues associated with network security, techniques, and tools to harden operating systems against attacks, and basic configuration of network security devices.
Prerequisite: Network Fundamentals 10150101 and IT Troubleshooting-Beginning 10150110 or equivalent work experience and consent of instructor.

10150161 // 3 credits
Advanced Networking Projects
This course goes into greater depth with the concepts, techniques, and tools introduced in Information Security I. New tools and techniques for detecting, analyzing, assessing, and defending against network attacks is presented in the context of properly securing a network. The course emphasizes network attack and defense methodologies with lab work focused on learning and using network attack and defense techniques and tools. The role of network device configuration is explored.
Prerequisite: Information Security I 10150160.

10150165 // 3 credits
Network Server Scripting
Provides best practices and techniques in Linux and Windows shell and command line scripting.
Prerequisite: Network Administration-Beginning 10150120.

152 IT APPLICATION DEVELOPMENT & WEB

10152101 // 4 credits
Programming Logic-Beginning
This course introduces students to fundamental computer programming logic and terminology. Students utilize the concepts of structures, pseudocode, and modularization in solving problems. The students then uses these tools to program in a current programming language.
Corequisite: Windows Operating Systems 10103102 or Microsoft Office-Introduction 10103106.

10152102 // 4 credits
Programming Logic-Intermediate
Building on previous learning of structured programming, this class introduces more complex algorithms and data structures. Programs are written that involve concepts such as arrays, data validation, data manipulation, and beginning object oriented concepts.
Prerequisite: Programming Logic-Beginning 10152101.

10152105 // 3 credits
Database Management
This course uses hands-on exercises and projects to give students experience with using databases for data storage and retrieval. To encourage students to become more sophisticated database users, background information, general relational database design concepts, and a database security overview are included.
Prerequisite: Microsoft Office-Introduction 10103106 or Applied Microsoft Office for Health 10103107.

10152106 // 3 credits
Information Management Technology
Students develop a conceptual framework for how technology is used to manage information within an organization. Reliability, security, speed, and user-friendliness are emphasized. Students develop an actual outline for an information management system.

10152110 // 3 credits
COBOL-Beginning
Introduces the components of the COBOL language and gives hands-on experience in analyzing, coding, debugging, and executing batch programs. Structured programming techniques are used to write programs that create reports and files using calculations, data validation, headings, detail, and summary information.
Prerequisites: Programming Logic-Beginning 10152101 and Introduction to the iSeries 10152120.

10152111 // 3 credits
COBOL-Intermediate
This is a continuation of beginning COBOL programming, done in an iSeries environment. More sophisticated programs are written involving concepts such as control-break principles, tables, indexed sequential file organization, file maintenance, different file access modes, sorting, merging, and subprograms.
Prerequisite: COBOL-Beginning 10152110.

10152115 // 3 credits
RPG-Beginning
Introduces the components of the RPG language and gives hands on experience in analyzing, coding, debugging, and executing batch programs. Structured programming techniques are used to write programs that include the use of calculations, looping, control breaks, table and array processing, data validation, and indexed sequential file maintenance.
Prerequisites: Programming Logic-Beginning 10152101 and Introduction to the iSeries 10152120.

10152116 // 3 credits
RPG-Intermediate
This is a continuation of Beginning RPG. Topics covered include display files, logical files, subfiles, and printer files. A project will be designed, coded, and implemented in interactive RPG. Students are also exposed to embedded SQL.
Prerequisite: RPG-Beginning 10152115.

10152120 // 1 credit
Introduction to the iSeries
Introduces students to the iSeries midrange computer. Topics covered include creating and loading databases, compiling programs, the Source Entry Utility (SEU), and Program Development Manager (PDM).
Prerequisite: Programming Logic-Beginning 10152101.

10152150 // 3 credits
Web Programming
Using client-side technologies, students will create dynamic web sites. Tools may include elements of the following languages: HTML, CSS, JavaScript, and XML.
Prerequisite: Programming Logic-Intermediate 10152102.

10152155 // 3 credits
Web Data Management
Using server-side technologies the student will create and demonstrate data connectivity to the web. Tools may include elements of the following languages: HTML, JavaScript, SQL, and PHP. The students will retrieve data for display to the web browser and capture data for storage from a web-based form.
Prerequisite: 10152150 Web Programming.

10152156 // 2 credits
Relational Database Development
Provides training for students in the concepts of relational database design and development. Topics covered include relational normalization, referential integrity, proper use of indexing, staging design patterns, T-SQL coding, and stored procedures.
Prerequisite: Programming Logic-Intermediate 10152102.

10152160 // 3 credits
Introductory Mobile Application Development
Provides instruction in developing software applications for mobile devices using the Android operating system.
Prerequisite: 10152155 Web Data Management or consent of instructor.

10152161 // 4 credits
Intermediate Mobile Application Development
Provides instruction in developing software applications for mobile devices using the Android operating system.
Prerequisite: Introductory Mobile Application Development.

10152162 // 3 credits
Advanced Mobile Application Development
Provides instruction in developing software applications for mobile devices using the Android operating system.
Prerequisite: Intermediate Mobile Application Development 10152161.

10152163 // 3 credits
Introductory Android Development
The course provides training in introductory mobile device development for devices running the Android operating system. Topics include platform and SDK setup, Java overview, menu creation, responding to gestures, screen layout, error handling, debugging, image handling, text files, screen state, dialog views, list views, and XML files.
Prerequisite: Programming Logic-Intermediate 10152102.

10152164 // 3 credits
Introductory iOS Development
Course provides training in the following topics: Overview of Xcode and Cocoa Touch libraries and proper setup, Objective C training, View creation, List Views, Scroll Views, Image Views, auto layout, Storyboarding, multi-view navigation, core data, and core graphics.
Prerequisite: Programming Logic-Intermediate 10152102.

10152165 // 3 credits
Intermediate Android Development
Course provides training in advanced Java concepts including interfaces, anonymous methods, and recursive techniques; and training in gesture recognition, data persistence, navigation, and action bar customization.
Prerequisite: Introductory Android Development 10152163.

10152166 // 3 credits
Intermediate iOS Development
Course provides advanced coverage of Objective C topics including blocks, design patterns, delegates, and notifications; and training in gesture recognition, core data, navigation, and accelerometer basics.
Prerequisite: Introductory iOS Development 10152164.

10152170 // 3 credits
Systems Analysis
A practical course which provides an overview of the Systems Development Life Cycle and then focuses in on the analysis phase of real world computer and manual systems. Students learn concepts, techniques, and tools to aid in the analysis of existing systems, the identification of user requirements, and the design of database files. Both written and oral communications are emphasized. Most of the work is done in groups.
Prerequisite: Programming Logic-Beginning 10152101.

10152171 // 3 credits
Systems Design
Provides actual hands-on experience with designing a software project. Students work in teams to develop software design documents, and software specifications. Concepts stressed are prototyping, documentation, communication, teamwork, and project management. *Prerequisites: Systems Analysis 10152170 and Access-Beginning 10103133 or Microsoft Office-Introduction 10103106.*

10152172 // 3 credits
Systems Implementation
Discusses the importance of and need for Database Management Systems (DBMS). Students are introduced to the three major models: hierarchical, network, and relational. Students design and implement relational databases and learn SQL. *Prerequisite: Systems Design 1015217, RPG-Beginning 10152115, or COBOL-Beginning 10152110.*

154 IT COMPUTER SUPPORT

10154101 // 2 credits
IT Customer Support
Develops skill in serving the needs of computer information system customers and documenting systems and procedures.
Prerequisites: Systems Analysis 10152170 and Written Communication 10801195 or English Composition I 10801136 or consent of instructor.

196 SUPERVISION & LEADERSHIP DEVELOPMENT

10196114 // 1 credit
Time Management
Learners apply time management techniques to enhance their productivity. Learners discover how their time is used, identify time wasters, identify time management techniques to eliminate time wasters, and develop action plans to enhance productivity through effective time usage. *Prerequisite: Supervision 10196191.*

10196117 // 1 credit
Interpersonal Skills for Leadership
This course has specialized content to meet business and industry training needs.

10196134 // 3 credits
Legal Issues for Supervisors
The learner applies the skills and tools necessary for a supervisor to effectively function in today's legal work environment. Learners apply legal practices in union and nonunion environments, analyze the impact of U.S. employment laws on the global economy, use the appeal process to settle disputes, manage legal charges, document the hiring and firing process, manage harassment and privacy issues, and summarize the legal issues facing contemporary supervisors.

10196136 // 3 credits
Safety in the Workplace
The learner applies the skills and tools necessary to provide a safe and secure work environment. Learners practice safety awareness; comply with federal/state/local safety regulations; investigate and document safety incidents; conduct safety inspections; analyze risks; manage workplace violence, substance abuse, and health hazards; administer first aid and CPR; and prepare for emergencies.

10196140 // 3 credits
Supervisory Update
This course has specialized content to meet business and industry training needs.

10196164 // 3 credits
Personal Skills for Supervisor
The learner applies skills and tools necessary to enhance personal professional success through the use of time and stress management and assertive behavior. Learners use time management techniques, conduct personal planning, engage in life-long learning, value the rights of others, communicate effectively, display assertive behavior, and manage stress.

10196168 // 3 credits
Organizational Development
The learner develops skill to assist organizations to achieve greater effectiveness, including increased financial performance and improved quality of work life. Skills developed include collecting, analyzing, and diagnosing organization development data; developing plans to enhance human processes, organization structure, and employee involvement, work design, human resources, and organization environment; and leading and managing the implementation of these plans.

10196169 // 3 credits
Diversity & Change Management
The learner applies the skills and tools necessary to implement and maintain a diverse work environment. Learners assess the current extent of diversity in the workplace; analyze the effect of perceptions, attitudes, biases, and organization culture on diversity; remove barriers; apply change management strategy, process, and reactions; and measure progress and celebrate success.

10196177 // 4 credits
Core Manufacturing Skills
Provides instruction in the Manufacturing Skills Standards Council (MSSC) areas of safety, quality practices & measurement, manufacturing processes & production, and maintenance awareness.

10196178 // 2 credits
Core Manufacturing Skills I
Students build fundamental skills in the manufacturing areas of safety and quality.

10196179 // 2 credits
Core Manufacturing Skills II
Students build fundamental skills in the manufacturing areas of safety and quality.

10196180 // 3 credits
Applied Data Analysis
This course provides the student with the tools and skills to collect and analyze data allowing them to solve problems and improve processes. An emphasis is placed on the use of statistical techniques to create and implement a data collection plan. Statistical techniques emphasized are process mapping, failure mode and effects analysis, probability, confidence intervals, measurement systems analysis, and hypothesis testing. *Prerequisite: Introductory Statistics 10804189.*

10196188 // 3 credits
Project Management
The learner applies the skills and tools necessary to design, implement, and evaluate formal projects. Each learner will write a project proposal, work with project teams, sequence project tasks, develop project budgets, identify project resources, implement the project, chart project progress, deal with variations, evaluate the project, and use various technology in these processes.

10196189 // 3 credits
Team Building & Problem Solving
The learner applies the skills and tools necessary to facilitate problem solving in a team environment. Each learner will assume the roles and responsibilities of team leadership in the stages of team development, use a systematic problem solving process, and employ consensus building and conflict management strategies.

10196190 // 3 credits
Leadership Development
The learner applies the skills and tools necessary to fulfill his/her role as a modern leader. Each learner will evaluate personal leadership effectiveness, use individual and group motivation strategies, implement mission and goals, demonstrate ethical behavior, adapt personal leadership style to worker readiness, use power, facilitate employee development, coach, manage change, and resolve conflict.

10196191 // 3 credits
Supervision
The learner applies the skills and tools necessary to perform the functions of a contemporary frontline leader. Students engage in operational planning, analyze organizational structures, review the staffing process, employ techniques to enhance employee personal and group effectiveness, and develop control techniques to measure effectiveness in the above areas.

10196192 // 3 credits
Managing for Quality
The learner applies the skills and tools necessary to implement and maintain a continuous improvement environment. Each learner will demonstrate the application of a personal philosophy of quality, identify stakeholder relationships, identify ways to meet/exceed customer expectations, apply a systems-focused approach, use quality models and tools, manage a quality improvement project, and measure effectiveness of continuous improvement activities.

10196193 // 3 credits
Human Resource Management
The learner applies the skills and tools necessary to perform human resource functions in an organization. Each learner will demonstrate skill in following EEOC laws; writing job descriptions; recruiting, selecting, and orienting employees; developing policies and procedures; developing and conducting training; designing performance appraisal plans; developing employee development plans; and selecting compensation and benefit strategies.

307 EARLY CHILDHOOD EDUCATION

10307117 // 3 credits
ECE: Credit for Prior Learning
This three-credit course examines early childhood professional experience for the purpose of receiving credit for prior learning. Course competencies include: access needed support services on campus and online analyze professionalism in the early childhood field; identify core-abilities; identify what a competency is within a course; examine the courses and outcomes of the WTCS Early Childhood Education program; analyze performance assessment; compare professional experience with early childhood competencies; compile materials for performance assessment of course(s); and determine plan of action for program completion.
Prerequisite: Interested individuals should possess a minimum of 750 hours of occupational experience in Early Childhood Education prior to enrolling in this course.

10307144 // 3 credits
Behavioral & Emotional Challenges
This three-credit course prepares the student to build rapport with children and their families; create supportive learning environments; demonstrate positive social-emotional teaching strategies; define specific discipline and guidance strategies; assess challenging behaviors; describe specific diagnoses typically related to challenging behaviors; develop individualized, positive guidance plans; and communicate the need for positive, consistent, team approaches to including children with challenging behaviors in typical community settings.
Prerequisite: Children with Differing Abilities 10307187.

10307146 // 3 credits
Special Health Care Needs
This three-credit course prepares the student to: 1) Recognize the family as the experts about their own child/family member; 2) Describe the roles of other health care professionals involved with various conditions; 3) Describe the role of program staff involved with the conditions covered in this course; 4) Identify community resources and support people available to assist individuals with various conditions; 5) Discuss educational implications and adaptive strategies for successful inclusion of individuals who have various health care conditions; 6) Explore health promotion in children and adults with special health care needs; 7) Examine the care of individuals with altered body systems function, including sensory, gastrointestinal, bowel and bladder elimination, respiratory, cardiovascular/blood, musculoskeletal, neurological, skin/immune, and endocrine related; and 8) Discuss emergency management of various health conditions.

10307148 // 3 credits
Foundations of Early Childhood Education
This three-credit course introduces you to the early childhood profession. Course competencies include: integrate strategies that support diversity and anti-bias perspectives, investigate the history of early childhood education, examine regulatory requirements for early childhood education programs in WI, summarize types of early childhood education settings, identify the components of a quality early childhood education program, summarize responsibilities of early childhood education professionals, and explore early childhood curriculum models.

10307150 / 1 credit
Wisconsin Model Early Learning Standards
Enhances the student's ability to analyze the guiding principles and the five developmental domains related to the WI Early Learning Standards; apply the WMELS to various developmentally appropriate curriculum models, activities, and assessments; integrate the WI Early Learning Standards into the program's teaching cycle (ongoing assessment, planning and curriculum goals, and implementation); evaluate learning and assessment activities using the early learning standards for each individual child; and relate the WMELS to other standards and indicators.

10307151 // 3 credits
Infant & Toddler Development
In this three-credit course you will study infant and toddler development as it applies to an early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives, analyze development of infants and toddlers (conception to three years), correlate prenatal and postnatal conditions with development, summarize child development theories, analyze the role of heredity and the environment, examine culturally and developmentally appropriate environments for infants and toddlers, examine the role of brain development in early learning (conception through age three), and examine caregiving routines as curriculum.

10307152 // 3 credits
Capstone: Family & Team-Centered Practices
This three-credit, field based course requires the student to volunteer in an ECE program with a child who has special needs and to spend time with that child's family at home and in the community. Students have the opportunity to participate with a child and family in daily routines and community settings (e.g., church, childcare, grocery store, library, pool, medical settings). Students also complete the required Credential Portfolio and culminate in the Wisconsin Registry Commission process.
Prerequisites: Children with Differing Abilities 10307187, Behavior & Emotional Challenges 10307145, and Special Health Care Needs 10307146.

10307160 // 3 credits
Preschool Capstone
The capstone is the last course all students take prior to completing the Preschool Credential. The intent of this capstone course is to cover and revisit some important themes from the prior five courses. The student will synthesize the information and demonstrate mastery of the competencies through the completion of a portfolio.
Prerequisites: Foundations of Early Childhood Education 10307148; Child Development 10307179; Health, Safety, & Nutrition 10307167; Guiding Children's Behavior 10307188; and Art, Music, & Language Arts 10307178.

10307166 // 3 credits
Curriculum Planning
This three-credit course examines the components of curriculum planning in early childhood education. Course competencies include: integrate strategies that support diversity and anti-bias perspectives, examine the critical role of play as it relates to curriculum planning, establish a developmentally appropriate environment, integrate Developmentally Appropriate Practice (DAP) into curriculum, develop activity plans that promote child development and learning, develop curriculum plans that promote child development and learning across all content areas, and analyze early childhood curriculum models.
Prerequisite: Art, Music, & Language Arts 10307178 or Math, Science, & Social Studies 10307194.

10307167 // 3 credits
Health, Safety, & Nutrition
This three-credit course examines the topics of health, safety, and nutrition within the context of the early childhood educational setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; follow governmental regulations and professional standards as they apply to health, safety, and nutrition; provide a safe early childhood program; provide a healthy early childhood program; provide a nutritionally sound early childhood program; adhere to child abuse and neglect mandates; apply Sudden Infant Death Syndrome (SIDS) risk reduction strategies; apply strategies to prevent Shaken Baby Syndrome (SBS); and incorporate health, safety, and nutrition concepts into the children's curriculum.

10307174 // 3 credits
Practicum 1
In this three-credit practicum course you will learn about and apply the course competencies in an actual child care setting. The course competencies include: document children's behavior; explore the standards for quality early childhood education; explore strategies that support diversity and anti-bias perspectives; implement activities developed by the co-op teacher/instructor/student; demonstrate professional behaviors; practice caregiving routines as curriculum; practice positive interpersonal skills with children and adults; analyze how WI Early Learning Standards provide a framework of guiding principles, developmental expectations, and program and performance standards to delineate the five developmental domains that embody delivery of quality education and care to young children; incorporate WI Early Learning Standards with the principles of developmentally appropriate practice, intentionality, and the teaching cycle to examine child development; evaluate program integration of WI Early Learning Standards into the teaching cycle of ongoing assessment, planning and curriculum goals, and implementation; identify specific goals and learning and assessment activities to promote the development of a focus child utilizing the WI Early Learning Standards; and develop a plan for child learning utilizing the performance standards, developmental continuum, and developmental domains from the WI Model Early Learning Standards that is based on experiential learning.
Prerequisite: Admission to Early Childhood Education 103071 program. Students must meet the state administrative code requirements to be in an Early Childhood Education setting (including both prior coursework and Caregiver Background Check). The CBC will be processed by the Early Childhood Education program coordinator prior to the student being eligible to participate in the Practicum 1 field experience.

10307178 // 3 credits
Art, Music, & Language Arts
This three-credit course focuses on beginning level curriculum development in the specific content areas of art, music, and language arts. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; examine the critical role of play as it relates to art, music, and language arts; establish a developmentally appropriate environment for art, music, and language arts; develop activity plans that promote child development and learning; analyze caregiving routines as curriculum; create developmentally appropriate language, literature, and literacy activities; create developmentally appropriate art activities; and create developmentally appropriate music and movement activities.

10307179 // 3 credits
Child Development
This three-credit course examines child development within the context of the early childhood education setting. Course competencies include: analyze social, cultural, and economic influences on child development; summarize child development theories; analyze development of children age three through age eight; summarize the methods and designs of child development research; analyze the role of heredity and the environment; and examine the role of brain development in early learning (ages 3-8).

10307180 // 3 credits
Administration/Supervision in Early Childhood Programs: Roles & Responsibilities
An overview of roles and responsibilities of directors, coordinators, supervisors, and other administrators in early childhood programs.

10307182 // 3 credits
Operations Management in Early Childhood Programs
Includes discussion and practical applications related to scheduling, staffing, facilities management, equipment acquisition and maintenance, services delivery, record keeping, and communication.

10307183 // 3 credits
Financial Planning and Management in Early Childhood Programs
Review of principles and practices in budget planning and preparation and fiscal management, including hands-on experience with program applications.

10307184 // 3 credits
Early Childhood Programs and the External Environment
Review of external factors which affect the operation of early care and education programs including determination of community child care needs, marketing, laws and regulations, working with government and community agencies, and political and societal issues and trends.

10307185 // 3 credits
Best Practices for Children and Families in Early Childhood Programs
Establishing and maintaining quality programs based on professional standards and the best available information on child growth and development and family friendly environment/services. Includes a review of literature and research studies; licensing laws and regulations; criteria for staff credentials (CDA) and the accreditation of programs by the National Academy of Early Childhood Programs; and funding requirements and performance standards, such as those for Head Start.

10307186 // 3 credits
Administrative Seminar
This is the culminating experience in the credential course sequence. Major individual projects are required with a focus on the integration of program aspects in developing strategic planning for change.
Prerequisites: Administration/ Supervision in Early Childhood Programs: Roles and Responsibilities 10307180, Operations Management in Early Childhood Programs 10307182, Financial Planning and Management in Early Childhood Programs 10307183, Early Childhood Programs and the External Environment 10307184, and Best Practices for Children and Families in Early Childhood Programs 10307185.

10307187 // 3 credits
Children with Differing Abilities
This three-credit course focuses on the child with differing abilities in an early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; provide inclusive programs for young children; apply legal and ethical requirements including, but not limited to, ADA and IDEA; work collaboratively through the consultation process to embed intervention in natural based settings; differentiate between typical and exceptional development; analyze the differing abilities of children with physical, cognitive, health/medical, communication, and/ or behavioral/emotional disorders; work collaboratively with community and professional resources; utilize an individual educational plan (IEP/IFSP) for children with developmental differences; adapt curriculum to meet the needs of children with developmental differences; and cultivate partnerships with families who have children with developmental differences.

10307188 // 3 credits
Guiding Children's Behavior
This three-credit course examines positive strategies to guide children's behavior in the early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives, summarize early childhood guidance principles, analyze factors that affect the behavior of children, practice positive guidance strategies, develop guidance strategies to meet individual needs, and create a guidance philosophy. This course meets the requirements for the Pyramid Model training.
Prerequisite: Child Development 10307179 or consent of instructor or associate dean.

10307191 // 3 credits
Infant-Toddler Credential Course 1: Infants, Toddlers, and Caregivers
Introduction to the development, care, and education of children ages 0-3. Includes principles of care giving, developmentally appropriate practice, diversity issues, curriculum, guidance, observation, and assessment. Both typical and atypical development are examined.

10307192 // 3 credits
Practicum 2
In this three-credit practicum course you will learn about and apply the course competencies in an actual child care setting. The course competencies include: identify children's growth and development; maintain the standards for quality early childhood education; practice strategies that support diversity and anti-bias perspectives; implement student teacher-developed activity plans; identify the elements of a developmentally appropriate environment; implement positive guidance strategies; demonstrate professional behaviors; utilize caregiving routines as curriculum; utilize positive interpersonal skills with children; and utilize positive interpersonal skills with adults.
Prerequisites: Admission to Early Childhood Education 103071 program and Practicum 1 10307174.

10307193 // 3 credits
Infant-Toddler Credential Course 3: Programs, Families and Society
Course focuses on partnerships with parents and collaboration with the community. Covers parent education, involvement, and inclusion as well as such issues as public policy, advocacy, community resources, and professionalism.

10307194 // 3 credits
Math, Science, & Social Studies
This three-credit course focuses on beginning level curriculum development in the specific content areas of math, science, and social studies. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; examine the critical role of play as it relates to math, science, and social studies; establish a developmentally appropriate environment for math, science, and social studies; develop activity plans that promote child development and learning; create developmentally appropriate science activities; create developmentally appropriate math activities; and create developmentally appropriate social studies activities.
Prerequisite: Art, Music, & Language Arts 10307178 or Child Development 10307179.

10307195 // 3 credits
Family & Community Relationships
In this three-credit course you will examine the role of relationships with family and community in early childhood education. Course competencies include: implement strategies that support diversity and anti-bias perspectives when working with families and community; analyze contemporary family patterns, trends, and relationships; utilize effective communication strategies; establish ongoing relationships with families; advocate for children and families; and work collaboratively with community resources.

10307196 // 3 credits
Infant & Toddler Credential Course 2: Group Care
Caring for infants and toddlers in group settings, both center-based and family child care. Covers program quality, philosophy, structure, environments, health and safety, developmentally appropriate practice, and inclusion/ diversity issues.

10307197 // 3 credits
Practicum 3
In this three-credit practicum course you will learn about and apply the course competencies in an actual child care setting. Course competencies include: assess children's growth and development; implement the standards for quality early childhood education; integrate strategies that support diversity and anti-bias perspectives; build meaningful curriculum; provide a developmentally appropriate environment; facilitate positive guidance strategies; evaluate one's own professional behaviors and practices; lead caregiving routines as curriculum; utilize positive interpersonal skills with children; and utilize positive interpersonal skills with adults.
Prerequisites: Admission to Early Childhood Education 103071 program and Practicum 2 10307192. Students must meet the state administrative code requirements to be in an Early Childhood Education setting (including both prior coursework and Caregiver Background Check). The CBC will be processed by the Early Childhood Education program coordinator prior to the student being eligible to participate in the Practicum 3 field experience. See additional information outlined in the MSTC Student Catalog regarding Practicum requirements.

10307198 // 3 credits
Administering an Early Childhood Education Program
This three-credit course focuses on the administration of an early childhood education program. Course competencies include: integrate strategies that support diversity and anti-bias perspectives, analyze the components of an ECE facility, design an ECE program, analyze the aspects of personnel supervision, outline financial components of an ECE program, apply laws and regulations related to an ECE facility, and advocate for the early childhood profession.
Prerequisite: Completion of 12 Early Childhood (307) credits.

10307199 // 3 credits
Practicum 4
In this three-credit practicum course you will learn about and apply the course competencies in an actual child care setting. Course competencies include: analyze children's growth and development based on assessment; integrate strategies that support diversity and anti-bias perspectives; promote professional behaviors and practices; implement meaningful curriculum; create respectful, reciprocal relationships; evaluate early childhood education programs for quality; and explore professional options in early childhood education.
Prerequisite: Practicum 3 10307197.

404 AUTOMOBILE-MECHANICAL

32404307 // 5 credits
Suspension & Steering Systems
Highlighted in this course will be an analysis of construction and working principles of chassis components. Included is frames, suspension systems, steering gears and linkages, wheels and tires, and wheel alignment. Special attention is given to products used in servicing chassis components.
Prerequisite: Admission to Automotive Technician 324042 program.

32404308 // 5 credits
Braking Systems-Automotive
Fundamentals of vehicle braking systems including drum and disc on hydraulic and air systems are studied. Power and anti-skid systems are included with emphasis on troubleshooting and component replacement and reconditioning.
Prerequisite: Admission to Automotive Technician 324042 program.

32404311 // 5 credits
Electrical Systems-Auto
This is the study of construction, function, and principles of operation of starting motors, charging systems, and controls. Basic electronics including capacitance, inductance, series and parallel circuits, magnetism and Ohm's Law, wiring schematics, soldering techniques, and use of diagnostic equipment are covered. Vehicle control and accessory systems are studied.
Corequisite: Intro to Electronics 10605108.

32404312 // 5 credits
Advanced Electrical Systems-Auto
Theory, operational fundamentals, diagnosis, and repair of vehicle electronic/electrical systems including computer self-diagnosis, scanners, analyzers, sensors, actuators, and computerized ignitions are studied in this course. Also covered are diagnostic and repair procedures on major electrical-electronic emission control systems.
Corequisite: Electrical Systems-Auto 32404311.

32404320 // 1 credit
Hybrid Systems-Auto
This course includes a general overview of hybrid vehicle systems including motor, inverter, and CVT operation. Also included is an overview of hybrid safety requirements and demonstration of proper high voltage lockout procedures.
Corequisites: Automatic Transmissions 32404323, Advanced Electricity 32404312, and Fuel Control Systems-Auto 32404326.

32404322 // 3 credits
Heating/Air Conditioning
This course provides an introduction to vehicle air conditioning systems. System components, operating characteristics, component testing, diagnosis, and repair are covered in detail for popular system types. Coverage includes servicing of engine cooling systems as well as diagnosis and servicing of vehicle heating systems.
Prerequisite: Admission to Automotive Technician 324042 or Diesel & Heavy Equipment Technician 324121 programs.

32404323 // 5 credits
Automatic Transmissions
This course provides coverage of vehicle automatic transmission diagnosis and repair. Course emphasis includes gear systems, operating principles, component diagnosis, maintenance and adjustment, and servicing of transaxle system components.
Prerequisites: Electrical Systems-Auto 32404311 and Applied Fluid Power 32404330.

32404324 // 5 credits
Engine Repair
This course provides a general overview of engine types and operating characteristics. Course emphasis includes the diagnosis and repair of cylinder heads, valve train components, and engine blocks and related components. Engine support systems such as the lubrication systems, cooling system, ignition system, fuel, and exhaust systems are also covered.
Prerequisite: Admission to Automotive Technician 324042 program.

32404325 // 5 credits
Manual Transmissions
This course provides coverage of manual transmission problem diagnosis and repair. Study includes clutch, drive shaft, and universal joint diagnosis and servicing. Additional topics include rear axle servicing as well as four-wheel drive diagnosis and repair.
Corequisite: Automatic Transmissions 32404323.

32404326 // 5 credits
Fuel Control System-Auto
This course provides an introduction to vehicle ignition systems, fuel systems, air induction systems, emission control systems, and engine electrical systems. Course emphasis focuses on problem diagnosis, component testing, and repairs for domestic as well as import vehicles. A review of engine operation and related servicing are also provided.
Prerequisite: Admission to Automotive Technician 324042 program.

32404330 // 2 credits
Applied Fluid Power
Covers basic principles and application of pumps, compressors, motors, valves, seals, packing, and conductors. Students learn the advantage of hydraulic and pneumatic systems, as well as the physical properties of liquids and air. The intent is to identify various parts of a circuit and to illustrate standard liquid power components through laboratory experiments.
Prerequisite: Admission to Automotive Technician 324042, Diesel & Heavy Equipment Technician 324121, or Machine Tool Technician 324201 programs.

32404375 // 2 credits
Service Practices in Transportation Industry
This course introduces the student to common tools, terminology, and service practices in the transportation service field. Safety, environmental concerns, and basic customer relations are also covered. Service shop management practices and the use of automated work order, parts ordering, and time management concepts are included.
Prerequisite: Admission to Automotive Technician 324042 or Diesel & Heavy Equipment Technician 324121 programs.

32404376 // 1 credit
Advanced Drivability-Auto
This course provides students with hands-on practical experience in powertrain diagnosis. This course builds on basic skills and system theory gained in previous courses.
Prerequisite: Automatic Transmissions 32404323. Corequisites: Advanced Electricity 32404312 and Fuel Control Systems-Auto 32404326.

412 COMBUSTION ENGINES

32412303 // 3 credits
Heating / AC – Diesel
This course introduces students to the theory and operation of the heating and air conditioning systems found in the transportation, farm, and heavy equipment industries. Students learn how to inspect, diagnose, and repair heat and air conditioning systems found in their field. Students have the opportunity to acquire their state of Wisconsin HVAC certification through a written test and hands on evaluation. This class offers experience in installation, operation, and repair of auxiliary power units found on today's modern trucks. Not only will students learn about heating and air conditioning for operator comfort, they also have the opportunity to learn how to inspect, service, and repair refrigerated units found on today's semi trailers and shipping containers.
Prerequisite: Admission to Diesel & Heavy Equipment Technician 324121 program.

32412305 // 1 credit
Preventive Maintenance-Diesel
This course provides an introduction to vehicle preventive maintenance and inspection. The focus will be on maintaining and inspecting the engine system, cab and hood, electrical and electronics, and frame and chassis components. Students learn how to properly service vehicle systems and perform a visual inspection of all vehicle components. Students also learn how to properly document all maintenance and inspection findings.

32412308 // 5 credits
Braking Systems-Diesel
Fundamentals of vehicle braking systems including drum and disc on hydraulic and air systems are studied. Power and anti-skid systems are included with emphasis on troubleshooting and component replacement and reconditioning.
Prerequisite: Admission to Diesel & Heavy Equipment Technician 324121 program.

32412309 // 5 credits
Suspension & Steering Systems
Highlighted in this course will be an analysis of construction and working principles of chassis components. Included is frames, suspension systems, steering gears and linkages, wheels and tires, and wheel alignment. Special attention is given to products used in servicing chassis components.
Prerequisite: Admission to Diesel & Heavy Equipment Technician 324121 program.

32412310 // 5 credits
Engine Performance-Diesel
This course provides an introduction to ignition systems, fuel systems, air induction systems, exhaust systems, emission control systems, and engine electrical systems. Course emphasis includes the proper diagnosis and repair of system components as related to the truck, construction, and heavy equipment industry. A review of engine operation and related servicing are also provided.
Prerequisite: Admission to Diesel & Heavy Equipment Technician 324121 program.

32412311 // 5 credits
Advanced Electricity-Diesel
This course provides advanced training in the theory, operating principles, diagnosis, and repair of vehicle electronic/electrical systems. Emphasis includes vehicle ignition, starting, charging, and lighting system problem diagnosis and repair as related to the truck, construction, and heavy equipment industries.
Prerequisite: Admission to Diesel & Heavy Equipment Technician 324121 program.

32412312 // 5 credits
Drive Trains
The course provides training in the proper diagnosis and repair of clutches, manual transmissions, drive shafts and universal joints, and drive axles. Coverage of track-type vehicle service will also be included. Diagnostic and service procedures will apply to the truck, construction, and heavy equipment industries.
Prerequisite: Admission to Diesel & Heavy Equipment Technician 324121 program.

32412313 // 5 credits
Electrical Systems
This is the study of construction, function, and principles of operation of starting motors, charging systems, and controls. Basic electronics including capacitance, inductance, series and parallel circuits, magnetism and Ohm's Law, wiring schematics, soldering techniques, and use of diagnostic equipment are covered. Vehicle control and accessory systems are studied.
Prerequisite: Admission to Diesel & Heavy Equipment Technician 324121 program.

32412320 // 1 credit
Hybrid Systems-Diesel
This course covers basic vehicle propulsion systems within hybrid electric vehicle (HEV) context with a focus on application, integration, testing, and development of battery systems. Course topics include the following: vehicle and powertrain systems requirements, regulations, design, energy storage, model based design, and control. HEV high voltage sub-systems are reviewed including electrical drive systems, electric machines, batteries, and their safety aspects.

32412324 // 5 credits
Engine Repair
This course provides a general overview of engine types and operating characteristics. Course emphasis includes the diagnosis and repair of cylinder heads, valve train components, and engine blocks and related components. Engine support systems such as the lubrication systems, cooling system, ignition system, fuel, and exhaust systems are also covered.
Prerequisite: Admission to Diesel & Heavy Equipment Technician 324121 program.

32412327 // 5 credits
Fuel Systems & Emissions
This course provides a detailed coverage of the principles of operation, the components, and diagnostic procedures for modern diesel engines. Emission control systems is included. Course emphasis includes fuel injection and pump timing procedures.
Prerequisite: Admission to Diesel & Heavy Equipment Technician 324121 program.

420 MACHINE SHOP

32420301 // 4 credits
Intro to Machine Tool
Students learn the concepts, terms, and basic information relevant and common to all facets of machine tool technology. Emphasis is placed on safety and safe work habits while expanding the learners' knowledge of precision and non-precision measuring tools, limits, tolerance, and hand tools used in the machine shop. The learner is introduced to more common manual machine tools, lathe, drill press, and band saw, while completing projects and exercises.

32420302 // 4 credits
Machine Shop Manual Operations
Learners explore new concepts, terms, and operations of machine tools while reviewing and further developing skills from previous covered operations. Safety must be practiced continually. Safety and the development of safe work habits are emphasized. Learners' working skills on the individual machine tools through exercises and projects will be expanded. Classroom instruction focuses on non-precision and precision layouts, drill presses, drill press accessories, band saws, and cutoff saws.
Prerequisite: Intro to Machine Tool 32420301.

32420303 // 5 credits
Manual Lathe & Cutting Fluids
The learners' understanding of new concepts, terms and operations of machine tools is developed while reviewing and further developing skills from previous covered operations. Safety must be practiced continually. Safety and the development of safe work habits are emphasized. The learners' working skills on the individual machine tools through exercises and projects are expanded. Classroom instruction places emphasis on the parts and accessories of the engine lathe, the use and benefit of cutting fluids, and the different operations performed on the lathe. The operations covered in this nine-week period include: setting up and turning work between centers, facing, knurling, cutting tapers; setting up and using 3 jaw and 4 jaw chucks; and using a follow rest and a steady rest.
Prerequisite: Intro to Machine Tool 32420301.

32420304 // 5 credits
Threads & Mills
Learners are presented with new concepts; terms and operations of machine tools while reviewing and further developing skills from previous covered operations. Safety must be practiced continually. Safety and the development of safe work habits are emphasized. The learner's working skills on the individual machine tools through exercises and projects are expanded. Classroom instruction places emphasis on threads, thread terminology, thread measuring, thread cutting, and the vertical milling machine.
Prerequisite: Intro to Machine Tool 32420301.

32420305 // 4 credits
Advanced Lathes
Instruction gives the student further insight in lathe concepts. Safety will be reviewed and advanced cutting tool materials such as carbides, ceramics, cubic boron nitride (CBN), and polycrystalline diamonds (PCD) is covered. Tooling, speeds and feeds, cutting tool selection, and advanced machine practices such as multi-operations and process planning will be covered.
Prerequisite: Threads & Mills 32420304.

32420306 // 4 credits
Advanced Mills
Instruction gives the student greater insight in milling machine concepts. Major emphasis is placed on milling machine terminology, work holding methods, location principles, tooling, and cutting tool selection along with operations and process planning. Rotary tables and indexing methods such as direct, simple, and angular are also taught.
Prerequisite: Threads & Mills 32420304.

32420307 // 3 credits
Non-Traditional Machine Operations
Students explore a variety non-traditional machining operations. Students gain knowledge of the theory and operation of electrical discharge machining (EDM) and coordinate measuring machine. The focus of this course is on the cutting edge processes that are becoming the mainstream of modern machining.
Prerequisites: Advanced Lathes 32420305 and Advanced Mills 32420306.

32420308 // 3 credits
Basic Lathe Operation
This course is devoted to helping learners understand concepts, terms and operations of the basic manual lathe. Safety must be practiced continuously. This course will emphasis safety and the development of safe work habits. This course will expand and enhance the learner's working skills on the individual machine tools through exercises and projects. The classroom instruction emphasis is placed the manual lathe.
Prerequisite: Intro to Machine Tool 32420301.

32420309 // 2 credits
Basic Mill Operation
This course is devoted to helping learners understand concepts, terms and operations of the vertical milling machine. Safety must be practiced continuously. This course emphasizes safety and the development of safe work habits. This course will expand and enhance the learner's working skills on the individual machine tools through exercises and projects. The classroom instruction emphasis is on the vertical-milling machine.
Prerequisite: Intro to Machine Tool 32420301.

32420312 // 2 credits
Metals Science
Students are introduced to the field of metallurgy. Includes the following topics: sources of common metals including both ferrous and non-ferrous methods of ore extraction and refining and classification of these metals and the alloy systems. The heat treatment of various metals and properties of metals are studied including lab work on shear, compression, tensile strength, and corrosion.

32420320 // 2 credits
Math for Manufacturing
This course includes the study of machine tool problems involving calculations with fractions, decimals, and percentage. Includes work with the metric system, measurement conversion, geometry, trigonometry of right triangles, and use of a scientific calculator. Formulas with application to the trades are also studied.
Prerequisite: Admission into Machine Tool Technician 324201 or Welding 314421 programs or consent of instructor.

32420321 // 2 credits
Machine Tool Print Reading
Workers in the machine trades use engineering drawings as the basic communication tool between engineering and production. In this course the symbolic language of the engineering drawings is detailed. Topics covered include line types, pictorial views, orthographic projections, visualization techniques, dimensioning, tolerancing, assembly drawings, and various techniques drafts people use to create detailed drawings.
Prerequisite: Intro to Machine Tool 32420301.

32420322 // 2 credits
Geometric Dimensioning & Tolerancing
Provides fundamentals of Geometric Dimensions and Tolerancing per the ASME Y14.5 standard. The development of the technical knowledge and skills required for application and interpretation of GD&T is the focus of the course.
Prerequisite: Admission to Machine Tool 324201 program or consent of instructor.

32420346 // 3 credits
Related Machine Shop
Students are introduced to basic machine shop operations. Covers hand tools, semi-precision and precision measuring tools, layout work, sawing, grinding, drill press, and lathe operations. Laboratory assignments are completed to familiarize students with various types of equipment for practical application in their respective trades.

32420360 // 2 credits
Intro to CNC Machining
This course introduces learners to the world of CNC (Computer Numerical Controlled) machining. Students explore the general terminology associated with automated machine tools, accompanied by an introduction to programming and operations of CNC mills and lathes. This course gives learners a hands-on understanding of the importance of the use of CNC machinery in modern manufacturing.
Prerequisites: Basic Mill Operation 32420309 and Basic Lathe Operation 32420308.

32420362 // 2 credits
CNC Lathes/Manual Programming
NC/CNC terminology including introduction to computers, and components of NC/CNC lathes are covered. All programming is manual word address (G + M Code) basics. Basic CNC lathe operation is included.
Corequisite: Advanced Lathes 32420305.

32420364 // 2 credits
CNC Mills/Manual Programming
NC/CNC terminology including introduction to computers and components of NC/CNC mills are covered. All programming is manual word address (G + M code) basics. Basic CNC mill operation is included.
Prerequisite: Mechanical Drafting Concepts 10623104. Corequisite: Advanced Lathes 32420305.

32420366 // 3 credits
CNC Controls
This course provides students with the skills needed to navigate common CNC machine control panels. Students learn common methods to set tool offsets, work offsets, and common part set up practices. Focus of this course is on accuracy, repeatability, and efficiency in the operations of CNC machine tools.
Prerequisites: CNC Lathes/Manual Programming 32420362 and CNC Mills/ Manual Programming 32420364.

32420368 // 3 credits
CAD/CAM
This course introduces students to Computer-Aided Drafting/Design (CAD) and computer-Aided Machining/ Manufacturing (CAM). This course consists of demonstrations and hands-on use of CAD/CAM software and hardware. Major emphasis is placed on geometry creation and editing functions, process planning, proper cutter selection, feed and speed selection, and tool path generation along with post processing to specific CNC machines. Some basic machine set-up and operation are included to verify program operation. Students should have knowledge of drafting/ design, machining processes and procedures, and computer operating systems (MS Windows).
Prerequisites: CNC Lathes/Manual Programming 32420362 and CNC Mills/ Manual Programming 32420364.

32420370 // 3 credits
Abrasives & Precision Grinding
Students learn abrasive machining technology including super abrasives. Precision surface grinding, cylindrical grinding and tool, and cutter grinding are covered. Advanced grinding operations such as radius dressing and special shapes and techniques are also taught.
Prerequisites: Advanced Mills 32420306 and Mechanical Drafting Concepts 10606142.

421 MECHANICAL DRAFTING

31421388 // 2 credits
Blueprint Reading-Welding
Introduces the use and reading of a blueprint, includes interpretation from orthographic projection; reviews the meaning of lines, dimensions, notes, and symbols; and covers the use of special views and assembly drawing and stresses actual blueprint reading.

442 RELATED WELDING

10442100 // 1 credit
Intro to Welding
Students gain knowledge of general welding shop procedures and safety, arc welding principles and equipment setup, and metal fabrication equipment use. Students work with a lab instructor to begin developing skills with the GMAW and GTAW welding processes by completing simple welding and fabricating tasks in preparation for further exploration in welding and fabricating.

10442101 // 2 credits
Basic GTAW (TIG)
This course is an introduction to the gas tungsten arc welding (GTAW) process commonly known as TIG. The necessary safety and care of equipment and supplies are learned. The student develops skills with the common production welding joints and materials.
Prerequisite: Intro to Welding 10442100.

10442102 // 2 credits
Intermediate GTAW (TIG)
In this course, students weld in the horizontal and vertical positions on stainless steel and aluminum. Pulsed current is applied to stainless steel weldments. Complete penetration groove welds in stainless steel is practiced and evaluated.
Corequisite: Basic GTAW (TIG) 10442101.

10442103 // 2 credits
Advanced GTAW (TIG)
This course involves complete penetration stainless steel pipe welds in the 5G and 6G positions.
Corequisite: Intermediate GTAW (TIG) 10442102.

10442110 // 3 credits
Gas Metal Arc Welding (GMAW)
In this course you develop skills of welding on steel sheet metals and plates using the GMAW process. Emphasis is placed on axial spray, pulse spray, and short circuit mode of transfer. Upon completion of this course, the student is able to weld in several positions, read basic weld symbols, and have an understanding of written welding procedures.
Corequisite: Intro to Welding 10442100.

10442111 // 3 credits
Intermediate GMAW/FCAW
In this course students build their skills with the GMAW process and perform welds on stainless steel and aluminum sheet metal and plate. The student will be able to differentiate, select proper electrodes, shielding gases, and properly adjust parameters. Emphasis is placed on axial spray, pulse spray, and short circuit mode of transfer depending on base metal. Students will also learn about and practice the FCAW process including types of electrodes, fluxes, and shielding gases used in these processes. Upon completion of this course, the student is able to weld in several positions, read some basic weld symbols, and have a basic understanding of written welding procedures.
Prerequisite: Intro to Welding 10442100.

10442115 // 2 credits
Welding Fabrication Techniques
In this course, students fabricate parts from prints and weld assemblies with a specified welding process. Cutting and forming may be required prior to assembly. Depending on the size and complexity of the project, students may be asked to work in a team to complete an assignment.
Prerequisites: Admission to Welding 314421 program and Intermediate GTAW (TIG) 10442102.

10442130 // 2 credits
Shielded Metal Arc Welding (SMAW)
This course begins to build the knowledge and skills of the SMAW process commonly known as stick welding. Upon completion of this course, the student is able to weld in several positions, read some basic weld symbols, and have a basic understanding of written welding procedures.
Corequisite: Intro to Welding 10442100.

10442131 // 2 credits
Intermediate SMAW (Stick)
This course is a continuation of Basic SMAW. Emphasis is placed on welding positions, technique, and understanding the AWS D1.1 welding code. Upon completion of this course, the student is able to weld in all positions without a backing plate on both V-Groove plate and pipe.
Corequisite: Basic GTAW (TIG) 10442101.

10442132 // 2 credits
Metal Cutting Welding
This course covers oxy-fuel cutting, plasma arc cutting, air-carbon arc cutting, mechanical cutting, and non-traditional cutting. Individual parts are produced using automatic and manual equipment. Both shop and field applications are practiced. The parts may be joined, by welding, to complete an assembly. Students may work in a team environment to complete assignments. This course is available to Welding program students only.
Corequisite: Intro to Welding 10442100.

10442163 // 1 credit
Weld Inspections and Testing
This course emphasizes measurement of weld defects and assessment of weld quality conformance to common welding codes. Students conduct etch tests, bend tests, and break tests on welds. Visual Inspection, dye penetrant testing, and magnetic particle testing are practiced.
Prerequisite: Intro to Welding 10442100.

480 RENEWABLE ENERGY-FOUNDATIONS

10480100 // 2 credits
Alternative Energy Overview
In this course, students investigate the need for renewable energy systems and emerging careers in renewable energy. Students examine the basic design, function, cost, and other considerations associated with various "green" energy systems, including solar photovoltaic, solar thermal, wind, geothermal, and biomass. Students also explore the production and use of alternative transportation fuels.

10480101 // 4 credits
Intro to Renewable Energy Systems
In this course, students investigate the need for renewable energy systems and emerging careers in renewable energy. Students examine the basic design, function, cost, and other considerations associated with solar photovoltaic, solar thermal, wind, geothermal, and biomass renewable energy systems. Students will also explore energy efficiency and conservation methods.

10480150 // 1 credit
Renewable Energy Academy
Students will participate in a series of workshops designed to expose them to the various renewable energy technologies and energy efficiency techniques. A field trip to the MREA Energy Fair is included.

10480190 // 2 credits
Renewable Energy Internship
Student internships provide an opportunity for career success through supervised on-the-job learning experiences. Through an internship, students apply subject knowledge learned in the program to the workplace under the direction of an experienced technician.
Prerequisite: Completion of 50% of program credits.

10480195 // 2 credits
Renewable Energy/Energy Conservation - Special Topics
Selected hands-on project in renewable energy/energy conservation requiring students to apply subject knowledge learned in the program.
Prerequisite: Completion of 50% of program credits.

481 ENERGY CONSERVATION

10481100 // 2 credits
Intro to Energy Efficiency & Management
Students in this course are introduced to the principles of energy management and the energy efficiency industry. Students learn about the history of energy production and costs, the dynamics of worldwide energy consumption and growth including environmental and financial impacts and consequences. Building energy flows will be described and analyzed. Students are introduced to the use of building diagnostic tools commonly employed in the industry to identify opportunities for improving energy efficiency. Building design features will be examined for efficiency/management improvements or upgrades.
Prerequisite: Admission to Solar Electric Technician 104822, Renewable Energy Specialist 104823, or Sustainable Heating & Cooling Technician 104831 programs.

10481109 // 2 credits
Building Envelope Analysis I
Students learn the tools and techniques used in the analysis of building shell integrity, with the first module to focus on blower door testing to quantify building envelope air leakage and infiltration rates. These concepts and skills are taught through extensive lab-hours working directly with the tools of the trade.
Corequisites: Intro to Energy Efficiency & Management 10481100, Construction Fundamentals 10482107, and College Mathematics 10804107.

10481110 // 3 credits
Building Science, Performance, & Evaluation
Students learn the tools and techniques use in the analysis of building shell integrity, focused on how to use an infrared camera to detect insulation, air, and water problems in a building, complemented by blower door testing. These concepts and skills are taught through extensive lab hours working directly with the tools of the trade. Students also investigate building ductwork leakage, building envelope tightness, and combustion efficiency.
Prerequisite: Construction Fundamentals 10482107.

10481111 // 2 credits
Building Envelope Analysis III
Students learn the tools and techniques used in the analysis of building shell integrity, with a focus upon combustion safety testing, gas leakage testing, complemented again by the use of the thermal imaging camera. These concepts and skills are taught through extensive lab-hours working directly with the tools of the trade over the program schedule. Students develop skills doing assessments related to thermal and moisture problems in buildings in order to maintain healthy indoor air quality. Course includes air flow, metrics and standards for building 'tightness' (BPI), equipment tolerances for combustion safety and testing procedure, and implications on occupant health and safety.
Prerequisite: Building Envelope Analysis II 10481110.

10481130 // 4 credits
Building Energy Modeling
The course covers a variety of computer programs available for analyzing buildings. Topics include BIN methodology, hourly simulations, utility rate analysis, cost estimating, analysis of energy efficiency measures, environmental and pollutant analysis, and financing options. Students perform supervised computer simulations, using software packages such as eQuest, REM Rate, Energy Gauge, and Optimizer. Students utilize software tools to prioritize potential energy efficiency measures based on both cost effectiveness and environmental impact.
Corequisite: Building Envelope Analysis III 10481111.

10481140 // 2 credits
Energy Use & Investment Analysis
This course provides an overview of energy, process, and building systems common to commercial facilities with an emphasis on improving energy efficiency and cost savings. Topics include day-lighting, lighting systems and controls, compressed air systems, heat recovery, chillers/cooling towers, hydronic pumping systems, geothermal systems, motors, commercial HVAC systems and controls, indoor air quality, boilers and steam systems, and commercial energy audits.

10481150 // 3 credits
Energy Analysis Capstone
The student will perform critical examinations of energy consuming facilities, including residential and/or light commercial, for the purpose of identifying energy efficiency opportunities. In addition, the student will identify various energy efficiency measures, including equipment that can be installed to further reduce energy consumption. Energy audits performed at various locations. The student will create a final energy audit report and energy management plan, and present the plan to both the class and to the energy management team or owner of the facility.
Prerequisite: Building Energy Modeling 10481130.

482 RENEWABLE ENERGY-ELECTRICITY

10482100 //2 credits
Intro to Renewable Electricity
Students in this course learn the basics of renewable electricity generation with particular emphasis on wind and solar energy. Topics include wind and solar resources, basic system components, system types, and applications.
Prerequisite: Admission to Solar Electric Technician 104822, Renewable Energy Specialist 104823, or Sustainable Heating & Cooling Technician 104831 programs.

10482101 // 3 credits
Solar Site Assessment & Evaluation
Students learn the steps to perform solar electric and solar water heating site assessments of a home or business. Class content covers solar window determination, load analysis, site selection, system types, system sizing and efficiency measures, and energy output estimation. The course also covers an overview of existing renewable electric incentive programs.
Prerequisite: Intro to Renewable Energy Systems 10480101.

10482102 // 2 credits
Wind Site Assessor Training
Students learn the steps to perform wind site assessments of a home or business. Class content covers measuring wind energy potential, load analysis, site selection, system types, system sizing and efficiency measures, and energy output estimation. The course also covers an overview of existing renewable electric incentive programs and permitting procedures.
Prerequisite: Intro to Renewable Electricity 10482100

10482105 // 3 credits
Intermediate Electrical Theory & Applications
Provides students with the information and knowledge necessary to accurately diagnose and solve electrical system faults. Main topics include safety and hazard awareness, electrical fundamentals, circuits and components, motors, wiring diagrams, common electrical service configurations, and troubleshooting.
Prerequisite: Intro to Electronics 10605108.

10482107 // 2 credits
Construction Fundamentals
Students study the concepts associated with the theory, materials, and methods used in construction to include footings and foundations, walls, floors, roofs and roof materials, exterior finishes, interior walls, ceiling and floor finishes, insulation types, vapor and air infiltration, and sound protection. Additionally, students will become familiar with blueprint reading and examine all the trades associated with construction, including electrical, HVAC, and plumbing. The safe use of the appropriate tools for each trade is also covered.

10482110 // 3 credits
Photovoltaic System Design & Installation 1
Students learn the details involved in the mechanical and electrical integration of a PV system. Topics include system components, product specifications, product integration, racking system design capabilities and limits, system diagramming, configurations, safety, common design mistakes and solutions, and installation techniques. This course will involve students in the installation of a photovoltaic system.
Prerequisite: Intro to Renewable Energy Systems 10480101.

10482111 // 3 credits
Photovoltaic System Design & Installation 2
This course is a continuation of Photovoltaic System Design and Installation 1 and includes an in-depth focus of the electrical integration of a PV system. Topics include system design capabilities and limits, system diagramming, wiring configurations, safety, National Electrical Code, common design mistakes and solutions, wiring techniques, and installation techniques. System maintenance principles and commissioning are covered.
Prerequisite: Photovoltaic System Design & Installation I 10482110.

10482115 // 2 credits
Grid-Tied Renewable Electric Systems
This course covers Wisconsin's utility interconnect standard, net metering policies, and how they relate to photovoltaic and wind installations. This course provides an overview of electrical power distribution and transmission networks along with metering techniques. Class consists of both bench-top and field maintenance grid-tied renewable electric systems.
Prerequisite: Photovoltaic System Installation II 10482111. Corequisite: Intro to Electronics 10605108.

10482116 // 2 credits
Stand-Alone Renewable Electric Systems
This course will cover stand-alone systems for both wind and PV renewable electric systems. Topics include battery types and their specific uses, battery bank sizing and configuration, along with safety, maintenance, and components related to stand-alone systems.
Prerequisite: Photovoltaic System Design & Installation 1 10482110.

10482120 // 3 credits
Wind Energy System Design and Installation
Students learn the steps to perform wind site assessments of a home or business. Class content covers measuring wind energy potential, site selection, system types, and energy output estimation. This course involves students in the installation of a tilt-up tower. Topics include proper use of tools and rigging systems, system design, layout, and turbine performance as well as electrical integration of a wind system, wiring, and installation techniques.
Prerequisite: Intro to Renewable Energy Systems 10480101.

10482121 // 2 credits
Wind Systems Installation II
This course is a continuation of Wind System Installation I and involves students in the electrical integration of a wind system. Topics include: National Electrical Code, component selection, wiring techniques, installation techniques, and troubleshooting techniques including both bench-top and field maintenance of wind turbines.
Prerequisite: Wind Systems Installation I 10482120 and Electrical Machines 10605127.

10482140 // 2 credits
Planning, Design, & Project Management I
Students in this capstone course design an integrated portfolio of energy systems, incorporating renewable energy options into a conventional system. Each learner will write a project proposal, work with project teams, sequence project tasks, develop project budgets, and identify project resources.
Prerequisite: Solar Heating System Design & Installation I 10483110.

10482141 // 2 credits
RE-Planning, Design, & Project Management II
This class is a continuation of Renewable Energy – Planning, Design, & Project Management I. Students create a capstone project that incorporates traditional and renewable energy systems with an overall goal of peak energy efficiency.
Prerequisite: Planning, Design, & Project Management I 10482140.

10482150 // 2 credits
Advanced Renewable Electric Systems
This course explores advanced renewable electric system designs including hybrid renewable electric systems, bimodal renewable electric systems, and micro hydro systems along with integration and interaction of multiple system types. Students complete a capstone project during the course.
Prerequisite: Successful completion of 12 credits of Renewable Electric (10482) coursework.

483 RENEWABLE ENERGY-THERMAL

10483100 // 3 credits
Intro to Renewable Thermal Systems
This course provides an overview of a variety of renewable/alternative water and space heating systems including solar, geothermal, and biomass. This overview includes an introduction to system design, installation, and operation.
Prerequisite: Admission to Renewable Energy Specialist 104823, Solar Electric Technician 104822, or Sustainable Heating & Cooling Technician 104831 programs.

10483101 // 2 credits
Solar Water Heating Site Assessor Training
Students learn how to assess a facility for its potential for a solar hot water system. Students learn how to define a site's solar window, interpret solar radiation and temperature data, size a system, identify mounting and engineering considerations relevant to the installation; identify & recommend steps for energy efficiency; perform a load analysis; describe & identify components of a solar water heating system; perform a general cost estimate for a solar water heating installation; list installers and equipment vendors; and provide information on financial programs in Wisconsin.
Corequisite: Intro to Renewable Thermal Systems 10483100.

10483110 // 3 credits
Solar Heating System Design & Installation 1
This course involves students in the installation and design of a solar hot water system. Topics include safety, system design and layout, component selection, mounting collectors, plumbing and insulating copper pipe, and installing a storage tank, heat exchanger, circulation pump, and other system components.
Prerequisite: Intro to Renewable Energy Systems 10480101.

10483111 // 3 credits
Solar Heating System Design & Evaluation 2
This course is a continuation of Solar Water Heating System Installation I and will focus on system integration and advanced installations. It also addresses solar space heating, solar pool heating, and solar cooling systems.
Prerequisite: Solar Heating System Design & Evaluation I 10483110.

10483112 // 2 credits
Solar Water Heating System Installation III
This course is a continuation of Solar Water Heating System Installation II and will involve students as the lead installer in a solar water heating system installation.
Prerequisite: Solar Water Heating System Installation II 10483111.

10483115 // 3 credits
Heat Load Estimation & Modeling
This course teaches the student how to use "Manual J" from ACCA. The student will develop the skills to do residential heating and cooling heat loads. Students will calculate heat loss and also losses or gains due to infiltration, sun loads, etc. The student will do calculations on actual buildings using ACCA industry standard form J-1. The student will also estimate energy upgrades such as insulation and window improvements; and calculate payback and fuel savings.
Prerequisite: College Mathematics 10804107. Corequisite: Excel-Intermediate 10103124.

10483120 // 2 credits
Heating & Plumbing Fundamentals
Heating system topics include introduction to heat principles, temperature measurement, fuels and other sources of heat, combustion, basic heating systems, basic furnace design, gas furnace design and operation, venting of furnaces, chimney or exhaust gases, and system controls. Plumbing system topics include fluid dynamics (pressure, resistance, and flow), basic system design, water heating, and operation of standard plumbing fixtures.
Prerequisite: Admission to Renewable Energy Specialist 104823, Solar Electric Technician 104822, or Sustainable Heating & Cooling Technician 104831 programs.

10483121 // 2 credits
Piping Fundamentals
This course presents the theory of basic methods of plumbing and piping installation practices. Laboratory activities provide students with basic pipe joining processes associated with the plumbing field.
Prerequisite: Intro to Renewable Thermal Systems 10483100.

10483122 // 2 credits
Ventilation, Cooling, and Refrigeration Fundamentals
Topics covered include air conditioning principles and terms, physical principles of air movement, air filtering and humidity, and methods of conditioning air for comfort and health. In addition, the proper use of psychrometers, dry bulb thermometers, hygrometers, and the reading and interpretation of psychrometric charts and scales are covered, along with ASHRAE and BPI ventilation standards for residential units. Descriptions of new products, and maintenance and operations for residential and commercial cooling systems are also covered, emphasizing energy conservation and efficiency options for new and existing equipment.

10483130 // 3 credits
HVACR Circuits & Controls
Topics in this course include an introduction to AC/DC electricity and the physical laws that apply to electronic circuits. Direct Current (DC) covers basic definitions of voltage, current, and resistance and analysis of series and parallel resistive circuits. Alternating Current (AC) includes an introduction to AC generation, capacitors, inductors, and transformers and their applications in electronic circuits. Additional topics include control circuits, symbols, diagrams, protection devices, relays, thermostats, single-phase motors, control components, and troubleshooting ACR system wiring diagrams.
Prerequisite: Electrical Circuits I 10605105 or Intro to Electronics 10605108.

10483131 // 3 credits
HVACR Installation & Service
This course addresses residential and light commercial heating, cooling, and refrigeration systems. Emphasis is placed on the diversity of heating and cooling systems and how they operate. Students will participate in the installation of a variety of HVACR systems and will troubleshoot and service systems.
Prerequisite: Intro to Electronics 10605108.

10483151 // 3 credits
Geothermal Systems
This course provides an overview of geothermal water and space heating/cooling systems. This overview includes an introduction to system design, installation, and operation.
Prerequisites: Intro to Renewable Thermal Systems 10483100, Ventilation & Cooling Systems 10483122, and College Mathematics 10804107.

10483161 // 2 credits
Advanced Renewable Thermal Systems
This course explores advanced designs of renewable thermal systems including geothermal, wood gasification boilers, hydronic cooling, and integrated systems. This course also includes a project based learning experience. Students complete a capstone project of their choosing.
Prerequisite: Successful completion of 12 credits of Sustainable Heating & Cooling (483) coursework.

484 BIO-FUELS/BIO-MASS

10484110 // 2 credits
Bioenergy Production I
This course provides training on fuel/energy production techniques relating to feed stock preparation, process chemicals and procedures, fuel quality improvements, fuel storage and transportation, fuel use and engine performance, safety, and waste handling.
Prerequisite: Intro to Process Technology 10484117.

10484111 // 2 credits
Bioenergy Production II
This course builds on Bioenergy Production I to provide training on fuel/energy production techniques relating to feed stock preparation, process chemicals and procedures, fuel quality improvements, fuel storage and transportation, fuel use and engine performance, safety, and waste handling.
Prerequisite: Bioenergy Production I 10484110.

10484112 // 2 credits
Bioenergy Production III
This course builds on Bioenergy Production II to provide advanced training in fuel/energy production techniques relating to feed stock preparation, process chemicals and procedures, fuel quality improvements, fuel storage and transportation, fuel use and engine performance, safety, and waste handling.
Prerequisite: Bioenergy Production II 10484111.

10484117 // 2 credits
Intro to Process Technology
This course provides basic orientation for operators in the biorefining industry. The course introduces terms that are encountered in the workplace. Topics include operator roles, responsibilities, and basic plant equipment. Simulation labs on process control and product testing will be included.
Prerequisite: Admission to Process & Biorefinery Technology 104841 program.

10484190 // 3 credits
Biorefinery Process Control
This capstone course examines process control systems and software common to the biorefining industry. Troubleshooting of processes are emphasized.
Prerequisite: Fourth semester Process & Biorefinery Technology program student.

501 MEDICAL TERMINOLOGY

10501101 // 3 credits
Medical Terminology
Students focus on the component parts of medical terms: prefixes, suffixes, and word roots. Students practice formation, analysis, and reconstruction of terms. Emphasis on spelling, definition, and pronunciation. Introduction to operative, diagnostic, therapeutic, and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

10501108 // 2 credits
Pharmacology for Allied Health
Introduces students to classifying medications into correct drug categories and applying basic pharmacology principles. Students apply basic pharmacodynamics to identifying common medications, medication preparation, and administration of medications used by the major body systems.

10501109 // 2 credits
Medical Law, Ethics, and Professionalism
Prepares students to display professionalism and perform within ethical boundaries in the health care setting. Students maintain confidentiality, examine legal aspects of the medical record, perform risk management procedures, and examine legal and bioethical issues.

10501110 // 2 credits
Healthcare Communication Strategies
Develop communication skills used in a variety of settings with diverse populations. Students understand and practice skills to enhance communication as service providers and team members. Develop ability to understand and empathize given new approaches to patient care and evolving technology.

10501123 // 1 credit
Student Success in Allied Health
Learners explore success strategies for allied health programs including time management, study skills, test preparation and test taking skills, planning, and stress management.
Prerequisite: Admission to Central Service 305341 or Surgical Technologist 315121 programs.

10501142 // 1 credit
Health Careers Exploration Seminar
The learner develops a basic understanding of the current health care delivery system, and careers in the career clusters of patient care, diagnostic services, therapeutic services, and health information services. The student will observe selected health professionals in their work setting.

502 BARBERING/ COSMETOLOGY

30502701 // 4 credits
Haircutting for Barbers
This course introduces haircutting theory and terminology and provides students with practice in basic and advanced haircutting techniques as well as trend cuts.
Prerequisite: Admission to Barber Technologist 305025 program.

30502702 // 2 credits
Facial Hair & Skin Care Services for Barbers
This course includes how to apply facial physiology and skin analysis in facial hair design, hair removal, facial massage, and facial treatment.
Prerequisite: Admission to Barber Technologist 305025 program.

30502703 // 2 credits
Introduction to the Barber Profession
This course provides an overview of the barbering profession, safety and decontamination in the barbershop, properties and disorders of the skin and scalp, and related science theory.
Prerequisite: Admission to Barber Technologist 305025 program.

30502704 // 2 credits
Haircoloring for Barbers
This course includes the theory and chemistry of color mixing as well as procedures including lightening, cap, foiling, and corrective color.
Prerequisite: Admission to Barber Technologist 305025 program.

30502705 // 2 credits
Chemical Texturing for Barbers
This course provides an overview of permanent waving, including various wrap techniques, hair relaxing applications, reformation curls, and chemical blow-out services.
Prerequisite: Admission to Barber Technologist 305025 program.

30502706 // 2 credits
Hairstyling for Barbers
This course emphasizes wet and dry hairstyling and includes hair analysis, shampooing, conditioning, reconditioning, scalp and hair treatments, blow drying, fingerwaves, pincurls, roller setting, thermal styling, and hair replacement techniques.
Prerequisite: Admission to Barber Technologist 305025 program.

30502722 // 1credit
Business Management for Barbers
This course includes business and management principles for barbers, barbering rules and regulations, and career strategies.
Prerequisite: Admission to Barber Technologist 305025 program.

30502730 // 2 credits
Barber Client Services 1
This course introduces client services performed by the barber. Emphasis is on hair and scalp analysis, shampooing, haircutting techniques, shaving, and chemical services. Students apply knowledge and skills to provide all barber services on customers in the on-campus salon.
Prerequisites: Haircutting for Barbers 30502701, Facial Hair & Skin Care Services for Barbers 30502702, and Introduction to the Barber Profession 30502703. Corequisites: Haircoloring for Barbers 30502704, Chemical Texturing for Barbers 30502705, and Hairstyling for Barbers 30502706.

30502731 // 2 credits
Barber Client Services 2
Students explore client services performed by the barber. Emphasis is on hair and scalp analysis, shampooing, haircutting techniques, shaving, facial services, and chemical services. Students apply knowledge and skills to provide all barber services on customers in the on-campus salon.
Prerequisite: Barber Client Services 1 30502730.

30502732 // 2 credits
Barber Client Services 3
Students practice building speed and accuracy in client services performed by the barber. Emphasis is on haircutting techniques, shaving, facial services, and chemical services. Students apply knowledge and skills to provide all barber services on customers in the on-campus salon.
Corequisite: Barber Client Services 2 30502731.

30502733 // 2 credits
Barber Client Services 4
Students practice building speed and accuracy in client services performed by the barber. Emphasis is on haircutting techniques, shaving, facial services, and chemical services. Students apply knowledge and skills to provide all barber services on customers in the on-campus salon.
Corequisite: Barber Client Services 3 30502732.

30502734 // 2 credits
Barber Client Services 5
This course provides students with opportunities to acquire barbering skills in preparation for entry-level, licensed employment. Emphasis is on providing services with speed and accuracy, including hair and scalp analysis, shampooing, haircutting, shaving, facial services, and chemical services. Students apply knowledge and skills to provide all barber services on customers in the client lab and complete preparation for the Wisconsin State Barber licensing exam.
Corequisite: Barber Client Services 4 30502733.

31502306 // 1 credit
Cosmetology Review
The review course is taken when an individual needs additional training in order to meet the State of Wisconsin's 1800 hour requirement. The course is 54 hours in length. Multiple sections of the course may be taken. Individual student schedules are determined by TheSalon@MSTC hours of operation.
Prerequisite: Admission to Cosmetology 315021 program and consent of instructor.

31502315 // 1 credit
Salon Business
This course provides learning experiences for students that focus on the history of cosmetology, career opportunities, personality development, professional image, communicating with clients and colleagues, how to open a salon, preparing for employment, and skills needed on the job. Through a variety of teaching and learning techniques and videos, scenarios are developed in which interaction skills and salon applications are practiced and fine-tuned. All of the skills covered and developed in this course are necessary for success in the workplace. This course is provided online only.
Prerequisite: Admission to Cosmetology 315021 program.

31502316// 1 credit
Theory of General Sciences
This course covers several general science topics integral to the field of barbering/cosmetology: bacteriology, infection control, properties of the hair and scalp, nail structure and growth, skin diseases and disorders, introduction to electrology, the basics of electricity, chemistry, and anatomy and physiology. This course is offered online only.
Prerequisite: Admission to Cosmetology 315021 program.

31502334 // 3 credits
Hairstyling
This course emphasizes wet and dry hairstyling to include rollers, air-forming, thermal styling, hair straightening, finger waving, pin curls, hair analysis, shampooing, scalp treatments, braiding, long hair design, and hair pressing. Fundamentals of thermal styling and comb outs are performed. Practical aspects of hair enhancements including wigs, hair extensions, and hair pieces will also be performed.
Prerequisite: Admission to Cosmetology 315021 program.

31502335 // 3 credits
Haircutting
This course involves designing haircuts, understanding form, and applying various haircutting techniques. Students perform various haircuts including blunt, uniform, increased, and graduated haircuts. Students also perform men's haircuts including razor cutting, shear over comb, clipper cutting clipper over comb, short tapered, and flattops. Trimming techniques used for men's facial hair including shaving, beards, mustaches, and side burns are also emphasized and practiced.
Prerequisite: Admission to Cosmetology 315021 program.

31502336 // 3 credits
Chemical Texture Services
This course includes the basics of safe and sanitary permanent waving and chemical hair relaxing. History and product knowledge of these chemical services as well as advanced techniques and procedures which define current trends in the salon are included.
Prerequisite: Admission to Cosmetology 315021 program.

31502337 // 1 credit
Nail Technology
Students achieve skills in manicuring, pedicuring, and nail enhancement services which include polish application and massage techniques. Students study nail shape and safe and sanitary use of nail care products. Paraffin hand dips, advanced polish techniques, and various nail art application are practiced.
Prerequisite: Admission to Cosmetology 315021 program.

31502338 // 1 credit
Salon Services I
This course promotes beginning level concentrated student development of skills and proficiencies by providing a wide range of client-related services. Emphasis is placed on client consultations, proper business practices, professional attitudes, and refining techniques that ensure entry-level preparedness for the Wisconsin Licensing exam. Students complete this course by working in an on-campus beauty salon environment.
Corequisites: Haircolor 31502347, Hairstyling 31502334, Haircutting 31502335, Chemical Texture Services 31502336, Nail Technology 31502337, and Theory of General Sciences 31502316.

31502339 // 2 credits
Salon Science & Business Technology
This course introduces basic chemistry and its relationship to ingredients in professional products. Students will identify and become familiar with effective merchandising displays, product knowledge, and successful selling methods. They will expand their skills in interpersonal communications to successfully meet the needs of clients. In addition, they will be introduced to computer skills which are needed for successful employability.
Prerequisite: Admission to Cosmetology 315021 program.

31502340 // 2 credits
Facials
Students will learn the different types of skin. Structure and functions of the skin will be studied and basic facial techniques applied. Students will study microdermabrasion, laser hair removal, and chemical peels. They will perform basic skin waxing techniques, removal of superfluous hair, makeup application, false eyelash application, and skin analysis.
Prerequisite: Admission to Cosmetology 315021 program.

31502341 // 1 credit
Wisconsin State Law
This course helps students understand Barber/ Cosmetology rules and statutes for safely performing services in the industry. Students will study the Wisconsin Statues and Laws relating to the practice of Barbering and Cosmetology. This course is offered online only.

31502342 // 2 credits
Capstone Experience
Students study all state board required practical and theoretical concepts and discover how to pack their student kit with required practical supplies and materials needed for state board exam submission. Students will be required to complete a mock assessment of all state board practical and written concepts. As a culmination of each student's learning experience, they will demonstrate on a mannequin what they have achieved and receive feedback from MSTC Advisory Committee members.
Corequisites: Salon Science & Business Technology 31502339, Facials 31502340, Salon Services II 31502343, and State Law 31502341.

31502343 // 3 credits
Salon Services II
This course builds on Salon Services I by promoting student development of skills and proficiencies in delivering a wide range of client-related services. Emphasis is placed on client consultations, proper business practices, professional attitudes, and refining techniques that will ensure entry-level preparedness for the Wisconsin Licensing exam. Students complete this course by working in an on-campus beauty salon environment.
Prerequisite: Salon Services I 31502338.

31502344 // 4 credits
Salon Services III
This course builds on techniques practiced in Salon Services I and II, concentrating on student development of skills and proficiencies by providing a wide range of client-related services. Emphasis is placed on client consultations, proper business practices, professional attitudes, and refining techniques that will ensure entry-level preparedness for the Wisconsin Licensing exam. Students complete this course by working in an on-campus beauty salon environment.
Prerequisite: Salon Services I 31502338.

31502345 // 4 credits
Salon Services IV
This course builds on techniques practiced in Salon Services I, II, and III, concentrating on student development of skills and proficiencies by providing a wide range of client-related services. Emphasis is placed on client consultations, proper business practices, professional attitudes, and refining techniques that will ensure entry-level preparedness for the Wisconsin Licensing exam. Students complete this course by working in an on-campus beauty salon environment.
Prerequisite: Salon Services I 31502338.

31502346 // 4 credits
Salon Services V
This course builds on techniques practiced in Salon Services I, II, III, and IV, concentrating on student development of skills and proficiencies by providing a wide range of client-related services. Emphasis is placed on client consultations, proper business practices, professional attitudes, and refining techniques that will ensure entry-level preparedness for the Wisconsin Licensing exam. Students complete this course by working in an on-campus beauty salon environment. Basic First Aid is covered in this course.
Prerequisite: Salon Services I 31502338.

31502347 // 3 credits
Haircolor
This course covers haircolor basics which include the law of color, the color wheel, and the theory behind these concepts. Students will identify the chemicals used in haircolor and discover the differences between temporary, semi/demi, and permanent color. Students will mix and apply color while developing skills and building client consultation techniques. Application methods governed by the state board regulations will be studied. The study of bleach theory and complete lightening applications, including foiling, is taught. Students experience advanced color formulations, color placement techniques and color correction procedures.
Prerequisite: Admission to Cosmetology 315021 program.

31502348 // 1 credit
Saturday Salon Services
This course promotes student development of skills and proficiencies in delivering a wide range of client-related services. Emphasis is placed on client consultations, proper business practices, professional attitudes, and refining techniques that will ensure entry-level preparedness for the Wisconsin Licensing exam. Students complete this course by working in an on-campus beauty salon on Saturdays.
Prerequisite: Salon Services I 31502338.

504 CRIMINAL JUSTICE

10504108 // 3 credits
Intro to Investigation Support Services
This course focuses on supportive aspects of law enforcement investigations. The course includes instruction in police photography, fingerprinting, latent fingerprint searching, developing, and lifting. Computer based composite sketching and crime scene sketching are introduced.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 program.

10504110 // 2 credits
Criminal Justice Service Readiness
This course is intended to assist students in their efforts to secure employment upon graduation. Students complete a basic resume, cover letter, interview thank-you letter, and a standard law enforcement or corrections application. Students also prepare for a criminal justice career interview and participate in a mock interview with current practitioners from law enforcement or corrections agencies.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 or Criminal Justice-Corrections 105042 programs.

10504112 // 3 credits
Court Procedures
This course examines the court system including procedures from incident of arrest to final disposition. The stages of a criminal trial are examined in depth. The authority of law enforcement officials to arrest and/or detain a subject is reviewed. Constitutional, Federal, State, and Civil laws as they apply to this criminal process is presented. Victims' rights are examined.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504116 // 3 credits
Probation & Parole
Analyzes modern probation and parole practices and services; examines current probation procedures and the case law affecting those decisions; and reviews the advantages of community-based treatment, special programs, and the use of non-professionals. Through learning activities, students are exposed to a portion of the "daily life" of a probation & parole agent.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504125 // 2 credits
Patrol Procedures
Prepares students to demonstrate effective patrol techniques, utilize computer information as well as telecommunication systems available to police agencies. Respond safely and effectively to crime, crime victims, domestic abuse, and other mandatory arrest situations. React appropriately to disasters and hazardous materials situations. Students will be exposed to procedures and strategies used while conducting low and high-risk vehicle contacts.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 program.

10504128 // 3 credits
Telecommunications for Corrections
Prepares learners to embrace emergency communications as a profession; describe legal and ethical issues regarding telecommunicator responsibility and accountability; apply enhanced 911, computer-aided dispatch, and map reading techniques; apply proper call receiving guidelines; demonstrate effective emergency radio communications techniques; interpret police computer information system data; perform telecommunications record-keeping functions; demonstrate effective crisis management skills in techniques to alleviate stress in emergency communications; and perform simulated dispatch functions.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504130 // 3 credits
Traffic Theory II
This course includes basic operator training in RADAR speed measurement and law enforcement use of electronic control devices. National Highway Traffic Safety Administration (NHTSA) RADAR operator certification and Taser Corporation operator certification are optional for students who successfully meet the practical and written assessment requirements.
Prerequisites: Admission to Criminal Justice-Law Enforcement 105041 program and Traffic Theory 10504908.

10504132 // 3 credits
Advanced Relational Communications Skills
This course uses scenario-based instruction to prepare students in the use of specific techniques and processes that are required for effective communication in today's professional Criminal Justice professions. Emphasis is given to those communication skills that enhance professional interactions within the corrections field.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504144 // 3 credits
Wellness in Corrections
Learners develop and apply the skills and abilities needed to deal constructively with stressors in the correctional field. Focus is on assessing individual stressors, analyzing the impact of stress, reducing stressors, and developing stress-coping mechanisms. Coping mechanisms include assertion, anger management, conflict resolution, time management, relaxation activities, and exercise and diet planning.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504151 // 2 credits
Tactical Application of Skills & Knowledge-Beginning
This course provides the opportunity for students to apply the beginning skills and knowledge learned in foundational criminal justice courses through reality-based training.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 program.

10504152 // 2 credits
Tactical Application of Skills & Knowledge-Intermediate
This course provides the opportunity for students to apply intermediate skills and knowledge learned in first and second semester criminal justice courses through reality-based training.
Prerequisites: Admission to Criminal Justice-Law Enforcement 105041 program and TASK & Knowledge-Beginning 10504151.

10504153 // 2 credits
Tactical Application of Skills & Knowledge-Advanced
This course provides the opportunity for students to apply advanced skills and knowledge learned in the first three semesters of the criminal justice program through reality-based training.
Prerequisites: Admission to Criminal Justice-Law Enforcement 105041 program and TASK-Intermediate 10504152.

10504154 // 2 credits
Tactical Application of Skills & Knowledge-Capstone
This course provides the opportunity for students to apply all the skills and knowledge learned throughout the four semesters of the criminal justice-law enforcement program through reality-based training.
Prerequisites: Admission to Criminal Justice-Law Enforcement 105041 program and TASK-Advanced 10504153.

10504155 // 1 credit
POSC Practical Application
This course provides students the opportunity to refresh and enhance Principles of Subject Control (POSC) knowledge and skills. Students review the rules associated with the application of POSC, observe instructor demonstration of techniques, and practice those learned techniques.
Prerequisite: Correctional Facilities Emergency Response 10504193.

10504171 // 3 credits
Advanced Criminal Investigation Techniques
This course provides the student with skills necessary for document analysis, forgery detection, handwriting identification, deception in written statements, and documentation and report preparation.

10504172 // 3 credits
Advanced Crime Scene Processing
This course introduces the student to specialized equipment utilized to enhance investigations. The student learns skills necessary for crime scene photography, crime scene searches, advanced latent fingerprint recovery, and advanced techniques for working with suspects, witnesses, and victims at crime scenes.

10504173 // 3 credits
Evidence and Evidence Processing
This course introduces the student to the functions of the Wisconsin Crime Lab. The student also learns advanced skills necessary for packaging and processing evidence, maintaining the chain of custody, and the science and processes associated with DNA evidence collection and processing.

10504174 // 3 credits
Advanced Computer Crime Investigative Techniques
This course provides the student with the knowledge and skills necessary to identity computer generated theft and other computer scams, hacking and computer crimes, and searching computers and digital data for evidence collection.

10504181 // 2 credits
Law Enforcement Certification Track-DAAT
This course is a required component for Wisconsin Department of Justice Law Enforcement Officer certification. Includes instruction in the use of Defensive and Arrest Tactics and the appropriate Use of Force in disturbance resolution.
Prerequisites: Admission to Criminal Justice-Law Enforcement 105041 program and completion of the first and second semesters Criminal Justice-Law Enforcement program curriculum.

10504182 // 2 credits
Law Enforcement Certification-Firearms
This course is a required component for Wisconsin Department of Justice Law Enforcement Office certification. The course includes instruction in the use of law enforcement firearms and deadly force decision making.
Prerequisites: Admission to Criminal Justice-Law Enforcement 105041 program and completion of the first and second semesters Criminal Justice-Law Enforcement program curriculum.

10504183 // 4 credits
Law Enforcement Certification Track-Traffic
This course is a required component for Wisconsin Department of Justice Law Enforcement Officer certification. The course includes instruction in the use of Emergency Vehicle Operation and Control, Vehicle Contacts, Operating a Motor Vehicle While Intoxicated/ Standardized Field Sobriety Testing, and Tactical Response.
Prerequisites: Admission to Criminal Justice-Law Enforcement 105041 program and completion of the first and second semesters Criminal Justice-Law Enforcement program curriculum.

10504188 // 3 credits
Adolescent/Juvenile Supervision
Learners review theories of adolescent development, history of juvenile court, the WI Juvenile Code, and the WI Administrative Code as it applies to juvenile offenders. Learners become familiar with procedures to admit/ release adolescents in secure detention. Additionally, Learners apply strategies for effective supervision, protection, and disciplining of juveniles and adolescents, including those classified as special needs offenders, in secure detention settings.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504192 // 3 credits
Intro to Corrections
This course examines the history and current trends of the correctional system in the United States. Students will analyze the changing philosophies of corrections and review the programs available to offenders at various stages of their involvement in the criminal justice system. Chain of command, management practices, personnel needs, types of offenders, organizational theories, policymaking, and the role of correctional personnel are addressed. Additional emphasis is placed on the role of the correctional employee and on effective management techniques to be utilized when working with offenders, including how to avoid manipulation.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504195 // 2 credits
Corrections Officer Internship
This course is designed to provide students the opportunity for the student to observe and/or apply in the workplace the concepts, principles, and skills they have learned in the Criminal Justice-Corrections course work. The internship assists the student in the development of basic skills necessary for a productive job search.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program, Academic Level: Sophomore, and Cumulative Grade Point Average of 2.5.

10504197 // 3 credits
Law Enforcement Tactical Skills Refresher I
This course provides students the opportunity to refresh their skills and knowledge in the law enforcement tactical skills that include defensive and arrest tactics, and firearms.
Prerequisites: Admission to Criminal Justice-Law Enforcement 105041 program, Law Enforcement Certification Track-DAAT 10504181, Law Enforcement Certification Track-Firearms 10504182, and Law Enforcement Certification Track-Traffic 10504183.

10504198 // 3 credits
Law Enforcement Tactical Skills Refresher II
This course provides students the opportunity to refresh their skills and knowledge in the law enforcement tactical skills that include emergency vehicle operation and control and vehicle contacts.
Prerequisites: Admission to Criminal Justice-Law Enforcement 105041 program, Law Enforcement Certification Track-DAAT 10504181, Law Enforcement Certification Track-Firearms 10504182, and Law Enforcement Certification Track-Traffic 10504183.

10504199 // 2 credits
Law Enforcement Internship
An excellent opportunity to experience first-hand, the wide variety of duties and responsibilities of criminal justice professionals including patrol officer, investigator, corrections officer, dispatcher, evidence custodian, records officer, and court officer. Due to limited availability of internship locations and agency requirements, there is a prescribed selection process for participation.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 or Criminal Justice-Corrections 105042 programs, Academic Level: Sophomore, and cumulative Grade Point Average of 2.5.

10504900 // 3 credits
Introduction to Criminal Justice
Learners distinguish between the roles and functions of courts with jurisdiction in Wisconsin; differentiate between the roles and functions of federal, state, and local law enforcement agencies; apply professional principles as a law enforcement officer; determine modern police functions and policies from an historical perspective; identify the role of law enforcement officers in American society; utilize a decision-making model; identify the characteristics of a good decision maker; describe how professionalism, ethics, and moral standards relate to a law enforcement career; practice a code of behavior; incorporate ethical decision-making strategies; describe how decisions are made; enhance an officer's critical thinking and police problem solving skills; apply principles of critical thinking, decision-making, and problem solving; identify required law enforcement policies; defend the importance of written agency policies; and distinguish between "ministerial" and "discretionary" duties. This course consists of competencies and learning objectives from the following blocks of instruction from the Law Enforcement Standards Board 520 hour Law Enforcement Basic Training Curriculum: Professional Orientation - 4 hours; Policing in a Free Society - 4 hours; Ethics - 10 hours; Critical Thinking and Problem Solving - 10 hours; and Agency Policy - 2 hours.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 program.

10504901 // 3 credits
Constitutional Law
Learners diagram the structure of the criminal justice system, identify situations where constitutional rules are applicable, identify situations where an officer may use reasonable suspicion to contact a subject, identify the elements of a lawful arrest, identify search-related activities where the 4th amendment is not applicable, identify the requirements that pertain to search warrants, analyze situations where an officer may conduct a search without a warrant, compare the requirements for conducting routine searches with those for searching disabled persons and strip searches, identify the requirements of the laws governing confessions and statements, and analyze the various requirements that evidence must meet before it can be admitted in court. This course consists of competencies and learning objectives from the following blocks of instruction from the Law Enforcement Standards Board 520 hour Law Enforcement Basic Training Curriculum: Constitutional Law - 30 hours.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 program.

10504902 // 3 credits
Criminal Law
Learners identify basic concepts of criminal law; analyze facts, circumstances, and situations to determine which crimes against persons and property have been committed; and determine which crimes involving drugs, alcohol, or other criminal activity have been committed. This course consists of competencies and learning objectives from the following block of instruction from the Law Enforcement Standards Board 520 hour Law Enforcement Basic Training Curriculum: Crimes - 12 hours.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 or Criminal Justice-Corrections 105042 programs.

10504903 // 3 credits
Professional Communications
Learners apply knowledge of the communication process, apply communication techniques, integrate verbal and physical intervention skills, develop strategies to obtain information in a variety of situations, differentiate between interview and interrogation, and analyze information for consideration as corroborative evidence. This course consists of competencies and learning objectives from the following blocks of instruction from the Law Enforcement Standards Board 520 hour Law Enforcement Basic Training Curriculum. Professional Communication - 24 hours and Interview and Interrogation - 6 hours.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 program.

10504904 // 3 credits
Juvenile Law
Learners describe the juvenile justice system, describe the handling of cases of children in need of protection or services, describe the handling of cases of juveniles in need of protection or services or alleged to be delinquent, identify constitutional law issues that are relevant to juveniles, analyze the role of law enforcement in responding to child maltreatment, explain issues involved in investigating incidents of child victimization, intervene and apply appropriate investigative strategies, describe the roles of other agencies in child maltreatment cases, and recognize the unique investigative issues for missing children. This course consists of competencies and learning objectives from the following blocks of instruction from the Law Enforcement Standards Board 520 hour Law Enforcement Basic Training Curriculum. Juvenile Law - 8 hours and Child Maltreatment - 8 hours.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 or Criminal Justice-Corrections 105042 programs.

10504905 // 3 credits
Report Writing
Learners explain the context of report writing, take effective field notes, organize information in reports, write narratives, describe what information should be included in certain types of reports, prepare for court, describe how to be an effective witness, and testify as a witness in court. This course consists of competencies and learning objectives from the following blocks of instruction from the Law Enforcement Standards Board 520 hour Law Enforcement Basic Training Curriculum. Report Writing - 22 hours and Testifying in Court - 8 hours.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 program.

10504906 // 3 credits
Criminal Investigation Theory
Learners describe the role evidence plays in criminal investigations and prosecutions; apply the steps for processing crime scenes; apply appropriate strategies to locate, handle, and package evidentiary items; document the crime scene; recognize the unique investigative issues for crimes against life; apply appropriate strategies to secure the scene, collect and preserve evidence, and investigate a death; recognize the dynamics of victimization; apply knowledge of the definitions and responsibilities for law enforcement; apply appropriate interview techniques with adult or child victims; analyze the role of law enforcement in responding to domestic abuse; intervene and apply appropriate investigative strategies; respond to an officer-involved domestic violence incident; analyze the role of law enforcement in responding to sexual abuse; demonstrate investigative techniques in a simulated sexual assault case; and identify other resources that can assist in sexual assault cases. This course consists of competencies and learning objectives from the following blocks of instruction from the Law Enforcement Standards Board 520 hour Law Enforcement Basic Training Curriculum. Physical Evidence Collection - 8 hours; Victims - 8 hours; Domestics - 12 hours; and Sexual Assault - 12 hours.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 program.

10504907 // 3 credits
Community Policing Strategies
Learners identify local community resources, describe the role of an advocacy group in the criminal justice community, demonstrate cultural self-awareness, interpret state and federal laws related to discrimination and diversity, utilize appropriate skills for interacting effectively and professionally with persons from culturally diverse backgrounds and lifestyles, identify and implement personal strategies that take into account cultural differences, identify the types of situations and the characteristics of individuals that are likely to be encountered in crisis management situations, apply Wisconsin statutory requirements and general guidelines regarding emergency detentions and emergency protective placements of persons, identify key concepts and elements associated with law enforcement response to people in crisis, apply crisis intervention principles and techniques, articulate the decision-making process taken to manage persons in crisis, incorporate community policing strategies into the community, illustrate problem-oriented policing strategies, evaluate other policing strategies, and apply principles of crime analysis and prevention. This course consists of competencies and learning objectives from the following blocks of instruction from the Law Enforcement Standards Board 520 hour Law Enforcement Basic Training Curriculum. Community Resources - 2 hours, Cultural Competence - 8 hours, Crisis Management - 16 hours, and Policing Strategies - 16 hours.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 program.

10504908 // 3 credits
Traffic Theory
Learners identify local community resources, describe the role of an advocacy group in the criminal justice community, demonstrate cultural self-awareness, interpret state and federal laws related to discrimination and diversity, utilize appropriate skills for interacting effectively and professionally with persons from culturally diverse backgrounds and lifestyles, identify and implement personal strategies that take into account cultural differences, identify the types of situations and the characteristics of individuals that are likely to be encountered in crisis management situations, apply Wisconsin statutory requirements and general guidelines regarding emergency detentions and emergency protective placements of persons, identify key concepts and elements associated with law enforcement response to people in crisis, apply crisis intervention principles and techniques, articulate the decision-making process taken to manage persons in crisis, incorporate community policing strategies into the community, illustrate problem-oriented policing strategies, evaluate other policing strategies, and apply principles of crime analysis and prevention. This course consists of competencies and learning objectives from the following blocks of instruction from the Law Enforcement Standards Board 520 hour Law Enforcement Basic Training Curriculum. Community Resources - 2 hours, Cultural Competence - 8 hours, Crisis Management - 16 hours, and Policing Strategies - 16 hours.
Prerequisite: Admission to Criminal Justice-Law Enforcement 105041 program.

10504930 // 3 credits
Security Procedures
Demonstrate the steps involved in receiving and releasing inmates and maintaining security. Develop the skills needed for mitigation of hostage type situations. Topics include admission, release, and search procedures; use of jail locking and surveillance equipment; and inmate health management procedures.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504931 // 3 credits
Communication Skills
Apply correctional professional communication skills including mediation, arbitration, and crisis intervention in a correctional setting.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504932 // 3 credits
Adult Supervision
Practice supervision skills including positive behavior control, dispute resolution, and incident debriefing. Explore belief systems, social pressure, moral problems, decision-making, and the consequences of decisions.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504933 // 3 credits
Correctional Report Writing
Learn basic requirements, guidelines, and skills for proper and professional documentation of activities and incidents in a correctional setting.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504934 // 3 credits
Correctional Law & Code
Learn key concepts and principles underlying legal requirements for jail operations and guidelines for protecting the legal rights of inmates. Key issues covered include introduction to the role of the jail officer, rules and standards governing correctional operations, structure of the court system, overview of civil liability, and key constitutional rights of inmates.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504935// 1 credit
Corrections Summary Assessment
Refine previously learned skills and abilities by applying them to various case studies and simulated situations.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504936 // 3 credits
Emergency Procedures
Implement Principles of Subject Control (POSC) in a correctional environment with an emphasis on team tactics. Learners apply current fire science concepts to jail fire prevention and response, including search and rescue, fire suppression, and use of safety procedures.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

10504937 // 3 credits
Juvenile Supervision
Apply theories of adolescent development to develop strategies for effective supervision, protection, and discipline of juveniles.
Prerequisite: Admission to Criminal Justice-Corrections 105042 program.

509 MEDICAL ASSISTANT

10509102 // 3 credits
Human Body in Health and Disease
Focuses on diseases that are frequently first diagnosed and treated in the medical office setting. Students learn to recognize the causes, signs, and symptoms of diseases of the major body systems as well as the diagnostic procedures, usual treatment, prognosis, and prevention of common diseases.
Corequisite: Medical Terminology 10501101.

10509130 // 2 credits
Medical Assistant Administrative Procedures
Introduces medical assistant students to office management and business administration in the medical office. Students learn to schedule appointments, perform filing, record keeping, telephone and reception duties, communicate effectively with patients and other medical office staff, and keep an inventory of supplies. Students apply introductory medical coding skills and managed care terminology.

10509131 // 2 credits
Medical Office, Insurance, and Finance
Introduces medical assistant students to health insurance and finance in the medical office. Students perform bookkeeping procedures, apply managed care guidelines, and complete insurance claim forms. Students use medical coding and managed care terminology to perform insurance-related duties.
Prerequisite: Admission to Medical Assistant 315091 program.

31509301 // 2 credits
Medical Assistant Administrative Procedures
Introduces medical assistant students to office management and business administration in the medical office. Students learn to schedule appointments, perform filing, record keeping, telephone and reception duties, communicate effectively with patients and other medical staff, and keep inventory of supplies. Students apply introductory medical coding skills and managed care terminology.
Prerequisite: Admission to Medical Assistant 315091 program.

31509303 // 2 credits
Medical Assistant Laboratory Procedures 1
Introduces medical assistant students to laboratory procedures commonly performed by medical assistants in a medical office setting. Students perform routine laboratory procedures commonly performed in the ambulatory care setting under the supervision of a physician. Students follow laboratory safety requirements and federal regulations while performing specimen collection and processing, microbiology, and urinalysis testing.
Prerequisite: Admission to Medical Assistant 315091 program.

31509304 // 4 credits
Medical Assistant Clinical Procedures 1
Introduces medical assistant students to clinical procedures performed in the medical office setting. Students perform basic examining room skills including screening, vital signs, patient history, minor surgery, and patient preparation for routine and specialty exams in the ambulatory setting.
Prerequisites: Admission into Medical Assistant Program 315091.

31509305 // 2 credits
Medical Assistant Laboratory Procedures 2
Prepares students to perform laboratory procedures commonly performed by the medical assistants in the ambulatory care setting under the supervision of a physician. Students perform phlebotomy, immunology, hematology, and chemistry laboratory procedures.
Prerequisite: Medical Assistant Laboratory Procedures 1.

31509306 // 3 credits
Medical Assistant Clinical Procedures 2
Prepares medical assistant students to perform patient care skills in the medical office setting. Students perform clinical procedures including administering medications, assisting with minor surgery, performing an electrocardiogram, assisting with respiratory testing, educating patients/community, and maintaining clinical equipment in an ambulatory setting.
Prerequisites: Medical Assistant Clinical Procedures 1 31509304, Medical Assistant Laboratory Procedures 1 31509303, Medical Terminology 10501101, and Human Body in Health and Disease 10509102.

31509307 // 2 credits
Medical Office, Insurance, and Finance
Introduces medical assistant students to health insurance and finance in the medical office. Students perform bookkeeping procedures, apply managed care guidelines, and complete insurance claim forms. Students use medical coding and managed care terminology to perform insurance related duties.
Prerequisite: Admission to Medical Assistant 315091 program.

31509310 // 3 credits
Medical Assistant Practicum
Requires medical assistant students to integrate and apply knowledge and skills from all previous medical assistant courses in actual patient settings. Learners perform medical assistant administrative, clinical, and laboratory duties under the supervision of trained mentors to effectively transition to the role of a medical assistant. There is no remuneration for students enrolled in this course.
Prerequisites: Medical Assistant Administrative Procedures 10509130, Human Body in Health and Disease 10509102, Medical Terminology 10501101, Medical Assistant Laboratory Procedures 1 31509303, Medical Assistant Clinical Procedures 1 31509304, and Applied Microsoft Office for Health 10103107. Corequisite: Medical Assistant Clinical Procedures 2 31509306; Medical Assistant Laboratory Procedures 2 31509305; Medical Office, Insurance, and Finance 10509131; Medical Law, Ethics, and Professionalism 10501109; and Written Communication 10801195.

31509356 // 3 credits
Medical Assistant Procedures II
Students are prepared to function as essential members of the health care team. They are instructed on how to assist physicians and specialists in preparation, examination and treatment of their patients.
Prerequisites: Medical Assistant Procedures I 31509355, Medical Office Procedures I 31106343, and Basic Laboratory Techniques 31509321. Corequisite: Medical Office Procedures II 31106344.

512 SURGICAL TECHNOLOGIST

10512104 // 2 credits
Applied Microbiology
Directs the learner's understanding of aseptic techniques, antimicrobial methods, specimen collection, preparation of cultures, body defenses against microorganisms, the infectious process, and transmission of disease-causing organisms. Students learn such techniques as standard and transmission based precautions, sanitization, disinfection, sterilization, preparation of cultures, and microscopic slide preparations with simple staining and gram staining.

31512327 // 4 credits
ST: Introduction to Surgical Technology
Includes the basic clinical skills needed by the surgical technologist in the scrub role. Learners develop skills in disinfection, sterilization, identifying basic instrumentation, supplies, drains, catheters, dressings, and sponges. Includes practice experience in creating a sterile field, draping, passing instruments and supplies, performing counts, and preparing supplies.
Prerequisites: Admission to Surgical Technologist 315121 program, Medical Terminology 10501101, Human Body in Health and Disease 10509102, or General Anatomy & Physiology 10806177.

31512328 // 4 credits
ST: Fundamentals 1
Includes the basic clinical skills needed by the surgical technologist in the scrub role. Learners develop skills in disinfection, sterilization, identifying basic instrumentation, supplies, drains, catheters, dressings, and sponges. Includes practice experience in creating a sterile field, draping, passing instruments and supplies, performing counts, and preparing supplies.
Prerequisites: Admission to Surgical Technologist 315121 program, Medical Terminology 10501101, Human Body in Health and Disease 10509102, or General Anatomy & Physiology 10806177.

31512329 // 2 credits
ST: Fundamentals 2
Builds upon and reinforces the role of the Surgical Technologist as a member of the operating room team. Discusses care of the patient before, during, and after surgery with emphasis on surgical wounds, wound closure materials, and vital signs.
Prerequisites: Introduction to Surgical Technology 31512327 and Fundamentals 1 31512328.

31512330 // 3 credits
ST: Clinical 1
Apply basic surgical theories, principles, and procedural techniques in the operating room. Students begin to function as team members under the guidance of the instructor and authorized clinical personnel. Surgical rotation case requirements are documented.
Prerequisites: Introduction to Surgical Technology 31512327, Fundamentals 1 31512328, and CPR certification.

31512331 // 4 credits
ST: Surgical Procedures
Provides the foundational knowledge of surgical core and specialty procedures. Examines the pathophysiology diagnostic interventions, and surgical interventions for a variety of surgical procedures. Incorporates integration of basic health sciences and technical knowledge to complete a plan of action for a surgical procedure.
Prerequisites: ST: Fundamentals 2 31512329 and Clinical 1 31512330.

31512332 // 4 credits
ST: Clinical 2
Further experience in a clinical setting allows the student to continue to improve technical skills while accepting more responsibilities during surgical procedures. Surgical rotation case requirements are documented.
Prerequisites: ST: Clinical 1 31512330 and ST: Fundamentals 2 31512329. Corequisite: ST: Surgical Procedures 31512331.

31512334 // 4 credits
ST: Clinical 3
Enhances the student's technical experience and employee skills. Serves as a transition between student and employee. Application of advanced skills for the entry-level surgical technologist in the clinical setting. Surgical rotation case requirements are documented.
Prerequisite: ST: Clinical 2 31512332. Corequisite: ST: Surgical Procedures 31512331.

513 LABORATORY ASSISTANT

10513101 // 3 credits
Basic Clinical Laboratory Techniques
Assists the learner to develop skills in performing basic medical lab procedures. Emphasizes specimen collection and processing, testing methods, quality control, and safety procedures. Correlates laboratory testing to human disease processes. Blood collection is a required part of this class.
Prerequisite: Admission to Phlebotomy Technician 305131 program.

10513116 // 3 credits
Principles of Phlebotomy
Prepares the learner to function as a member of the health care delivery team, performing the role of a phlebotomist. The phlebotomist generally works in a clinical laboratory under the supervision of the appropriate professional. The phlebotomist is responsible for collection procedures in both out-patient clinics and hospital in-patient settings for the purpose of laboratory analysis, including emergency and routine collection procedures from veins, skin puncture areas, and arteries on patients of all ages. Specimen integrity is emphasized as dependent on collection procedures, proper choice of equipment, and knowledge of patient variables. Positive patient identification protocol is an absolute requirement which is stressed throughout. Proper transport and processing of specimens are also included. This theory course is primarily an online course and is designed for the student preparing to enter the laboratory/practicum experience of the phlebotomy program.
Prerequisite: Admission to Phlebotomy Technician 305131 program and completion of first semester courses with a grade of "C" or better.

10513117 // 5 credits
Phlebotomy Laboratory/Practicum
Prepares the learner to function as a staff member in a medical laboratory setting performing venipuncture and other specimen collection procedures, processing and handling of laboratory specimens, and performing related duties. There is no remuneration for students enrolled in this course.
Prerequisite: Principles of Phlebotomy 10513116 with a grade of "C" or better.

10513118 // 1 credit
Phlebotomy Refresher
Phlebotomy Refresher reviews all aspects of phlebotomy, including types of collections, supplies and equipment, national standards, safety, patient variety, and interpersonal skills. It is designed to review past knowledge, provide an update on current equipment and best practices. Phlebotomy Refresher is appropriate for health care providers, graduates of phlebotomy training programs, and current phlebotomists who need review.
Prerequisite: Previous related work experience or consent of instructor.

515 RESPIRATORY THERAPIST

10515100 // 1 credit
Student Success in Respiratory Therapist
Learners explore success strategies for the Respiratory Therapist program including time management, study skills, test preparation and test taking skills, planning, and stress management.
Prerequisite: Admission to Respiratory Therapist 105151 program. Corequisite: Respiratory Survey 10515111.

10515101 // 1 credit
Respiratory Therapist Test Prep
Learners explore strategies for preparing for respiratory therapist professional examinations including study skills, test preparation, and test taking skills. The course includes a basic review of content related to the examinations.
Prerequisite: Respiratory Clinical 4 10515182.

10515111 // 3 credits
Respiratory Survey
Examines the role of the Respiratory Therapist within the health care community. Reviews the ethical, legal, and regulatory principles that guide practice across diverse populations. Introductory patient assessment and critical thinking processes used in the development of respiratory care plans are explored.
Prerequisite: Admission to Respiratory Therapy 105151 program. Corequisite: Medical Terminology 10501101.

10515112 // 2 credits
Respiratory Airway Management
Provides a comprehensive exploration of airway management concepts and skills.
Prerequisite: Respiratory Clinical 1 10515175.

10515113 // 3 credits
Respiratory Life Support
Focuses on management of adult ventilatory support.
Prerequisites: Respiratory Therapeutics 2 10515172 and Respiratory Clinical 1 10515175. Corequisite: Respiratory Airway Management 10515112.

10515138 // 2 credits
Respiratory Care Prac.-Independent Study
Designed for students who have demonstrated above average skills and knowledge in required core courses, and who wish to pursue specific topics beyond the depth required in formal courses. Enrollment requires the permission of the program director.

10515170 // 4 credits
Respiratory Therapy Survey
Examines the role of the respiratory therapist within the health care community. Reviews the ethical, legal, and regulatory principles that guide practice across diverse populations. Introductory patient assessment and critical thinking processes used in the development of respiratory care plans are explored.
Prerequisite: Admission to Respiratory Therapy 105151 program.

10515171 // 3 credits
Respiratory Therapeutics 1
Introduces the topics of medical gas administration and humidity and aerosol therapy. The learner will apply physics, math, and patient assessment concepts to oxygen, aerosol, and humidity therapy.
Corequisites: Respiratory Survey 10515111, Medical Terminology 10501101, and General Anatomy & Physiology 10806177.

10515172 // 3 credits
Respiratory Therapeutics 2
Introduces therapeutic procedures including arterial puncture, bronchial hygiene, lung expansion therapy, and pulmonary rehabilitation.
Prerequisites: Respiratory Therapeutics 1 10515171, Respiratory Survey 10515111, and General Anatomy & Physiology 10806177.

10515173 // 3 credits
Respiratory Pharmacology
Examines basic pharmacology principles, drug dosage, and calculations. Medications for inhalation including mucolytics, bronchodilators, and anti-inflammatories. Also includes cardiac drugs, anesthetic drugs, neuromuscular blockers, and antimicrobials.
Prerequisites: Respiratory Survey 10515111, Respiratory Therapeutics 1 10515171, and General Anatomy & Physiology 10806177.

10515174 // 3 credits
Respiratory/Cardiac Physiology
Provides the student with an in-depth knowledge of the structure and function of the respiratory and circulatory systems necessary to function as a competent respiratory therapist.
Prerequisites: General Anatomy & Physiology 10806177, Respiratory Survey 10515111, and Respiratory Therapeutics 1 10515171.

10515175 // 2 credits
Respiratory Clinical 1
Introduces respiratory therapy practice in the hospital setting. Includes the development of skills such as basic therapeutics, patient assessment, medical record review, safety practices, patient interaction, and communication.
Prerequisites: Respiratory Survey 10515111, Respiratory Therapeutics 1 10515171, Respiratory Therapeutics 2 10515172, Respiratory Pharmacology 10515173, Respiratory/Cardiac Physiology 10515174, and Microbiology 10806197.

10515176 // 3 credits
Respiratory Disease
Exploration of signs, symptoms, causes, progression, and treatment of obstructive, restrictive, and infectious diseases or disorders of the body that affect the respiratory system.
Prerequisites: Respiratory Survey 10515111, General Anatomy & Physiology 10806177, and Microbiology 10806197.

10515178 // 3 credits
Respiratory Clinical 2
Continued development of respiratory therapy clinical skills including respiratory therapeutics. Focuses on monitoring, analyzing, and interpreting data to make appropriate modifications in patient care.
Prerequisite: Respiratory Clinical 1 10515175.

10515179 // 3 credits
Respiratory Clinical 3
Continued development of respiratory therapy clinical skills including respiratory therapeutics. Focuses on monitoring, analyzing, and interpreting data to make appropriate modifications in patient care.
Corequisite: Respiratory Clinical 2 10515178.

10515180 // 2 credits
Respiratory Neo/Peds Care
Provides a comprehensive orientation to the field of neonatal and pediatric respiratory care to include fetal development, birth, neonatal physiology, pulmonary dynamics, abnormal cardiopulmonary conditions, diseases, noninvasive, and invasive therapeutic interventions.
Prerequisite: Respiratory Life Support 10515113 and Respiratory Clinical 3 10515179.

10515181 // 3 credits
Respiratory/Cardio Diagnostics
Advanced invasive and noninvasive diagnostic cardiopulmonary procedures including pulmonary function, hemodynamics, and rescue medicine.
Prerequisite: Respiratory Clinical 3 10515179.

10515182 // 3 credits
Respiratory Clinical 4
Continued development of respiratory therapy clinical skills including respiratory therapeutics. Focuses on monitoring, analyzing, and interpreting data to make appropriate modifications in patient care.
Prerequisites: Respiratory Clinical 3 10515179 and Respiratory Life Support 10515113.

10515183 // 3 credits
Respiratory Clinical 5
Focuses on the completion of respiratory therapy competencies and transition to employment.
Prerequisite: Respiratory Clinical 4 10515182.

530 MEDICAL RECORDS

10530111 // 3 credits
Introduction to Health Records
Focuses on the purpose, format, content, use, confidentiality, and administrative issues of a patient's medical history and care. Students study the use of the patient's medical record as a basis for planning patient care, documenting communication between the health care provider and any other health professional contributing to the patient's care, assisting in protecting the legal interest of the patient and the health care providers responsible for the patient's care, and documenting the care and services provided to the patient. Emphasis is placed on accuracy, organization, and confidentiality. Students will be introduced to EMR concepts.
Corequisite: Medical Terminology 10501101.

10530122 // 3 credits
Electronic Health Records
Course introduces students to the electronic health record (EHR) as a technology-based representation of health care data integration from a participating collection of varied systems for a single patient. Course covers emerging use of the electronic health record, an overview of EHR, applications, benefits and barriers to its use, vocabularies, principles of implementation, health information exchange, standards, privacy, security, information retrieval, digital libraries, and image management.
Prerequisites: Medical Terminology 10501101, General Anatomy & Physiology 10806177, and Intro to Health Records 10530111.

10530125 // 2 credits
Organization of Healthcare
This course examines the organization and delivery of health care services, external standards, regulations, initiatives, payment and reimbursement systems, and health care providers and disciplines.

10530132 // 3 credits
Health Data Analysis
Focuses on the collection, computation, analysis, and presentation of health care statistical data. Data analytics, registries, vital statistics, mandatory reporting, and research are examined.
Prerequisites: Intro Health Records 10530111, Organization of Healthcare 10530125, and Electronic Health Records 10530122.

10530134 // 3 credits
Health Data Analysis & Performance Improvement
This course introduces the collection, computation, analysis, and presentation of health care statistical data. It also studies health care performance improvement systems including risk management, utilization management, and quality assessment.
Prerequisites: Electronic Health Records 10530122 and Introductory Statistics 10804189. Corequisite: Managing for Quality 10196192.

10530143 // 1 credit
Clinical Experience
This course provides a blend of supervised clinical experience in health care facilities or virtual practice with some classroom activity. Students apply skills and knowledge gained from previous courses. Classroom activity will cover discussion of clinical situations.
Prerequisite: Health Data Analysis and Performance Improvement 10530134. Corequisites: Private and Government Reimbursement 10530146 and Advanced Coding 10530148.

10530144 // 3 credits
CPT Coding
Prepares learners to assign current procedural terminology (CPT) codes supported by medical documentation with entry-level proficiency. Students are familiar with and use standard coding references. Emphasis is placed on accuracy, CPT instructional notations, conventions, rules, and official coding guidelines when assigning CPT codes to case studies and actual medical record documentation. Application of modifiers to services and relationship to financial impact is also covered.
Prerequisites: Medical Terminology 10501101, General Anatomy & Physiology 10806177, Human Diseases for Health Professions 10530182, and Intro to Health Records 10530111.

10530146 // 3 credits
Private and Government Reimbursement
Introduces students to the vocabulary of private or voluntary-based health care reimbursement. Students identify and compare the varieties of private health care insurance including the advantages and disadvantages of each for the provider and for the policyholder. Learners assign Diagnosis Related Groups (DRGs), Ambulatory Payment Classifications (APCs), and Resource Utilization (RUGs) with entry-level proficiency using computerized encoding and grouping software. HIPAA guidelines are utilized throughout.
Prerequisites: ICD Diagnosis Coding 10530197, ICD Procedure Coding 10530199, and CPT Coding 10530144.

10530148 // 2 credits
Advanced Coding
This course builds on basic coding knowledge and skills by providing the student with coding of clinical case studies and actual medical records. Students access, review, and code electronic medical records from the Academic EHR System. Students perform data quality reviews to validate code assignment and compliance with reporting requirements.
Prerequisites: ICD Diagnosis Coding 10530197, ICD Procedure Coding 10530199, and CPT Coding 10530144. Corequisite: Private and Government Reimbursement 10530146.

10530150 // 2 credits
Introduction to Health Information Technology
Prepares learners to illustrate the flow of health information in various health care delivery systems and within the health information department and to retrieve data from health records. Professional ethics, confidentiality, and security of information are emphasized. This course also examines the content and structure of an EHR (inpatient and ambulatory patient records), documentation practice guidelines, and the types of user devices utilized in an EHR system. Basic concepts of clinical decision support, standards relating to content of health records, data integrity, and EHR system security are included. Students will have access to an electronic health record to apply concepts learned.

10530182 // 3 credits
Human Disease for the Health Professions
This course focuses on the common diseases of each body system as encountered in all types of health care settings by health information professionals. Emphasis is placed on understanding the etiology (causes), signs and symptoms, diagnostic tests, and treatment (including pharmacologic) of each disease.
Prerequisites: Medical Terminology 10501101 and General Anatomy & Physiology 10806177.

10530183 // 1 credit
Intro to the Electronic Health Record
Introduces the use of the electronic health record (EHR) for those providing patient care as well as those processing health information. This course examines the content and structure of an EHR (inpatient and ambulatory patient records), documentation practice guidelines, and the types of user devices utilized in an EHR system. This course also covers basic concepts of clinical decision support, standards relating to content of health records, data integrity, and EHR system security. Students will have access to an electronic health record to apply concepts learned.

10530195 // 2 credits
Legal Aspects of HIIM
Focuses on regulations for the content, access, disclosure, privacy, confidentiality, security, retention, and destruction of health information. Includes an overview of the U.S. legal system.
Corequisite: Intro to Health Records 10530111.

10530196 // 3 credits
Performance Improvement for Health Professions
Examines health care performance improvement systems. Includes performance assessment, measurement, and improvement as well as patient safety, risk management, utilization management, and medical staff credentialing.
Prerequisites: Intro to Health Records 10530111, Organization of Healthcare 10530125, and Electronic Health Records 10530122.

10530197 // 3 credits
ICD Diagnosis Coding
Prepares students to assign ICD diagnosis codes supported by medical documentation with entry-level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD diagnosis codes to case studies and actual medical record documentation.
Prerequisites: Medical Terminology 10501101, Intro to Health Records 10530111, and General Anatomy & Physiology 10806177. Corequisite: Human Disease for the Health Professions 10530182.

10530198 // 3 credits
HIIM Clinical Experience
This course provides a blend of supervised clinical experience in health care facilities with some online work. Students will apply skills and knowledge gained from previous courses.
Prerequisites Organization of Healthcare 10530125, Intro to Health Records 10530111, Electronic Health Record 10530122, CPT Coding 10530144, ICD Diagnosis Coding 10530197, and ICD Procedure Coding 10530199. Corequisites: Private & Government Reimbursement 10530146 and Advanced Coding 10530148.

10530199 // 2 credits
ICD Procedure Coding
Prepares students to assign ICD procedure codes supported by medical documentation with entry-level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD procedure codes to case studies and actual medical record documentation.
Prerequisites: Medical Terminology 10501101, Intro to Health Records 10530111, General Anatomy & Physiology 10806177, and Human Disease for the Health Professions 10530182.

531 EMERGENCY MEDICAL SERVICES

10531100 // 2 credits
Wis First Responder-Basic W/CPR
This 58-hour course uses the U.S. Department of Transportation National Highway Traffic Safety Administration (NHTSA) National Standard Curriculum with approved Wisconsin additions, to provide training in all aspects of emergency medical care required at the scene of an accident or sudden illness. It includes the American Heart Association Health Care Provider Basic Life Support CPR course. The National Registry of EMT's - Registered First Responder Exam is available as an option after successful completion of this course.

10531168 // 5 credits
EMT Basic
Based upon the State of Wisconsin/ U.S. Department of Transportation/ National Highway Transportation Safety Administration curriculum, this 185-hour program includes classroom instruction—lectures, discussion, demonstrations, skill practice—and an additional patient care experience, which requires a minimum of ten patient care contacts.
Prerequisite: Admission to Emergency Medical Technician 305313 program.

10531169 // 4 credits
EMS Career Fundamentals
This course is designed to introduce the student to a variety of topics that are relevant to a successful career in EMS. The course content focuses on employment readiness, organizational structure, leadership concepts, community involvement, and application of EMS research findings.

10531911 // 2 credits
EMS Fundamental
This course provides the paramedic student with comprehensive knowledge of EMS systems, safety, well-being, legal issues, and ethical issues, with the intended outcome of improving the health of EMS personnel, patients, and the community. The students obtain fundamental knowledge of public health principles and epidemiology as related to public health emergencies, health promotion, and illness/injury prevention. Introducing students to comprehensive anatomical and medical terminology and abbreviations fosters the development of effective written and oral communications with colleagues and other health care professionals.
Prerequisites: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs and Wisconsin Emergency Medical Technician (or higher) license or a current National Registry of EMTs certification at the Emergency Medical Technician level or higher.

10531912 // 4 credits
Paramedic Medical Principles
This course addresses the complex depth of anatomy, physiology, and pathophysiology of major human systems while also introducing paramedic students to the topics of shock, immunology, and bleeding.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531913 // 3 credits
Patient Assessment Principles
This course teaches the paramedic student to integrate scene and patient assessment findings with knowledge of epidemiology and pathophysiology to form a field impression. By utilizing a structured and organized assessment process with knowledge of anatomy, physiology, pathophysiology, life span development, and changes that occur to the human body with time, students will learn to develop a list of differential diagnoses through clinical reasoning, along with the ability to modify the assessment as necessary to formulate a treatment plan for their patients.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531914 // 3 credits
Prehospital Pharmacology
This course provides the paramedic student with the comprehensive knowledge of pharmacology required to formulate and administer a pharmacological treatment plan intended to mitigate emergencies and improve the overall health of the patient.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531915 // 2 credits
Paramedic Respiratory Management
This course teaches the paramedic student to integrate complex knowledge of anatomy, physiology, and pathophysiology into the assessment to develop and implement a treatment plan with the goal of assuring a patient airway, adequate mechanical ventilation, and respiration for patients of all ages. Specific knowledge pertaining to the respiratory system is also provided to ensure the student is prepared to formulate a field impression and implement a comprehensive treatment plan for a patient with a respiratory complaint.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531916 // 4 credits
Paramedic Cardiology
This course teaches the paramedic student to integrate assessment findings with principles of cardiovascular anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for a patient with a cardiovascular complaint.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531917 // 3 credits
Paramedic Clinical/Field 1
This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in field and health care environment experiences with actual patients under the supervision of instructors or approved preceptors. Students may also have the opportunity to participate in formal high-fidelity human patient simulator experiences as a part of this course.
Prerequisites: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs, Advanced Prehosital Pharmacology 10531914, and a current Wisconsin license at the Emergency Medical Technician (or higher) level.

10531918 // 1 credit
Advanced Resuscitation
By teaching Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS) methodologies and protocols, this course prepares the paramedic student in the integration of comprehensive knowledge of causes and pathophysiology into the management of shock, respiratory failure, respiratory arrest, cardiac arrest, and peri-arrest states with an emphasis on early intervention to prevent respiratory and/or cardiac arrest if possible.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531919 // 4 credits
Paramedic Medical Emergencies
This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for a patient with a medical complaint.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531920 // 3 credits
Paramedic Trauma
This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for an acutely injured patient.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531921 // 3 credits
Special Patient Populations
This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for patients with special needs. Gynecological emergencies, along with special considerations in trauma, are also included within this course.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531922 // 1 credit
EMS Operations
This course provides the paramedic student with the knowledge of operational roles and responsibilities to ensure patient, public, and EMS personnel safety.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

10531923 // 1 credit
Paramedic Capstone
This course provides the student with a final opportunity to incorporate their cognitive knowledge and psychomotor skills through labs and scenario-based practice and evaluations prior to taking the National Registry written and practical examinations. Technical Skills Attainment (TSA) for each student will be compiled and/or documented within this course as required by the DHS-approved paramedic curriculum.
Prerequisite: EMS Operations 10531922.

10531924 // 4 credits
Paramedic Clinical/Field 2
This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in field and health care environment experiences with actual patients under the supervision of instructors or approved preceptors. Students may also have the opportunity to participate in formal high-fidelity human patient simulator experiences as a part of this course. Successful completion of this course requires the student to meet all clinical and field competency requirements at the paramedic level as defined by WI DHS EMS.
Prerequisite: Admission to Paramedic Technician 105311 or EMT-Paramedic 315311 programs.

30531309 // 1 credit
Paramedic Refresher
Based on the U.S. Department of Transportation Emergency Medical Technician-Paramedic National Standard curriculum, this 48-hour course is a refresher for currently licensed Paramedics. This course provides an opportunity and forum to review of the core knowledge as it relates to prehospital emergency medical care of the infant, child, adolescent, adult, and geriatric patient.

30531310 // 2 credits
EMT-Intermediate Technician
Based upon the Wisconsin Bureau of Local Health Support and Emergency Medical Services 2001 curriculum, this 72-hour program provides the student with the knowledge and skills required to enhance their ability to think critically, initiate intravenous access and administer specific medications. The student learns how to integrate problem specific assessments for patients experiencing a cardiovascular, diabetic, and/or poisoning/overdose emergencies.
Prerequisite: EMT-Basic 10531168.

30531311 // 3 credits
EMT Intermediate I
The EMT-Intermediate I course is part-one of the EMT-Intermediate program. This course will focus on the roles and responsibilities of the EMT Intermediate; illness and injury prevention; medical, legal, and ethical issues. The course will build upon the student's previous knowledge in pathophysiology, pharmacology, venous access and medication administration, basic and advanced airway management, patient assessment, and pulmonary and cardiac emergencies. Students will take the American Heart Association's Advanced Cardiac Life Support Certification course.
Prerequisite: NREMT-Basic Certification or Wisconsin EMT-Intermediate Technician licensure. Students are required to hold Wisconsin licensure at either the EMT-Basic or EMT Intermediate Technician Level prior to beginning clinical rotations. Corequisite: EMT-Intermediate Clinical 30531313.

30531312 // 3 credits
EMT Intermediate II
This course is part-two of the EMT-Intermediate program. This course focuses on the management of medical and environmental injuries, infectious and communicable disease, behavioral and psychiatric disorders. Students acquire knowledge and skills in managing obstetrical and neonatal emergencies, interacting and assessing the pediatric and geriatric patient, as well as patients who are victims of abuse and/or assault. Additional topics include acute intervention in home care, and assessment-based management.
Prerequisite: EMT-Intermediate I 30531311. Corequisite: EMT-Intermediate Clinical 30531313.

30531313 // 2 credits
EMT Intermediate Clinical
The student is required to complete 110 hours of documented practical skills application and observation at the beginning EMT-Intermediate level. The student will perform required skill competencies at a variety of clinical and field internship sites under the direct supervision of an approved preceptor.
Corequisites: EMT- Intermediate I 30531311 and EMT Intermediate II 30531312.

30531315 // 3 credits
Critical Care Transport – Paramedic
The Critical Care Transport-Paramedic course is designed to prepare Wisconsin paramedics to function as critical care transport team members. Critically ill or injured patients requiring transport between facilities need a different level of care from hospital or emergency field patients. This course provides students with knowledge of the special assessment techniques and needs of the critical care patient, the ability to operate and troubleshoot critical care transport equipment, and the skills necessary to maintain the stability of the critical care patient during transport. This course follows the Wisconsin curriculum for license endorsement as a Critical Care Paramedic.
Prerequisites: Licensed Paramedic or RN and a BLS and a ACLS card.

30531317 // 1 credit
Emergency Response for Protective Services
Learn how to perform an initial medical assessment for injury or medical condition, how to provide immediate treatment for a variety of injuries and conditions, and how to perform CPR and use an automatic emergency defibrillator.

30531318 // 4 credits
Advanced EMT
Program graduates will demonstrate competency in the initiation of intravenous therapy, administration of select medications as approved by DHS and local medical directors via intravenous, intramuscular, subcutaneous, sublingual, and inhalation routes. Potential occupations include Emergency Medical Technician, Ambulance Attendant, Firefighter, ER-Technician.
Prerequisite: Wisconsin Emergency Medical Technician Licensure.

534 CENTRAL SERVICES TECH

30534301 // 5 credits
Central Service
This course guides the student in achieving the knowledge and skills necessary to function as a Central Service Technician. Students learn to clean, sterilize, and assemble equipment, supplies, and instruments, and perform record keeping procedures including orders, charges, and inventory.
Prerequisite: Admission to Central Service Technician 305341 program.

543 NURSING

10543100 // 2 credits
Becoming a Critical Thinker in Nursing
This course introduces the learner to the concept of critical thinking. By understanding the fundamentals and utilzing knowledge, facts, and data, the student will develop effective strategies to solve problems. The student will then be able to tranfser these Critical Thinking skills to the clinical setting to make appropriate clinical judgments.
Corequisite: Nursing Fundamentals 10543101, Nursing Pharmacology 10543103, or must have previously completed these two classes.

10543101 // 2 credits
Nursing Fundamentals
This course focuses on basic nursing concepts to provide evidenced-based care to diverse patient populations across the lifespan. Current and historical issues impacting nursing are explored within the scope of nursing practice. The nursing process is introduced as a framework for organizing the care of patients.
Prerequisite: Successful completion of all Step 3 Nursing program required courses and space availability.

10543102 // 3 credits
Nursing Skills
This course focuses on development of evidence-based clinical skills and physical assessment across the lifespan. Content includes mathematical calculations and conversions related to clinical skills. In addition, the course includes techniques related to obtaining a health history and basic physical assessment skills using a body systems approach.
Prerequisite: Successful completion of all Step 3 Nursing program required courses and space availability.

10543103 // 2 credits
Nursing Pharmacology
Introduces the principles of pharmacology, including drug classifications and their effects on the body. Emphasis is on the use of the components of the nursing process when administering medications.
Prerequisite: Successful completion of all Step 3 Nursing program required courses and space availability.

10543104 // 2 credits
Nursing: Intro to Clinical Practice
This introductory clinical course emphasizes basic nursing skills and application of the nursing process in meeting the needs of diverse clients across the lifespan. Emphasis is placed on performing basic nursing skills, the formation of nurse-client relationships, communication, data collection, documentation, and medication administration.
Prerequisite: Successful completion of all Step 3 Nursing program required courses and space availability.
Corequisites: Nursing Fundamentals 10543101, Nursing Skills 10543102, and Nursing Pharmacology 10543103.

10543105 // 3 credits
Nursing Health Alterations
This course elaborates upon the basic concepts of health and illness as presented in Nursing Fundamentals. It applies theories of nursing in the care of patients through the lifespan, utilizing problem solving and critical thinking. This course provides an opportunity to study conditions affecting different body systems and apply evidence-based nursing interventions. It also introduces concepts of leadership and management.
Prerequisites: Nursing Fundamentals 10543101, Nursing Skills 10543102, Nursing Pharmacology 10543103, and Intro to Clinical 10543104.

10543106 // 3 credits
Nursing Health Promotion
This course focuses on topics related to health promotion for individuals and families throughout the lifespan. We will cover nursing care of the developing family, which includes reproductive issues, pregnancy, labor and delivery, post-partum, the newborn, and the child. Recognizing the spectrum of healthy families, we will discern patterns associated with adaptive and maladaptive behaviors applying mental health principles. An emphasis is placed on teaching and supporting healthy lifestyles choices for individuals of all ages. Nutrition, exercise, stress management, empowerment, and risk reduction practices are highlighted. Study of the family will cover dynamics, functions, discipline styles, and stages of development.
Prerequisites: Nursing Fundamentals 10543101, Nursing Skills 10543102, Nursing Pharmacology 10543103, Intro to Clinical Practice 10543104, and Developmental Psychology 10809188.

10543107 // 2 credits
Nursing: Clinical Care Across the Lifespan
Applies nursing concepts and therapeutic interventions to clients across the lifespan. It also provides an introduction to concepts of teaching and learning. Extending care to include the family is emphasized.
Prerequisites: Nursing Fundamentals 10543101, Nursing Skills 10543102, Nursing Pharmacology 10543103, and Intro to Clinical Practice 10543104.

10543108 // 2 credits
Nursing: Intro to Clinical Care Management
Applies nursing concepts and therapeutic nursing interventions to groups of clients across the lifespan. It also provides an introduction to leadership, management, and team building.
Prerequisites: Nursing Fundamentals 10543101, Nursing Skills 10543102, Nursing Pharmacology 10543103, and Intro to Clinical Practice 10543104.

10543109 // 3 credits
Nursing: Complex Health Alterations 1
Complex Health Alterations I prepares the learner to provide and evaluate care for patients across the lifespan with alterations in cardiovascular, respiratory, endocrine, and hematologic systems as well as patients with fluid/electrolyte and acid-base imbalance, and alterations in comfort.
Prerequisites: Health Alterations 10543105, Nursing Health Promotion 10543106, Clinical Care Across the Lifespan 10543107, and Intro to Clinical Care Management 10543108. Corequisite: Microbiology 10806197.

10543110 // 2 credits
Nursing: Mental Health and Community Concepts
This course covers topics related to the delivery of community and mental health care. Specific health needs of individuals, families, and groups will be addressed across the lifespan. Attention will be given to diverse and at-risk populations. Mental health concepts will concentrate on adaptive/maladaptive behaviors and specific mental health disorders. Community resources will be examined in relation to specific types of support offered to racial, ethnic, economically diverse individuals and groups.
Prerequisites: Health Alterations 10543105, Nursing Health Promotion 10543106, Clinical Care Across the Lifespan 10543107, and Intro to Clinical Care Management 10543108.

10543111 // 3 credits
Nursing: Intermediate Clinical Practice
This intermediate level clinical course develops the RN role when working with clients with complex health care needs. A focus of the course is developing skills needed for managing multiple clients and priorities. Using the nursing process, students will gain experience in adapting nursing practice to meet the needs of clients with diverse needs and backgrounds.
Prerequisites: Health Alterations 10543105, Nursing Health Promotion 10543106, Clinical Care Across the Lifespan 10543107, and Intro to Clinical Care Management 10543108.

10543112 // 1 credit
Nursing Advanced Skills
This course focuses on the development of advanced clinical skills across the lifespan. Content includes advanced intravenous skills, blood product administration, chest tube systems, basic electrocardiogram interpretation, and nasogastric/feeding tube insertion.
Prerequisites: Health Alterations 10543105, Nursing Health Promotion 10543106, Clinical Care Across the Lifespan 10543107, and Intro to Clinical Care Management 10543108.

10543113 // 3 credits
Nursing: Complex Health Alterations 2
Complex Health Alterations II prepares the learner to provide and evaluate care for patients across the lifespan with alterations in the immune, neuro-sensory, musculoskeletal, gastrointestinal, hepatobiliary, renal/urinary, and reproductive systems and shock, burns, and trauma. The learner will also focus on management of care for patients with high-risk perinatal conditions and high-risk newborns.
Prerequisites: Complex Health Alterations 1 10543109, Mental Health & Community Concepts 10543110, Intermediate Clinical Practice 10543111, and Nursing Advanced Skills 10543112.

10543114 // 2 credits
Nursing: Management and Professional Concepts
This course covers nursing management and professional issues related to the role of the registered nurse. Emphasis is placed on preparing for practice as a registered nurse.
Prerequisites: Complex Health Alterations 1 10543109, Mental Health & Community Concepts 10543110, Intermediate Clinical Practice 10543111, and Nursing Advanced Skills 10543112.

10543115 // 3 credits
Nursing: Advanced Clinical Practice
This advanced clinical course requires the student to integrate concepts from all previous courses in the management of groups of clients facing complex health alterations. Students have the opportunity to further develop critical thinking skills using the nursing process in making clinical decisions. Continuity of care through interdisciplinary collaboration is emphasized.
Prerequisites: Complex Health Alterations 1 10543109, Mental Health & Community Concepts 10543110, Intermediate Clinical Practice 10543111, and Nursing Advanced Skills 10543112.

10543116 // 2 credits
Nursing: Clinical Transition
This clinical experience integrates all knowledge learned in the previous courses in transitioning to the role of the graduate nurse. The course promotes relatively independent clinical decisions, delegation, and works collaboratively with others to achieve client and organizational outcomes. Continued professional development is fostered.
Corequisite: Nursing: Advanced Clinical Practice 10543115.

10543120 // 2 credits
Basic Nursing Skills
This course introduces the student to basic nursing skills. The role of the nurse in relation to infection control, hygiene, vital signs, safety, body mechanics, and meeting client's personal needs is the focus. PLEASE NOTE: Completion of this course will meet the prerequisite to be accepted into the Nursing program. However, completion of this course will not allow the student to work as a CNA.
Prerequisite: Student must have a health care clinical background to qualify for this class.

10543121 // 2 credits
Basic Skills Refresher
This course introduces the student to basic nursing skills. The role of the nurse in relation to infection control, hygiene, vital signs, safety, body mechanics, and meeting client's personal needs is the focus. PLEASE NOTE: Completion of this course will meet the prerequisite to be accepted into the Nursing program. However, completion of this course will not allow the student to work as a CNA.
Prerequisite: Basic Nursing Skills 10543120 or Nursing Assistant 30543300.

10543123 // 2 credits
Medical Nursing Refresher Theory
This course guides the student through the common medical diagnoses, highlighting the typical signs and symptoms and the usual collaborative treatment. The course identifies the most frequent complications that the nurse should be watching for in medical patients.
Prerequisite: 19 Nursing or Practical Nursing core credits or Registered Nurse or Licensed Practical Nurse license.

10543124 // 2 credits
Nursing Skills Refresher
This course reviews physical assessment knowledge/skills, the use of the nursing process utilizing care plans, and common psychomotor nursing skills. This course is primarily skills lab based.
Prerequisite: Medical Nursing Refresher Theory 10543123.

10543126 // 2 credits
Precepted Clinical Nursing Refresher
This course provides the student the opportunity for transition to the professional nursing role through an internship experience. Selected area health care agencies provide on the job training with experienced staff.
Prerequisites: Medical Nursing Refresher Theory 10543123 and Nursing Skills Refresher 10543124.

10543127 // 1 credit
Review of Psychiatric Nursing
This course assists the student to review the basic aspects of psychiatric nursing, and explore more complex issues within this area of nursing. This course designed for students to become more familiar with psychiatric nursing.
Prerequisite: 19 Nursing or Practical Nursing core credits or Registered Nurse or Licensed Practical Nurse license.

10543128 // 1 credit
Review of Obstetrical Nursing
This course assists the student to review the basic aspects of obstetrical nursing and to explore more complex issues within this area of nursing. This course is designed for students to become more familiar with obstetrical nursing.
Prerequisite: 19 Nursing or Practical Nursing core credits or Registered Nurse or Licensed Practical Nurse license.

10543129 // 2 credits
Transition from LPN to AND
This course introduces Licensed Practical Nurses (LPNs) to the Associate Degree Nursing (ADN) program. Strategies for success, role transition, the nursing process assessment of patients, and advanced technical skills are discussed.

10543131 // 2 credits
Intro to Critical Care Nursing
This course introduces students to the nursing responsibilities associated with the critical care environment. Students discuss hemodynamic monitoring such as arterial lines, pulmonary artery lines and central venous pressure lines, and how values can be affected by physiological changes. Students will investigate modes of ventilatory assistance with associated blood gases, as well as cardiac dysrhythmias and resuscitation roles. Students will also examine stressors upon patients, families, and staff nurses as a result of the critical care environment.
Prerequisite: Advanced Anatomy & Physiology 10806179.

10543132 // 2 credits
Caring for People at the End of Life
This course covers topics relevant to nursing care at the end of life including mental health, spiritual issues, and symptom management such as pain control and other comfort measures. Additional topics include communication strategies, bereavement techniques, and introduction to ethical decision-making.

10543133 // 2 credits
Intro to Gerontology
This course gives students an opportunity to explore the area of gerontology, which focuses on the care of older adults. The specialized health needs of older adults involve areas such as living with chronic disease, promoting mobility, encouraging healthy behaviors, and problems associated with treatments for disease such as chronic pain and multiple medications. Attention is given to managing the losses associated with aging and the importance of family and social support systems. Legal and ethical issues related to the care of the older adult is also explored.

10543135 // 2 credits
Nursing Leadership, Ethics, and Action
This course introduces students to leadership concepts such as communication, delegation, collaboration, and professional behavior. Also discussed is ethical responsibilities such as honesty, integrity, informed consent, the underserved, human rights, violence toward others, resource allocation, impaired professionals, reporting errors, and role delineation.

10543136 // 1 credit
Improving Test Taking Skills in Nursing
This course focuses on strategies to help a student improve written test taking skills in nursing. The focus of this course will be written multiple choice tests. Topics discussed will be what to do before a test, such as preparing and organizing notes, studying, and creating a personal plan for success. Also discussed will be information to use during a test such as tips to control test anxiety, the different personalities of test takers and suggestions for developing some tips to read questions more carefully, and eliminate wrong options.

10543137 // 2 credits
Womens Health Issues
Identification of health concerns for women focusing on physical changes, emotional and mental health needs, and commonly occurring health problems across the lifespan. Students will recognize differences in women's health needs among age, socioeconomic, and cultural perspectives.

10543139 // 2 credits
Introduction to Dementia
This course introduces the student to the different types of dementia, the changes in physiology, and the signs and symptoms associated with the onset of dementia. This course focuses on the principles of communicating and providing care to individuals with memory loss and confusion while learning the best practices for dealing with behavior changes, challenges with the activities of daily living, and strategies to assist caregivers.

10543150 // 2 credits
LPN Refresher Theory
This course reviews common medical diagnoses highlighting the typical signs and symptoms, the usual treatment medications, and complications. The course also covers the nursing process, infection control, recent trends in nursing techniques and responsibilities, the aging population, communication, documentation and reporting, and the scope of practice, including delegation and supervision.
Prerequisite: 19 Nursing or Practical Nursing core credits or Licensed Practical Nurse license.

10543151 // 2 credits
LPN Skills Refresher
This course reviews physical assessment skills aspects of safe medication administration, and a variety of psychomotor skills commonly performed by the LPN. The course is primarily skills-lab based.
Prerequisite: 19 Nursing or Practical Nursing core credits or Licensed Practical Nurse license.

10543152 // 2 credits
LPN Precepted Clinical Nursing Refresher
This course provides the LPN refresher student with the opportunity for "on-the-job" training. The student works directly with an LPN preceptor in a long-term care setting.

10543155 // 1 credit
Nursing Preparation for NCLEX
This course assists the student in identifying and analyzing his/her individual strengths and weaknesses in beginning nursing knowledge in an effort to better prepare the graduate to pass NCLEX. The student and the instructor will work together to identify problem areas and devise strategies to better utilize study time prior to attempting NCLEX.

10543163 // 2 credits
Development of Disease Processes
This course helps the student to recognize physiological changes leading to illness and disease. This course enhances the knowledge and understanding of cellular function so the student can correlate pathophysiology to clinical manifestations and the related diagnostic tests and treatment.
Prerequisite: General Anatomy & Physiology 1086177.

10543170 // 2 credits
Nursing: Introduction to the Operating Room
This course provides the RN or the Advanced Practice Nurse Practitioner with the foundational knowledge of infection control, asepsis, transport devices, basic instrumentation, sterilization/disinfection techniques, equipment and supplies, and basic information regarding drains, catheters, dressings, and sponges.
Prerequisite: Must be a registered nurse or have completed at least the second semester of the ADN program to be eligible for this course.

10543171 // 3 credits
Introduction to the RN First Assistant Role
The Registered Nurse First Assistant (RNFA) is a registered nurse who works in collaboration with the surgeon and the health care team members to achieve optimal patient care. This course builds upon the education of the registered nurse to learn the knowledge, judgment, and attitudes that include preoperative patient management, intraoperative surgical first assisting, and postoperative patient management. While independent nursing skills and judgment are essential to this practice, the intraoperative activities of the RNFA are interdependent and directed by the surgeon.
Prerequisite: Must be an RN and complete Intro to the Operating Room 10543170 or must be a registered nurse with previous operating room experience.

10543172 // 2 credits
Registered Nurse First Assistant Precepted Clinical
This course is an extension of the Introduction to the RN First Assistant (RNFA) course. This course provides the onsite clinical experience expanding on the role of the RNFA in preoperative patient management, intraoperative surgical first assisting, and postoperative patient management.

10543173 // 2 credits
Nursing Assistant-Acute Care
This two-credit course enhances the existing skillset of certified nursing assistants (CNAs) by providing proficiencies in professionalism, communication, patient safety, infection control, and wellness promotion necessary for work in an acute care setting. Increased employment opportunities in acute care settings and a smoother transition into the Practical Nursing and Associate Degree Nursing programs may also result. The 72-hour course, offered in a hybrid format to accommodate employment schedules, includes 36 hours of skills laboratory, 9 hours of e-learning content theory lecture labs, and 27 hours of clinical at a local acute care facility.
Prerequisites: Completion of a State-approved nursing assistant course and certification as a nursing assistant in good standing on the nurse aide registry.

30543300 // 3 credits
Nursing Assistant
The Nursing Assistant program prepares students for employment as nursing assistants. The program also prepares Nursing Assistant students with some of the skills needed for the first semester of the Nursing program. During the 120-hour course, students are required to demonstrate the following skills under the supervision of a licensed nurse: communication, basic nursing assistant and personal care skills, attention to client's rights, and care of clients with dementias. The program is recognized by the Wisconsin Department of Health Services as a nurse-aide training program. Upon successful completion of the program, the student is eligible to take the Wisconsin Nursing Assistant competency evaluation for employment in nursing homes, hospitals, home health agencies, hospices, CBRF's, assisted living centers, and homes for the developmentally disabled.
Prerequisite: Admission to Nursing Assistant 305431 program and Nursing Assistant Informational Session.

544 GERONTOLOGY

10544102 // 3 credits
Physical Aspects of Aging
Study of normal and pathological changes occurring in the aging human body with special emphasis on age-related chronic disease. Includes analysis of biological theories of aging and cultural and ethnic influence on aging pathologies.

10544103 // 3 credits
Healthy Aging
Overview of practices to promote healthy aging. This course addresses nutrition, physical activity, and prevention practices as well as medications commonly prescribed for the older adult. Emphasis is on practices to address current aging trends.

10544107 // 3 credits
Legal & Financial Issues of Aging
Covers concepts and structures involved in the legal and financial realm of gerontology including Power of Attorney for Health Care/Finance, guardianships, trusts, reallocation of assets, spending down, Medicare/ Medicaid benefits, supplemental insurance, Social Security, financial exploitation, and relevant governmental policy. Learners are able to apply knowledge by learning advocacy techniques to benefit senior populations on a community, local, and federal level.

10544108 // 3 credits
Developing the Gerontology Professional
Exploration of effective communication styles and interview techniques for developing rapport and relationships with aging populations. Other topics included ethics and boundaries, self-determination, case management, documentation skills, research, and grant funding.

10544109 // 3 credits
Programs & Services in Aging
Students learn resources available in the community, eligibility criteria, and how to access and coordinate services for seniors. Supplementing social networking and enhancing mental health functioning for the aging population are also discussed. Students will explore different career fields within gerontology.

10544111 // 3 credits
Gerontology Internship
Students will integrate concepts from completed coursework through supervised work experiences in appropriate settings.
Prerequisites: Intro to Social Gerontology 10809130, Healthy Aging 10544103, Physical Aspects of Aging 10544102, Intro to Dementia 10543139, Legal and Financial Issues of Aging 10544107, and Developing the Gerontology Professional 10544108. Corequisites: Programs & Services in Aging 10544109 and Generations & Diversity in Aging 10809132.

546 HEALTH AND WELLNESS

10546100 // 3 credits
Essential Concepts for Health and Wellness
An introductory course including basic health and wellness promotion principles at the individual level; basic principles include physical, mental, and spiritual. Students explore a holistic view of health and wellness concepts covering healthy lifestyle choices, managing stress, individual wellness perspective, and how economics can positively and negatively impact the health and wellness of an individual.

10546101 // 3 credits
Nutrition for Healthy Living
Students learn concepts of healthy eating to facilitate the journey of good health across the lifespan. Healthy eating concepts focus on individual decision making and behavior change with sustainable interventions rooted in evidenced based practice. Students investigate nutrition myth versus fact and explore how policy and environment impact nutritional choice.

10546102 // 3 credits
Behavior Change for Wellness
This course examines the importance of understanding the theory of behavior change to assist others in overcoming barriers so they may achieve sustainable behavior change. A beginning skill set including how to advise individuals on goal setting, strategy planning, and encouraging maintenance of health and wellness goals will be refined.

10546103 // 3 credits
Principles of Physical Conditioning
Quality of life improvement and encouraging others to maximize health and wellness potential through physical conditioning are emphasized. The effects of physical exercise on body systems and functioning are explored including specific exercises for balance, endurance, strength, and weight loss. Special populations and considerations are highlighted throughout the course.
Prerequisite: General Anatomy & Physiology 10806177.

10546104 // 3 credits
Population Health & Wellness
The components and attributes of population health are examined including economic and policy implications for population-based health promotion activities. The student will take a closer look at measures including interventions and programming that support the health of the community.

10546105 // 3 credits
Program Development, Implementation, & Evaluation
The student will acquire the skill set to develop, implement, and evaluate a health and wellness promotion project at the individual or community level. Components of health and wellness promotion program building include the needs assessment, marketing principles, the role of leadership, continuous quality improvement, economics, and collaborations to ensure a successful program.
Prerequisites: Essential Concepts for Health & Wellness 10546100, Behavior Change for Wellness 10546102, Principles of Physical Conditioning 10546103, and Nutrition for Healthy Living 10546101. Corequisite: Population Health & Wellness 10546104.

10546106 // 2 credits
Health & Wellness Practicum
Practical experience empowers the student to apply concepts from previous coursework to assist in the transition to the role of community health promoter. The practicum location is chosen in collaboration with faculty based on student interest and site availability. The student works closely with an approved preceptor and faculty to accomplish individualized learning goals.
Prerequisites: Essential Concepts for Health & Wellness 10546100, Behavior Change for Wellness 10546102, Principles of Physical Conditioning 10546103, and Nutrition for Healthy Living 10546101. Corequisites: Population Health & Wellness 10546104 and Program Development, Implementation, & Evaluation 10546105.

558 CLINICAL RESEARCH COORDINATOR

10558101 // 3 credits
Intro to Clinical Research
This course provides a comprehensive introduction to the clinical research process and its history and evolution. Topics include phases of clinical trials, protection of human subjects, roles of the clinical research teams, and responsibilities of clinical research organizations. Upon completion, students are able to prepare an organizational chart depicting a typical research team, defining the roles or responsibilities of each member. Students are able to describe the product approval process and discuss the general conduct of a typical clinical trial.
Corequisite: Medical Terminology 10501101.

10558102 // 2 credits
Electronic Medical Records for CRC's
Course introduces students to the electronic medical record (EMR) as a technology-based representation of health care data integration from a participating collection of varied systems for a single patient. Course covers emerging use of the electronic medical record, an overview of EMR, applications, benefits and barriers to its use, ontologies, vocabularies, principles of implementation, health information exchange, standards, privacy, security, information retrieval, digital libraries, and image management.
Prerequisites: Medical Terminology 10501101, General Anatomy & Physiology 10806177, and Medical Records 10530111.

10558103 // 3 credits
Epidemiology
Course introduces students to the basic concepts and principles of the study of the distribution and determinants of health-related states or events in specified populations and the application of this study to the control of health problems. Topics include history of epidemiology, classification of disease, epidemiological measurement, outbreak investigation, study design, bias, and causality. Various epidemiologic study designs for investigating associations between risk factors and disease outcomes are also introduced, culminating with criteria for casual inferences. The application of these disciplines in the areas of health services, screening, genetics, and environmental policy are presented. The influence of epidemiology and biostatistics on legal and ethical issues is also covered.
Prerequisite: Medical Terminology 10501101. Corequisite: Introductory Statistics 10804189.

10558104 // 3 credits
Legal & Regulatory Research Compliance
Course covers the range of national and international regulations and guidelines governing the development of drugs, diagnostics, medical devices, and biologics. Topics include a review of regulatory agencies, guidelines for regulatory application, required documentation, and protection of human subjects. Specific topics include ICH Guidelines; FDA, IND, and IDE regulations; IRB and IEC activities; HIPAA; Human Subject Protection/ Informed consent; and other rules and regulations. Upon completion, students should be able to demonstrate a basic understanding of regulations, guidelines, and legal issues associated with clinical research, and describe effective means of compliance.
Prerequisites: Admission to Clinical Research Coordinator 105581 program, Intro to Clinical Research 10558101 and Medical Terminology 10501101.

10558105 // 3 credits
Clinical Research Management
This course introduces the student to the elements involved in implementing, monitoring, and managing a clinical study from the perspective of the sponsor or contract research organization (CRO). Topics include overall project planning, development of study goals, preparation of budget and contracts, implementation of monitoring visits, and effective management of research sites. Upon completion, student should be able to design and prepare a plan for implementation and management of a sample clinical research project.
Prerequisites: Admission to Clinical Research Coordinator 105581 program, Intro to Clinical Research 10558101, Medical Terminology 10501101, and Technical Reporting 10801197.

10558106 // 3 credits
Genetics
This course introduces students to the progression of genetic discovery including evolving legal and ethical implications. Topics covered include Mendelian genetics, post-Mendelian genetics, population genetics, molecular genetics, DNA structure, replication, transcription and translation, and current DNA technologies.

10558107 // 2 credits
Clinical Research Coordinator Practicum
The student will have supervised work experience in a clinical setting at various research sites agreed upon by the instructor and student. Emphasis is on the observation, performance and enhancement of professional and management skills, interactive team communication, and the application of research principles, procedures, and regulations in the workplace.
Prerequisite: Admission to Clinical Research Coordinator 105581 program.

10558108 // 3 credits
Healthcare Leadership, Ethics, & Application
Course introduces students to leadership concepts and ethical foundations applicable to a health care environment. Leadership concepts include communication, collaboration, delegation, conflict management, problem-solving, and professional behavior. Ethical foundations include integrity, honesty, the nature of moral judgments, and respect. Application of leadership concepts and ethical responsibilities involves working with the entire health care community including underserved and vulnerable populations. Other topics addressed include ensuring informed consent, human rights, violence toward others, resource allocation, impaired professionals, reporting errors, and role delineation. May substitute Intro to Ethics: Theory and Application 10809166.

10558109 // 3 credits
CRC Lab & Clinical Procedures
This course prepares the student to perform comprehensive research participant baseline assessments, drug accountability, blood draws, lab preparation, and shipping.
Prerequisites: Admission to Clinical Research Coordinator 105581 program, Intro to Clinical Research 10558101, Epidemiology 10558103, Legal & Regulatory Research Compliance 10558104, and General Anatomy & Physiology 10806177. Corequisite: Microbiology 10806197.

10558110 // 3 credits
CRC Clinical Experience
Learners supervised clinical work experience in a research setting. Emphasis is on the observation, performance, and enhancement of professional and management skills, interactive team communication, and the application of research principles, procedures, and regulations.

605 ELECTRONICS TECHNOLOGY

10605100 // 4 credits
Process Measurements I
Reviews basic principles and calibration standards and practices developed in Instrument Mechanics. Common sensing devices and components employed for the measurement of pressure, temperature, flow, level, and their related phenomena are studied.
Prerequisite: Instrument Mechanics 10605102 with a grade of "C" or better.

10605101 // 3 credits
Electrical-Special Topics for Business & Industry
This course may be offered for a variety of topics related to electrical systems. Topics may include: Each course may be offered for up to 3 credits.

10605102 // 3 credits
Instrument Mechanics
An introductory course into instrumentation emphasizing a functional and mathematical approach to the use and study of various pneumatic instruments and principles. Identifies the duties and functions of instruments and their components. Calculations of springs, force balance, moment balance, and an introduction to pressure measurement and controllers.
Corequisite: Intermediate Algebra with Applications 10804118.

10605104 // 3 credits
Process Measurements II
This course covers analog and digital electronic transmitters and controllers, pulp and papermaking, pH, conductivity, ORP, and concludes with a study of basic nuclear theory.
Prerequisites: Process Measurements 1 10605100 and Instrument Mechanics 10605102.

10605105 // 3 credits
Electrical Circuits I
An introduction to AC/DC electricity and the physical laws that apply to electronic circuits. Direct Current (DC) covers basic definitions of voltage, current, and resistance and analysis of series and parallel resistive circuits. Alternating Current (AC) includes an introduction to AC generation, capacitors, inductors, and transformers and their applications in electronic circuits. Approximately 50% of the course is spent in the laboratory applying the principles and theory presented in the classroom.
Corequisite: Intermediate Algebra with Applications 10804118.

10605107 // 3 credits
Microprocessors
Introduces students to the basic operation of microprocessors. Begins with an introduction to the basic concepts of architecture and programming. Covers various types of instructions required to perform operations that are basic to microprocessors. Concludes with more advanced programming techniques, interfacing, and microprocessor hardware.
Corequisite: Digital Integrated Circuits 10605151.

10605108 // 2 credits
Intro to Electronics
This course presents a survey of electricity and electronics which includes lab activities and is designed for persons wishing to learn some of the basics of electricity and electronics. It is an excellent refresher course to get back into electronics or improve a skills list. The course is intended for persons where electronics has become a part of their regular occupation and a need exists to identify various electronic components and perform basic tests using test equipment such as multimeters and oscilloscopes. The course covers concepts and applications of DC and AC electricity, semiconductor components, and digital devices using basic math skills.

10605110 // 3 credits
Electrical Circuits II
This course continues the study of AC/DC circuits started in Electrical Circuits I. Advanced DC circuit analysis techniques such as Thevenin's Theorem and Node analysis are introduced. AC circuit analysis includes discussion on voltage and power theorems used in the analysis of circuits consisting of both resistance and reactance. The complex plane and construction of phase diagrams are also discussed. The course concludes with an introduction to electronic filter circuits used in transmission and communication equipment. Approximately 50% of the course is spent in the laboratory applying the principles and theory presented in the classroom.
Prerequisite: Electrical Circuits I 10605105 with a grade of "C" or better. Corequisite: Trigonometry with Applications 10804196.

10605115 // 3 credits
Basic Electronics
Presents semi-conductor principles with emphasis on practical applications. After reviewing diode and transistor characteristics, bias stabilizing techniques are studied, followed by an introduction to transistor amplifiers.
Corequisite: Electrical Circuits II 10605110.

10605116 // 4 credits
Instrumentation Electronics
A basic course in industrial electronics involving devices and circuits that relate to the field of instrumentation. Includes a basic review of electronic and electrical fundamentals. Additional topics include power supplies, operational amplifiers, servo mechanisms, relay ladder logic, PLCs, motor control devices, variable frequency drive, single and 3 phase, 110 volt, 220 volt, and 480 volt generation and usage.
Prerequisite: Basic Electronics 10605115 with a grade of "C" or better.

10605117 // 3 credits
Programmable Logic Controllers-Beginning
An overview of programmable logic controllers (PLCs) which provides a foundation of knowledge of the programming techniques, operation, and maintenance of PLCs used in typical industrial automation.

10605118 // 3 credits
Programmable Logic Controllers-Advanced
This lab-intensive course is a continuation of the beginning PLC course designed to build advanced PLC skills. Activities in advanced programming techniques, motor control and operator interfaces may be included. This course may be offered for 1-3 credits. Check with the course instructor for specific competencies to be covered each semester.
Prerequisite: Programmable Logic Controllers-Beginning 10605117 or consent of instructor.

10605120 // 3 credits
Electrical Power Science
An introduction to the field of electrical power technology. Covers the power generation process, transmission techniques, and networks. Topics include prime energy sources, converting raw energy into electrical energy, metering electricity, and disbursing electrical energy from generation plant to consumer.

10605122 // 4 credits
Electrical Power Generation
A study of equipment and facilities utilized in the production of electricity. Topics include fuels, prime mover turbines, and generators. Emphasis is on safety controls, efficient production, and operational procedures. The course concludes with computer-simulated operation of a large power station boiler.
Prerequisite: Electrical Power Science 10605120.

10605124 // 3 credits
Electrical Power Transmission
This course covers the basic principles of high-voltage transmission of electrical energy. Students are introduced to the concepts of active, reactive, and apparent power in electric power technology. Basic properties of single- and three-phase transformers and their importance to power transmission are discussed. The behavior of ideal and practical (or non-ideal) transformers are used as a building block to explain the electrical function of a transformer in many transmission circuits. Basic mechanical (e.g., supporting structures, line sag, galloping, the effect of weather) and electrical (e.g., corona, pollution, insulation, lightning) requirements that must be met for successful power transmission over large distances are discussed. Approximately 50% of the course is spent in the laboratory working with equipment that simulates power transmission.
Prerequisites: Electrical Machines 10605127 and Electrical Power Distribution 10605125.

10605125 // 4 credits
Electrical Power Distribution
Designed to teach the principles of distribution systems and substations. Covers wire capacity, sag, guying, supporting structures, troubleshooting, insulators, lightning arresters, switches, recloser and power circuit breakers. Students also do an exercise applying distribution standards of an actual utility to the building and design of a power line on paper.
Prerequisites: Electrical Circuits I 10605105 and Electrical Power Generation 10605122.

10605127 // 3 credits
Electrical Machines
Designed to teach fundamentals of generators and motors. Covers DC and AC generators and motors.
Prerequisite: Electrical Circuits I 10605105 or Intro to Electronics 10605108.

10605129 // 1 credit
Industrial Career Development
This class assists students enrolled in industrial programs prepare their existing resume and application materials for specific career opportunities in their associated field of study. Individual guidance and mentoring provides more directed preparation towards beginning their career path.
Corequisite: Career Development 10102130 or consent of instructor.

10605130 // 3 credits
Industrial Internship
This course is designed for second-year associate degree students to gain experience working in their program field. This course may be taken for 1 to 3 credits where approx. 80 hours of relevant industry work is required per course credit. Check with your program advisor for detailed reporting requirements for this course.
Prerequisite: Completed approximately 50% of a Technical or Industrial AAS program.

10605135 // 1 credit
Supervised Occupational Field Experience
This course integrates classroom study with industry specific occupational experience. It provides the student with practical, on-the-job work experience through competencies that are planned, supervised, and evaluated by the instructor and/or a cooperating industry trainer.
Prerequisite: Consent of instructor.

10605140 // 3 credits
Electrical Circuit Fundamentals
This course provides an introduction to AC/DC electricity and the physical laws that apply to electronic circuits. Direct Current (DC) covers basic definitions of voltage, current, resistance, and analysis of series and parallel resistive circuits. Alternating Current (AC) includes an introduction to AC generation, capacitors, inductors, and transformers and their applications in electronic circuits. You need to complete the following units on the Fault Assisted Circuits for Electronics Training (FACET) system in order to get credit for the course DC Fundamentals and AC 1 Fundamentals. This is an independent study course that is taken on a computer. You can complete the course on any of MSTC's four locations, but once you start the course at a particular location you need to continue and finish it at that campus. The course is set up on the computer and includes both the theory and the laboratory portions. You are expected to complete the course work with minimal supervision.

10605141 // 3 credits
Circuit Analysis Fundamentals
This course continues the study of AC/DC circuits started in Electrical Circuits I. Advanced DC circuit analysis techniques such as Thevenin's Theorem and Node analysis is discussed. Advanced AC circuit analysis includes an introduction to phasor analysis and complex circuits. The course concludes with an introduction to electronic filter circuits used in communication equipment. You need to complete the following units on the Fault Assisted Circuits for Electronics Training (FACET) system in order to get credit for the course DC Network Theorems and AC 2 Fundamentals. This is an independent study course that is taken on a computer. You can complete the course on any of MSTC's four locations, but once you start the course at a particular location you need to continue and finish it at that campus. The course is set up on the computer and includes both the theory and the laboratory portions. You are expected to complete the course work with minimal supervision.
Prerequisite: Electrical Circuit Fundamentals 10605140.

10605142 // 3 credits
Semiconductor and Transistor Fundamentals
This course presents semi-conductor principles with emphasis on practical applications. Diode and transistor characteristics and bias stabilizing techniques are studied followed by an introduction to transistor amplifiers. You need to complete the following units on the Fault Assisted Circuits for Electronics Training (FACET) system in order to get credit for the course Semi Conductor Fundamentals, Transistor Amplifier Circuits and Transistor Power Amplifiers. This is an independent study course that is taken on a computer. You can complete the course on any of MSTC's four locations, but once you start the course at a particular location you need to continue and finish it at that campus. The course is set up on the computer and includes both the theory and the laboratory portions. You are expected to complete the course work with minimal supervision.
Prerequisite: Circuit Analysis Fundamentals 10605141.

10605150 // 3 credits
Linear Circuitry
Continues the study of semi-conductors including the frequency effects in multi-stage amplifiers. Operational amplifiers theory and the effects of negative feedback on operational amplifiers is studied. The application of operational amplifiers in various linear and nonlinear circuits are also discussed. Regulated power supplies, oscillators, and timers are analyzed. Frequency mixing and signal modulation will be studied after an introduction to the frequency domain.
Prerequisite: Basic Electronics 10605115 with a grade of "C" or better.

10605151 // 3 credits
Digital Integrated Circuits
The logical theory and application of digital integrated circuits are studied with regard to individual chip functions and their interconnections to build digital circuits. Techniques used in the analysis of digital ICs include number systems, Boolean algebra, and Karnaugh mapping techniques. Student experimentation utilizes standard industrial integrated circuit families to reinforce the analysis and techniques of circuit operation.
Corequisite: Basic Electronics 10605115.

10605152 // 3 credits
Control Circuits & Systems
Provides knowledge of basic automatic control systems used in industry. Includes such systems as power and motor control, photoelectric devices, servomechanisms, and operation amplifier applications. The student is introduced to basic industrial closed loop system control including on/off, proportional, PI, and PID modes. Emphasis is on hands-on applications of the above principles. Basic SCR applications involving AC inverter and DC phase controlled motor drives are discussed and applied using "real world" equipment in the laboratory. Industrial safety is stressed throughout the course.
Prerequisite: Digital Integrated Circuits 10605151. Corequisite: Microprocessors 10605107.

10605160 // 3 credits
Computer Systems
This course is designed to teach the basic operations of a computer. The course emphasizes the electronic components used in computers with an emphasis on the processor. The fundamental relationships between components will be presented to form a strong foundation in computer hardware. In addition to formal lecture periods, a laboratory period will be utilized to give "hands-on" time so the student can analyze actual computer components, circuits, and assemblies. Computer usage during lab periods will give the student experience with computers.
Corequisite: Digital Integrated Circuits 10605151.

10605161 // 3 credits
Computer Systems Design
The course trains the student to start with a basic computer system and expand its operating capabilities. Units cover basic system devices using standard industrial integrated circuits. Processor and memory timing is examined to explain the basic operating theory of computer systems. Various memory technologies are studied to determine appropriate memory expansion procedures. The DMA Direct Memory Access Integrated Circuit is also studied as an example of peripheral to memory data transfers. The course gives ample hands-on time in the laboratory for circuit construction and evaluation. Troubleshooting procedures are examined as each unit is developed.
Prerequisite: Computer Systems 10605160.

10605162 // 3 credits
Input-Output Devices & Storage
Deals with specific peripheral devices encountered in all computer systems regardless of the system type or application. Emphasis is placed on the theory of computer interfacing, and on various troubleshooting methods used in computer maintenance. Performance evaluation is studied using diagnostic routines when possible. Testing methods are explained and used including the use of machine code routines. The purpose of this type of approach is to give the student substantial hands-on experience in all major input/output hardware areas.
Prerequisite: Computer Systems 10605160.

10605163 // 3 credits
Computer Applications
The course covers main topic areas in a progressive format. The initial unit introduces the student to operating system functions and system operations. After a level of user proficiency is reached the system architecture will be covered on a functional block diagram level. Additional topics such as system setup and configuration, troubleshooting, and various repair procedures are also addressed.
Prerequisite: Computer Systems 10605160.

10605164 // 1 credit
Electronics Fabrication 1
This course provides hand-on activity in the design and construction of electronic equipment. Topics include but are not limited to circuit design, schematics, printed circuit board layout, and fabrication. The course includes projects designed to apply your knowledge of electrical theory to real-world applications.
Prerequisite: Intro to AutoCAD 10623106. Corequisite: Basic Electronics 10605115.

10605165 //1 credit
Electronics Fabrication 2
This course is a continuation of Electronics Fabrication 1 in which you will assemble, test, and troubleshoot your electronics projects. Topics include but are not limited to surface mount technology, soldering techniques, and troubleshooting. A formal presentation and demonstration of a working project is expected.
Prerequisite: Electronics Fabrication 1 10605164.

10605170 // 4 credits
Electrical Power System Protective Relaying
A study of controlling devices and systems utilized in generation, distribution, and transmission of electricity. Students study instrument transformers, protective relays, protective systems, power system standards, drawing conventions, equipment rating terminology, insulation, circuit interrupting devices, grounding, and power system faults.
Prerequisite: Electrical Machines 10605127.

10605171 // 4 credits
Process Control
Introduces the concept of automatic process control on the instrument technician level. Reviews principles of force/moment balance and feedback concepts. Studies two position control, feedback/feedforward control, and process characteristics related to process gain, dead time, time constants, and process capacity. Studies controller functions and effects such as proportional, integral, and derivative, and how different combinations of each cause controller outputs and inputs to respond in open and closed loops. Practices digital controller configuration and loop tuning for level, pressure, flow, and temperature.
Prerequisites: Instrument Mechanics 10605102 and Process Measurements I 10605100.

606 MECHANICAL TECHNOLOGY

10606107 // 3 credits
CAD
This course is designed to acquaint students with Computer Assisted Drafting (CAD) systems and their use as drafting tools. The areas of emphasis are terminology, types of systems, use of keyboard and mouse, and creation of two-dimensional mechanical drawings.
Prerequisite: Mechanical Drafting Concepts 10606142.

10606109 // 2 credits
Geometric Dimensioning & Tolerancing
Provides fundamentals of geometric dimensioning and tolerancing (GD&T) per the ASME Y14.5M standard. The development of the technical knowledge and skills required for application and interpretation of GD&T is the focus of the course. Design requirements for functional gages and other methods used to verify GD&T specifications are also presented.

10606110 // 3 credits
Descriptive Geometry
Covers the theory of projection and the solution by graphical methods of problems dealing with the relation to points, lines, and planes. Revolutions, intersections, and developments are included. Practical application problems are used to supplement course theory.

607 CIVIL ENGINEERING TECHNOLOGY

10607100 // 3 credits
Civil Engineering - Special Topics
This course is offered on a variety of topics related to civil engineering technology. Topics include AutoCAD and GIS. Each course may be offered for up to three credits.

10607110 // 4 credits
Cemented Aggregate Mixtures
Inspection/testing concepts, sampling procedures, aggregate properties, PCC mix design methods, HMA design, and field laboratory quality control testing. ACI Grade I and WisDOT PCCTEC certifications are available through this course.
Corequisite: Trigonometry with Applications 10804196.

10607117 // 2 credits
GIS Fundamentals
This course is an introduction to geographic information systems (GIS), and how they are used to document and convey information that has a spacial component. Students use GIS software to create, manipulate, and present geographic information.
Prerequisite: Civil Engineering Drafting I 10607150.

10607118 // 1 credit
Land Records
This course focuses on the interpretation of land documents; this includes property descriptions, the Public Land Survey System, meridians, angle measurements, and line direction formats used by surveyors.
Corequisite: Intro to Surveying 10607155.

10607138 // 3 credits
Highway Construction Materials
This course covers properties and field testing procedures for materials used in highway construction. Material properties of aggregates, bituminous materials, and Portland cement are evaluated individually and as mixtures. Proportioning materials in mixture design, construction methods, curing, material testing, and the interrelationship of these topics are evaluated in this course.
Prerequisite: Intermediate Algebra with Applications 10804118.

10607145 // 3 credits
Soils
This course covers the general classification and properties of soil and subsurface materials. Subsurface exploration soil tests and hydraulic principles are covered as used in the field of civil engineering. Laboratory techniques are developed for testing and classifying soil and aggregate.
Corequisite: Intermediate Algebra with Applications 10804118.

10607149 // 3 credits
Highway Bridges, Medians, & Barriers
The processes, considerations, and safety aspects of constructing and maintaining highway bridges, medians, and barriers are covered. Includes investigation of structural loads, stress factors, and valid design procedures for these critical components of today's modern roads and highways.
Prerequisite: Highway Surveying 10607171. Corequisite: Inspection 10607167.

10607150 // 3 credits
Civil Engineering Drafting I
Provides fundamentals necessary for using Civil Engineering software to create subdivision, property, traverse, topographic, and contour drawings. Information collected in Surveying - Total Station is downloaded onto the computer to create drawings.
Prerequisite: Intro to AutoCAD 10623106. Corequisites: Intermediate Algebra with Applications 10804118 and Intro to Surveying 10607155.

10607152 // 2 credits
Civil Engineer & Highway Internship
The job experience gained through supervised on-the-job activities directly related to the Civil Engineering Technology-Highway Technician program builds upon and enhances the students' understanding of theories and concepts learned in their first year of the program and provide insight into their future courses within the program.

10607155 // 2 credits
Intro to Surveying
Covers fundamental principles of surveying and the use of surveying instruments in the application of these principles. Topics include measurement of horizontal distances, care and use of survey equipment, note keeping, differential leveling, angular measurement, and surveying field procedures. Actual field problems supplement classroom instruction.
Corequisite: Intermediate Algebra with Applications 10804118 and Intro to AutoCAD 10623106.

10607156 // 3 credits
Surveying–Total Station
Advanced principles of surveying and use of surveying instruments are covered. Topics include land surveying, calculation and layout of vertical and horizontal curves, and topographic surveys using transits and Total Stations. The data collected is downloaded onto computers for use in Civil Engineering Drafting I. Actual field problems supplement classroom instruction.
Prerequisites: Intro to Surveying 10607155. Corequisite: Trigonometry with Applications 10804196 and Civil Engineering Drafting I 10607150.

10607160 // 2 credits
Civil Engineering Drafting II
Expands on topics learned in Civil Engineering Drafting I. Covers fundamentals necessary for creating a set of highway plans. Drawings include the development and design of alignments, profiles, cross-sections, and earthwork calculations. In addition, design information is downloaded from the computer to the Total Station to be used for staking.
Prerequisites: Civil Engineering Drafting I 10607150 and Intro to Surveying 10607155.

10607166 // 3 credits
Construction Estimating & Management
Goals and performance of quantity takeoff, cost estimation, resource leveling, estimating labor, and contract interpretation are presented. Project bidding, construction techniques, and equipment capabilities are evaluated.
Prerequisites: Microsoft Office-Introduction 10103106, Problem Solving and Critical Thinking 10623100, and Intro to AutoCAD 10623106.

10607167 // 2 credits
Inspection
Concerns construction inspection and its importance, the role of the inspector, requirements for a good inspector, and general duties of the inspector. Emphasis is on concrete and asphalt inspection.
Prerequisite: Intro to Surveying 10607155.

10607170 // 3 credits
Storm Water Management
Emphasis is on stormwater management, calculations, planning, and design. Topics include open channel and pressure flow, storage and treatment facility design concepts, and regulation, permitting, and enforcement for sanitary and stormwater ordinances.
Prerequisite: Civil Engineering Drafting I 10607150.

10607171 // 2 credits
Highway Surveying
Principles of geometric design of highways, including horizontal curves, vertical curves, superelevation, and using station/offset orientation. Also includes basic design principles of airports, railways, and pipeline design. Evaluation of existing traffic and designing for future needs are included.
Prerequisites: Trigonometry with Applications 10804196, Civil Engineering Drafting I 10607150, and Intro to Surveying 10607155.

10607174 // 2 credits
GPS for Surveyors
Basic operation of survey-grade GPS equipment and equipment limitations are explored. Emphasis is on data collection, stakeout, and performing calculations with a hand-held data collector. Interaction of design team and surveyors is discussed.
Prerequisite: Intro to Surveying 10607155.

10607180 // 2 credits
Civil Engineering Capstone
The civil engineering capstone class is a project-based learning experience which allows students to integrate and demonstrate their civil engineering drafting, design, and survey skills by applying them to a specific engineering problem. Students collaborate in teams to apply their problem solving and technology skills to a design experience. Working in collaboration with a faculty member, students plan, produce, document, and present quality engineering designs. Students should be in their last semester of the Civil Engineering Technology program to enroll in this class.
Prerequisites: Civil Engineering Drafting II 10607160, Storm Water Management 10607170, and Highway Surveying 10607171.

623 INDUSTRIAL MANUFACTURING TECH

10623100 // 1 credit
Problem Solving & Critical Thinking
Introductory course in problem setup, organization, and solution. Identification of given and unknown values, equation setup, unit conversions, and use of significant figures. Introduction to physical science; working with units of force, area, volume, time, and distance in metric and imperial systems. This course is designed to help you be successful in technical and engineering classes and should be taken during your first semester of enrollment.

10623101 // 3 credits
Intro to Manufacturing
This course is designed to introduce the student to manufacturing. This course may be repeated for a maximum of three credits.

10623102 // 3 credits
Safety - Special Topics
This course provides an overview of occupational safety and health compliance procedures emphasizing areas such as hazard communication, lockout/tagout, confined space entry, personnel protective equipment, machine guards, and hand and portable tools.

10623103 // 3 credits
Industrial Controls - Special Topics
This course may be offered for a variety of topics related to industrial process controls. Topics may include instrumentation, calibration, measurement, control loops, and specialized devices. Each course may be offered for up to three credits.

10623104 // 3 credits
Mechanical Drafting Concepts
Drafting media, drafting standards, reproduction processes, geometric construction, isometric and oblique pictorial drawings, dimensioning, tolerancing, parts drawing, and part identification are included in this course.

10623105 // 1 credit
Blueprint Reading
Provides basic general information in reading and understanding plans and drawings that are useful to vocational students with any major. Focusing on line and symbol conventions used in industrial blueprints and visualization of solid objects from orthographic and isometric projections, the course leads to development of required skills for industrial design and problem solving.

10623106 // 2 credits
Intro to AutoCAD
This is an introductory course in computer aided drafting (CAD) using AutoCAD software. It provides foundation skills in using CAD software to create and print two dimensional technical drawings. This course is available to students in any program. Computer skills and prior knowledge of drawing/drafting techniques is recommended.

10623107 // 3 credits
Advanced CAD
This course is a continuation of the principles learned in Intro to AutoCAD 10623106. Students interact with the CAD software to create advanced mechanical drawings. It begins with a review of the various types of pictorial drawings, continues with isometric drawing, and culminates with the production of three-dimensional drawings. Surface models and solid models aer drawn and shaded using the AutoCAD software.
Prerequisite: Intro to AutoCAD 10623106.

10623110 // 3 credits
Quality Assurance Concepts & Techniques
Quality organizations and programs, analysis under unstable conditions, criteria and methods of control charting means, comparison of various sampling plans, statistical process control methods, codes, specifications, safe applications of equipment, and qualifications of personnel are covered.
Prerequisite: Intermediate Algebra with Applications 10804118.

10623111 // 3 credits
Special Topics in Metrology
This course covers advanced topics such as piping and weldment drawings using CAD techniques. Specification techniques and detail and assembly drawings may also be covered, as well as Geometric Dimensioning and Tolerancing.
Prerequisite: Mechanical Drafting Concepts 10606142 or consent of instructor/dean.

10623112 // 3 credits
Manufacturing Practices
As competition for market share continues to increase, manufacturers rely on innovations in technology, methods, and practices to give them the edge they need. To remain competitive globally, manufacturer's watchwords are productivity, efficiency, and quality. In this course, students examine some of the practices that many manufacturing operations have come to rely on to make their operations competitive, efficient, and cost-effective. Topics covered in this class include the principles of lean manufacturing, value versus non-value added waste, 5S's, value stream mapping, set-up reduction and quick changeover, cellular flow, building a lean culture, total productive maintenance, and Statistical Process Control (SPC).

10623121 // 5 credits
Intro to Composites in Blade Manufacturing
This course provides an introduction to wind turbine blade manufacturing using composite materials. Students perform hands-on activities with fabric, epoxy and chemicals. This is the first course in a series of three courses in composite blade manufacturing.

10623122 // 5 credits
Composite Blade Molding
This course provides hands-on activities in glass laying, infusion, and de-molding to further develop the understanding of composites and wind turbine blade manufacturing utilizing an 8m blade training mold. The student learns how to be part of a manufacturing team. This is the second in a series of three blade manufacturing courses.
Prerequisite: Intro to Composite Blade Manufacturing 10623121.

10623123 // 5 credits
Composite Blade Finishing
This course provides skill development in trimming, sanding, and fairing of wind turbine blade utilizing an 8m blade. The student learns how to be part of a manufacturing team. This is the third in a series of three blade manufacturing courses.
Prerequisite: Composite Blade Molding 10623122.

10623130 // 4 credits
Standards & Metrology
The reason for and the language of measurement. Precision, accuracy and reliability. Measurement systems and the evolution of standards. Some common measurement tools and techniques, applications, comparisons, and accuracies of these tools will be covered. Codes, inspection standards, and testing procedures are introduced. Learning environment will include class discussion, laboratory experiments in measurement and gauging, analysis of generated data, reports, and project work.
Prerequisite: Quality Assurance Concepts & Technique 10623110.

10623133 // 4 credits
Manufacturing Materials and Processes
This course introduces the properties and uses of engineering materials. Materials discussed include metals, alloys, ceramics, woods, polymers, and composites. Different heat treatment processes and production processes that can be used to manufacture ferrous and non-ferrous metals and alloys are also covered. Material testing methods and their relevance to applications are included. Modern manufacturing tools, machines, and processes are studied. Learning environment includes class discussion, paper presentation on specific topics, and field trips.

10623135 // 3 credits
Strength of Materials
A study of stress and strain experienced by machine parts and structural members in service. Includes statics and vector analysis as applied to structures, properties of materials, beam theory, beam design, theory of columns, and design formulas. Emphasis is on application of theory and problem solving.
Prerequisite: General Physics I 10806154.

10623140 // 3 credits
Statistical Quality Control
Entry-level course for learning the BASICS of statistical quality control. Students are given practical training in the use of statistical quality control, incoming, in process, and final inspection. Emphasis are given to topics like error, operating characteristics, significant tests, sampling, and manufacturing process control.
Prerequisite: Quality Assurance Concepts & Technique 10623110.

10623170 // 3 credits
Principles of Lean Manufacturing
Lean Manufacturing is a business initiative to systematically reduce cost and throughput time within a manufacturing operation by minimizing the waste at every stage of the operation. Unlike Lean, traditional manufacturing often involves large batch sizes and inventories that add to the cost of the product in terms of wasted time, non-value added activities and eventually, less than desirable product quality. Lean Manufacturing exposes the waste occurring within a company and can make the practice of continuous improvement a real possibility. It is a fusion of proven ideas like Just-In-Time, Kanban, Kaizen, and Total Quality coming together to work in unison toward achieving zero inventory, zero defects, zero delays, and zero downtime in the design, manufacturing, and distribution of goods and services within a company. As a manufacturing philosophy when fully adopted, it significantly shortens the timeline between a customer order and shipment of the finished product. After completing this program you will have the necessary tools to reduce waste, streamline performance, and improve quality within your organization. If implemented consistently over long periods of time, Lean Manufacturing can have a significant impact on cost savings, productivity, profitability, and product quality.

10623171 // 3 credits
Intro to Six Sigma
Six-Sigma can be defined as a disciplined, data driven methodology that utilizes proven statistical analysis techniques to significantly improve performance in all aspects of a business. The sustained practice of Six-Sigma has the potential to create a paradigm shift within an organization that can achieve significant improvements in productivity, profitability, and product quality. Six-Sigma is also driven by specific customer needs that focus attention on managing, controlling, and improving business processes to maximize customer satisfaction. This course is designed to give you an overview of Six-Sigma as it is practiced today in many organizations. At the completion of this course you will have a basic understanding of what Six-Sigma is and what it is not. You will be exposed to the standard terminology and basic techniques used in the practice of Six-Sigma and how this approach compares to other quality initiatives being used today. You will have a good understanding of the benefits of implementing Six-Sigma within your organization and what is required to start the process. Credits earned through this course can be used to continue your training toward a green belt certification.

10623172 // 4 credits
Six Sigma Green Belt Training
This course is designed to prepare you for the Green Belt certification offered by American Society for Quality (ASQ). You are trained in the body of knowledge required for Green Belt certification. You also have the opportunity to gain mastery of the techniques by completing a quality improvement project using the concepts and techniques discussed in class. You learn to harness the power of a spreadsheet to compile, chart, analyze, and interpret the data gathered in your quality improvement project. A Six Sigma Green Belt operates under the supervision of a Black Belt and is closely aligned with the quality improvement initiatives of a business. The concepts you will learn in this course can be applied to manufacturing, service, or any other type of industry that wants to improve its bottom line, employee motivation, and customer satisfaction. Credits earned in this course can be used toward the CQI certificate offered by MSTC.

10623175 // 4 credits
Lean Six Sigma Project Application
The course is the capstone course for the Six Sigma Green Belt certification. The student are required to participate in a team based project and the team must successfully complete the complex project. The student also completes an individual Six Sigma project within an organization that they are a member of using the DMAIC methodology. The student is also required to pass an exam on Six Sigma concepts and methodology.

GENERAL COLLEGE SKILLS

76862771 // 0 credit
Career Awareness
This short-term course helps students reflect upon their strengths and identify possible careers that utilize those strengths. Topics include goal setting, interest inventories, personality styles, career searching, labor market statistics, trend, projections, and career planning. This is a tuition-free class. Students must be 18 years of age or older. This course cannot be used to satisfy program completion requirements at MSTC.

74860743 // 0 credit
Computer Basics
This short-term course offers instruction in general computer systems (hardware, software, data, and users); logging into the MSTC network; basic commands and features of Windows 2000; and introductory elements of email and the Internet. This is a tuition-free class. This course cannot be used to satisfy program completion requirements at MSTC.

10835103 // 1 credit
Study Skills
This course provides students with strategies to develop study skills for success in college. Through hands-on experiences, students will apply study skills, learn how to think critically, and use information resources and technology. The purpose of this course is to prepare students for successful entry into required program courses. This course is tuition bearing and under certain circumstances may qualify for financial aid. This course cannot be used to satisfy program completion requirements at MSTC.

COMMUNICATION SKILLS

Developmental Communication
The following courses are developmental and do not meet graduation requirements.

10831103 // 3 credits
Intro to College Writing
Introduces basic principles of composition, including organization, development, unity, and coherence in paragraphs and multi-paragraph documents. The purpose of this course is to prepare students for successful entry into required program courses. This course is tuition bearing and under certain circumstances may qualify for financial aid. This course cannot be used to satisfy program completion requirements at MSTC.
Prerequisite: Accuplacer Sentence Skills score of 55 or equivalent. Proficiency in word processing skills recommended.

10838105 // 3 credits
Intro to Reading and Study Skills
This course provides students with opportunities to develop study skills and expand reading skills including comprehension, fluency, and vocabulary skills. Students apply reading skills to academic tasks and read to acquire information from a variety of sources. The purpose of this course is to prepare students for successful entry into required program courses. This course is tuition bearing and may qualify for financial aid. This course cannot be used to satisfy program completion requirements at MSTC. Introduces basic principles of composition, including organization, development, unity, and coherence in paragraphs and multi-paragraph documents.

Associate Degree /Technical Diploma Communication Skills
Please check which communication skills class meets your program requirements.

10801136 // 3 credits
English Composition I
This course is designed for learners to develop knowledge and skills in all aspects of the writing process. Planning, organizing, writing, editing, and revising are applied through a variety of activities. Students analyze audience and purpose, use elements of research, and format documents using standard guidelines. Individuals develop critical reading skills through analysis of various written documents.
Prerequisite: Accuplacer Sentence Skills score of 85 or equivalent or Intro to College Writing 10831103 with a grade of "C" or better. Proficiency in word processing skills recommended.

10801195 // 3 credits
Written Communication
Develops writing skills which include prewriting, drafting, revising, and editing. A variety of writing assignments is designed to help the learner analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Also develops critical reading and thinking skills through analysis of a variety of written documents.
Prerequisite: Accuplacer Sentence Skills score of 85 or equivalent or Intro to College Writing 10831103 with a grade of "C" or better. Proficiency in word processing skills recommended.

10801196 // 3 credits
Oral/Interpersonal Communication
Focuses upon developing speaking, verbal and non-verbal communication, and listening skills through individual presentations, group activities, and other projects.

10801197 // 3 credits
Technical Reporting
The student prepares and presents oral and written technical reports. Types of reports may include lab and field reports, proposals, technical letters and memos, technical research reports, and case studies. Designed as an advanced communication course for students who have completed at least the prerequisite introductory writing course.
Prerequisite: Written Communication 10801195 with a grade "C" or better or English Composition I 10801136 with a grade "C" or better. Proficiency in word processing skills recommended.

10801198 // 3 credits
Speech
Explores the fundamentals of effective oral presentation to small and large groups. Topic selection, audience analysis, methods of organization, research, structuring evidence and support, delivery techniques, and other essential elements of speaking successfully, including the listening process, form the basis of this course.

10801199 // 3 credits
Employment Strategies
A course designed to assist students in securing employment. This communication-based course helps develop an awareness of personal and academic skills as they relate to the job seeking process. Topics of study include personal and skill assessments, research of employment sources, completion of application forms, formation of professional resumes, composition of various business letters, interviewing skills, and job offer evaluation.
Corequisite: Twelve Administrative Professional 10106 credits, twelve Instrumentation & Controls Engineering 10605 credits, or consent of instructor.

31801351 // 2 credits
Occupational Communication
Designed to help a student develop communication skills needed for employment. Students examine the communication process and learn to avoid communication breakdown. The course develops reading and information-finding skills, reviews using standard English in written messages, strengthens effective oral and written communication needed to apply for a job, builds effective listening skills, and develops appropriate spoken messages and nonverbal communication.

MATHEMATICS

Developmental Math
The following courses are developmental and do not meet graduation requirements.

77854783 & 77854784// 0 credit
ASC Math Prep V/VI
Students must enroll in ASC Math Prep V / VI concurrently. This course is designed to prepare students with low or rusty math skills to prepare for the math GED test, prepare for the Accuplacer math test, study to increase their Accuplacer math score, or as a prerequisite for their required program math class. Topics include calculations, percents, fractions, decimals, area, perimeter, and the basics of algebra. These are tuition-free classes. Math preparation for GED and Accuplacer testing is also available in a flexible lab format in the Academic Support Center. These courses cannot be used to satisfy program completion requirements at MSTC.

10834109 // 3 credits
Pre-Algebra
Provides an introduction to algebra. Includes operations on real numbers, solving linear equations, percent and proportion, and an introduction to polynomials and statistics. Prepares students for elementary algebra and subsequent algebra-related courses.
Prerequisite: Accuplacer Math score of 65, Accuplacer Algebra score of 30, ASC Math Prep V 76854785 and ASC Math Prep VI 76854786 with a grade of "S" (Note: ASC Math Prep VI & V courses cannot be used to satisfy program completion requirements at MSTC).

Associate Degree/Technical Diploma / Certificate Level Math
Please check which math class meets your program requirements.

10804107 // 3 credits
College Mathematics
This course is designed to review and develop fundamental concepts of mathematics pertinent to the areas of: 1) arithmetic and algebra; 2) geometry and trigonometry; and 3) probability and statistics. Special emphasis is placed on problem solving, critical thinking and logical reasoning, making connections, and using calculators. Topics include performing arithmetic operations and simplifying algebraic expressions, solving linear equations and inequalities in one variable, solving proportions and incorporating percent applications, manipulating formulas, solving and graphing systems of linear equations and inequalities in two variables, finding areas and volumes of geometric figures, applying similar and congruent triangles, converting measurements within and between U.S. and metric systems, applying Pythagorean Theorem, solving right and oblique triangles, calculating probabilities, organizing data and interpreting charts, calculating central and spread measures, and summarizing and analyzing data.
Prerequisites: Accuplacer Math score of 65 and Accuplacer Algebra score of 30 or higher or Pre-Algebra 10834109 with a grade of "C" or better.

10804118 // 4 credits
Intermediate Algebra with Applications
This course offers algebra content with applications. Topics include properties of real numbers, order of operations, algebraic solution for linear equations and inequalities, operations with polynomial and rational expressions, operations with rational exponents and radicals, algebra of inverse, logarithmic and exponential functions.
Prerequisite: Pre-Algebra 10834109 with a grade of "C" or better; Accuplacer Arithmetic score of 110; Accuplacer Arithmetic score of 90 and Accuplacer Algebra score of 30; or Accuplacer Algebra score of 45.

10804189 // 3 credits
Introductory Statistics
Students taking Introductory Statistics display data with graphs, describe distributions with numbers perform correlation and regression analyses, and design experiments. They use probability and distributions to make predictions, estimate parameters, and test hypotheses. They draw inferences about relationships including ANOVA. Algebra knowledge and foundational skills in mathematics are important for success in this course.
Prerequisite: Pre-Algebra 10834109 with a grade of "C" or better or College Math 10804107 with a "C" or better or Accuplacer Algebra score of 45 or greater.

10804195 // 3 credits
College Algebra with Applications
This course covers those skills needed for success in Calculus and many application areas on a baccalaureate level. Topics include the real and complex number systems, polynomials, exponents, radicals, solving equations and inequalities (linear and nonlinear), relations and functions, systems of equations and inequalities (linear and nonlinear), matrices, graphing, conic sections, sequences and series, combinatories, and the binomial theorem.
Prerequisite: Trigonometry with Applications 10804196 with a grade of "C" or better.

10804196 // 3 credits
Trigonometry with Applications
Topics include circular functions, graphing of trigonometry functions, identities, equations, trigonometric functions of angles, inverse functions, solutions of triangles complex numbers, DeMoivre's Theorem, polar coordinates, and vectors.
Prerequisite: Intermediate Algebra with Applications 10804118 with a grade of "C" or better.

10804198 // 4 credits
Calculus 1
Analyze and graph algebraic expressions, especially conic sections. Develop an intuitive understanding of limits, derivatives, and integrals. Apply the derivative and the integral to certain physical problems.
Prerequisite: College Algebra with Applications 10804195 with a grade of "C" or better.

NATURAL SCIENCE

Developmental Science
The following courses are developmental and do not meet graduation requirements.

10836113 // 2 credits
Prep for Basic Biology
Introduces students to basic principles of biology. Students become familiar with the nature of science, basic biochemistry concepts, and the structure and function of the cell. The purpose of this course is to prepare students for successful entry into required program courses. This course is tuition bearing and under certain circumstances may qualify for financial aid. This course cannot be used to satisfy program completion requirements at MSTC.

10836133 // 2 credits
Prep for Basic Chemistry
Introduces basic principles of chemistry including the properties of matter, atomic structure, and the classification of chemical reactions. Students learn to characterize solutions, acids, and bases and differentiate between elements and compounds. The purpose of this course is to prepare students for successful entry into required program courses. This course is tuition bearing and under certain circumstances may qualify for financial aid. This course cannot be used to satisfy program completion requirements at MSTC.

Associate Degree/Technical Diploma Level Science
Please check which science class meets your program requirements.

10806112 // 3 credits
Principles of Sustainability
Prepares the student to develop sustainable literacy, analyze the interconnections among the physical and biological sciences and environmental systems, summarize the effects of sustainability on health and well-being, analyze connections among social, economic, and environmental systems, employ energy conservation strategies to reduce the use of fossil fuels, investigate alternative energy options, evaluate options to current waste disposal and recycling in the U.S., and analyze approaches used by your community to promote and implement sustainability.

10806114 // 4 credits
General Biology
Introduces general biological concepts and principles. Emphasis is on cell structure and function, genetics, evolution, and taxonomical relationships. Consideration is also given to diversity among the various kingdoms.
Prerequisite: Prep for Basic Biology 10836113 with a grade of "C" or better or two semesters of high school biology with a grade of "C" or better.

10806134 // 4 credits
General Chemistry
Covers the fundamentals of chemistry. Topics include the metric system, problem-solving, periodic relationships, chemical reactions, chemical equilibrium, and properties of water; acids, bases, and salts; and gas laws.
Prerequisite: College Math 10804107 with a "C" or better or Intermediate Algebra with Applications 10804195 with a "C" or better or Accuplacer Algebra score of 57 or greater.

10806154 // 4 credits
General Physics 1
Presents the applications and theory of basic physics principles. This course emphasizes problem-solving, laboratory investigation, and applications. Topics include unit conversion and analysis, vectors, translational and rotational kinematics, translational and rotational dynamics, heat and temperature, and harmonic motion and waves.
Corequisite: Trigonometry with Applications 10804196.

10806177 // 4 credits
General Anatomy & Physiology
Examines basic concepts of human anatomy and physiology as they relate to health sciences. Using a body systems approach, the course emphasizes the interrelationships between structure and function at the gross and microscopic levels of organization of the entire human body. It is intended to prepare health care professionals who need to apply basic concepts of whole body anatomy and physiology to informed decision-making and professional communication with colleagues and patients.
Prerequisite: Complete a combination of one year of high school Biology, Chemistry, or Anatomy and Physiology with a "C" or better, or one semester of college-level Biology or Chemistry with a "C" or better, or Human Body in Health & Disease 10509102 with a "C" or better.

10806179 // 4 credits
Advanced Anatomy & Physiology
The second semester in a two-semester sequence in which normal human anatomy and physiology are studied using a body system approach with emphasis on the interrelationships between form and function at the gross and microscopic levels of organization. Instructional delivery is within a classroom and laboratory setting. Experimentation within a science lab includes analysis of cellular metabolism, the individual components of body systems such as the nervous, neuromuscular, cardiovascular, and urinary. Continued examination of homeostatic mechanisms and their relationship to fluid, electrolyte, acid-base balance, and blood. Integration of genetics to human reproduction and development are also included in this course.
Prerequisite: General Anatomy & Physiology 10806177 with a grade of "C" or better.

10806184 // 3 credits
Plant Biology
This lecture/laboratory course provides students with an in-depth study of the plant kingdom. The content includes, but is not limited to, plant cell anatomy and physiology, plant genetics, plant classification, plant anatomy and physiology, plant responses, plant life cycles, and ecology. A survey of viruses, prokaryotes, protista, and fungi as they pertain to plants is presented.

10806197 // 4 credits
Microbiology
This course examines microbial structure, metabolism, genetics, growth, and the relationship between humans and microorganisms. Disease production, epidemiology, host defense mechanisms, and the medical impact of microbes in the environment, industry, and biotechnology are also addressed.
Prerequisite: General Anatomy & Physiology 10806177, General Biology 10806114, or Plant Biology 10806184 with a grade of "C" or better.

31806311 // 2 credits
Applied Microbiology
Directs the learner's understanding of aseptic techniques, antimicrobial methods, specimen collection, preparation of cultures, body defenses against microorganisms, the infectious process, and transmission of disease-causing organisms. Students learn such techniques as standard and transmission based precautions, sanitization, disinfection, sterilization, preparation of cultures, and microscopic slide preparations with simple staining and gram staining.
Prerequisites: Human Body in Health and Disease 10509102 or General Anatomy & Physiology 10806177.

32806351 // 2 credits
Applied Science
Applied Science is a survey course in basic physics designed for students in the Automotive Technician, Diesel & Heavy Equipment Technician, and Machine Tool Technician programs. Topics have been specially selected to provide students with basic support material for principles applied in the above listed programs. Topics to be covered include basic measurement skills; problem solving; motion; forces and energy transfer in linear and rotary systems; properties of solids, liquids and gases; temperature and heat; and basic DC electricity.
Prerequisite: College Mathematics 10804107.

SOCIAL SCIENCE

10809122 // 3 credits
Intro to American Government
Introduces American political processes and institutions. Focuses on rights and responsibilities of citizens and the process of participatory democracy. Learners examine the complexity of the separation of powers and checks and balances. Explores the role of the media, interest groups, political parties, and public opinion in the political process. Also explores the role of state and national government in our federal system.

10809130 // 3 credits
Intro to Social Gerontology
Review of aging in respect to social roles and processes. Topics include history of aging, demographics, family relationships, social supports, economics, retirement, widowhood, poverty, and politics of aging.

10809131 // 3 credits
Death and Dying
Study of losses during the aging process beyond the physical and emotional process of death and dying. Societal and personal views of death, dying, and cultural practices are explored. Stages of bereavement and recommendations for healthy transitions in coping with loss are integrated into practical applications. Discussion of various topics related to death and dying include treatment for terminally ill people, euthanasia, and suicide.

10809132 // 3 credits
Generations & Diversity in Aging
Generational study of experience and history on the value and societal expectations of each generation. Also covered are diversity trends among older adults including but not limited to race, ethnicity, culture, sexual orientation, and physical, cognitive, and developmental disabilities.

10809133 // 3 credits
Women and Aging
This course focuses on the process of aging for mid- and late-life women from a sociological perspective. Topics include normal physiological changes, menopause, stereotypes of women and aging, demographics, aging beauty, late life sexuality, widowhood, and health issues. This course concludes with female perspectives on death, dying, and bereavement.

10809143 // 3 credits
Microeconomics
This course examines the behavior of individual decision makers, primarily consumers, and firms. Topics include choices of how much to consume and to produce, the functioning of perfectly and imperfectly competitive markets, the conditions under which markets may fail, and arguments for and against government intervention. The student applies the fundamental tools of economics to real-world problems.

10809144 // 3 credits
Macroeconomics
Macroeconomics is an introductory course. Basic social choices regarding economic systems, basic economic aggregates, fiscal policy, the banking system, monetary policy, and international trade are the principle topics discussed in the course. A balance is drawn between description, theory, analysis, and a critique of the institutions that characterize modern mixed-capitalist economies. Conflicting social goals, economic constraints, and environmental concerns provide the framework through which the macroeconomy is analyzed.

10809159 // 3 credits
Abnormal Psychology
The course surveys the essential features, possible causes, and assessment and treatment of the various types of abnormal behavior from the viewpoint of the major theoretical perspectives in the field of abnormal psychology. Students are introduced in the diagnosis system of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). In addition, the history of the psychology of abnormality will be traced. Cultural and social perspectives in understanding and responding to abnormal behavior are explored as well as current topics and issues within abnormal psychology. *Prerequisite: Intro to Psychology 10809198 with a grade of "C" or better.*

10809166 // 3 credits
Intro to Ethics: Theory & Application
This course provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives are used to analyze and compare relevant issues. Students critically evaluate individual, social, and/or professional standards of behavior, and apply a systemic decision-making process to these situations.

10809172 // 3 credits
Introduction to Diversity Studies
Introduces learners to the study of diversity from a local to a global environment using a holistic, interdisciplinary approach. Encourages self-exploration and prepares the learner to work in a diverse environment. In addition to an analysis of majority/minority relations in a multicultural context, the primary topics of race, ethnicity, age, gender, class, sexual orientation, disability, and religion are explored.

10809188 // 3 credits
Developmental Psychology
Developmental Psychology is the study of human development throughout the lifespan. This course explores developmental theory and research with an emphasis on the interactive nature of the biological, cognitive, and psychosocial changes that affect the individual from conception to death. Application activities and critical thinking skills enables students to gain an increased knowledge and understanding of themselves and others.

10809196 // 3 credits
Intro to Sociology
Introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions including family, politics, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, and social organization.

10809198 // 3 credits
Intro to Psychology
This introductory course in psychology is a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings.

31809351 // 2 credits
Applied Human Relations
In an effort to better understand human behavior, students investigate topics designed to examine the challenges of coping with an ever-changing world of work and life. Students are given an opportunity to improve their understanding of themselves and others through discussion of topics such as dealing with stress, suicide, grief, defense mechanisms, perception, problem solving, nutrition and physical fitness, drug abuse, mental illness, self-concept and personality, emotions, attitudes, motivation, value clarification, work relationships, and family life styles.

32809351 // 2 credits
Applied Human Relations
In an effort to better understand human behavior, students investigate topics designed to examine the challenges of coping with an ever-changing world of work and life. Students are given an opportunity to improve their understanding of themselves and others through discussion of topics such as dealing with stress, suicide, grief, defense mechanisms, perception, problem solving, nutrition and physical fitness, drug abuse, mental illness, self-concept and personality, emotions, attitudes, motivation, value clarification, work relationships, and family life styles.

ACADEMIC INTEGRITY

The MSTC Board, administration, faculty, and staff believe that academic honesty and integrity are fundamental to the mission of higher education. All students are expected to maintain and promote the highest standards of personal honesty and professional integrity. These standards apply to all examinations, assigned work, and projects. Therefore, a student who is found to have been dishonest, fraudulent, or deceptive in the completion of work; willing to help others to be so; or is found to have plagiarized (presented the work of others as his or her own) is subject to disciplinary action up to and including suspension.

Admissions & Enrollment

ADDING/DROPPING COURSES

- Classes may be added through the first week of class meetings. Classes added after the first week require instructor/dean approval.
- Classes dropped before 10% of the class meetings have occurred will not be reflected on the student's transcript.
- A grade of "W" (withdrawal) is issued if the class is dropped after 10% but before 90% of the class meetings having occurred. After 90% of the class meetings have occurred, a grade of "F" is assigned. The effective date of a drop is determined by the date the Office of Student Records receives the Drop/Add Form or phone call from the student, or the date the student completes the drop transaction for a class online. The form is then entered into the student data system based on the date of receipt. Grades and refunds will be calculated based on the effective date of the class drop. It is the student's responsibility to obtain and retain a copy of the drop form.
- Within a semester, a student who drops one section of a course and, at the same time, enrolls in an equivalent section of the same course shall not receive a refund of course fees for the dropped section or be charged course fees for the added section. An equivalent section is defined as a course offered for the same credit value, is subject to the same dollar amount of student fees, and is at substantially the same point in the course curriculum at the time of the drop/add. Section changes done after the first week of a course must be approved by a dean or associate dean and the instructor.
- One hundred percent of tuition and fees must be paid for added courses. If the reduction in tuition/fees for the dropped course exceeds the fees for the added class, the student will be issued a refund. If the added course exceeds the tuition/fees of the dropped class, the student will be required to pay the additional amount owed at the time of registration. If the student is enrolled in a payment plan or is receiving financial aid, adjustments will be made accordingly.
- Students who do not attend the first class period without notifying the instructor or academic dean of their reason for non-attendance may be dropped from the class without prior notification. The vacancy created by their enrollment drop may be filled by other students seeking to enroll in the class.

ADMISSION TO A PROGRAM

Admission refers to the process of applying for acceptance into a program at MSTC. Whether studying full-time or part-time, you need to complete the admissions process if you plan to earn a degree or technical diploma from MSTC. MSTC maintains an open-door admissions policy for all prospective students. Many programs demand that students have certain skills prior to entry to maximize their experience at the college. Therefore, high school graduation or completion of the HSED or GED is required, plus completion of certain related high school courses is strongly recommended. For detailed application steps, go to mstc.edu/admissions/how-to-apply.

Re-Admission to MSTC

A student who was previously admitted and enrolled in a program and does not enroll in classes for at least two consecutive semesters is withdrawn from the college. The student may reapply to a program at MSTC. The student is then subject to the program requirements published in the MSTC catalog for the semester they are re-admitted to the college.

Program Change/Limitation on Number of Active Programs

Students may elect to change the program in which they are currently enrolled. To do so they should meet with a program counselor to complete a Program Change Card and pay the $5 program update fee. The student must identify programs they want to remain active in (graduate from) and programs they are no longer interested in graduating from. Each student is allowed a maximum of two active programs. The student's record will then be reviewed against the admissions requirement for the new program they have chosen.

Program changes can be submitted at any time during a semester, but they are only processed for the next available term. Program changes during a semester are not possible unless a student meets with a counselor to review the need for a change. Transcripts and transfer credit for the new program will only be reviewed upon student request.

AGE REQUIREMENT FOR ENROLLMENT

Under Age 18: MSTC complies with all education statutes and policies regulated and promulgated by the Department of Public Instruction. Information regarding these policies is located at http://dpi.wi.gov/home.html.

Programs may possess age criteria for admission based on licensing/certification requirements. All students who seek to enroll at MSTC are subject to the course prerequisites and program admission requirements as outlined in the MSTC Catalog. Questions regarding under age 18 attendance or home-schooled students should be directed to the Student Affairs Office at any MSTC location.

- High school students age 18 and older may attend MSTC courses and programs at any time during the day if they have met the applicable prerequisite or program admission requirements. Attendance during the school day for students enrolled in public/private schools can be done with the written permission of the school principal and the parent.
- High school students between the ages of 16-18 may not attend Academic Success Center classes without an approved contract from their school district (unless his/her high school class has already graduated).
- High school students between the ages of 16-18 may attend undergraduate day classes with written consent from their parent/guardian and high school

principal. Financial aid cannot be awarded to high school students who have not graduated from high school.

Under Age 16: A student under the age of 16, with the prior written consent of their parent, may attend night classes at MSTC (after 4:00 p.m.) for secondary non-required courses or post-secondary courses for which they meet the prerequisites. Students under 16 years of age may not be allowed to enroll in certain courses due to safety, certification, licensing, or policy requirements. Hazardous areas include use of hoisting apparatus, logging, motor vehicle drivers and outside helpers, usage of firearms, manufacturing or processing, and classes involving hands-on applications for skill development in areas identified as hazardous in Chapter 70 Wisconsin Code (Ind. 70.03(3e)). Please consult an MSTC counselor, high school relations coordinator, or new student specialist for information on courses for which the student under 16 may be eligible to enroll. The following conditions must be met for students under the age of 16 to enroll at MSTC:

- The individual has the written permission of his/her parent or guardian. A signed and dated letter from the parent or guardian should accompany the registration form.
- The individual will not be attending during the hours of the normal school day established under Wisconsin Compulsory Attendance laws.

ATTENDANCE

Class attendance is considered essential to the learning process. Therefore, regular, punctual attendance is expected of all students. Students are responsible for discussing absences with their instructors and when permitted by instructors, responsible for making up work that is missed. Any student deciding that he or she no longer wishes to attend class must officially drop the class. Students failing to drop a class remain responsible for class costs and will be issued a failing grade.

Students are expected to attend the first class period or notify the class instructor. Students who do not attend the first class period or provide appropriate notification may be administratively dropped from the class. The college will inactivate a student's enrollment and program status after a period of two consecutive semesters of nonattendance.

CLASS CANCELLATION

On occasion a class will be cancelled. Students will be contacted by the college to consider placement into another class. MSTC reserves the right to cancel courses due to low enrollment.

COURSE NUMBERING SYSTEM

The first two digits of the course number identify the degree level of the coursework.

- 10 – Associate Degree level (e.g., 10809198)

  Exception: catalog numbers with the 3rd and 4th digit equal to 83 are developmental courses (e.g., 10835103)
- 30, 31, 32 – Technical Diploma level (e.g., 30543300, 31509309, 32404307)

CREDIT FOR PRIOR LEARNING

MSTC's Credit for Prior Learning Policy provides an opportunity for students to receive credit for their knowledge and skills gained from experience other than through course offerings at MSTC in order to accelerate the completion of their degree or diploma. Credit for Prior Learning credits may include transfer of credits from regionally accredited, post-secondary institutions; credit by standardized examination; military or occupational experiences/training; and articulated high school credit. MSTC has agreements with many area high schools to grant advanced standing for select high school courses.

Students are required to complete 25% of the technical studies (associate degree programs) or occupational-specific studies (technical diploma programs) at MSTC. The remaining 75% of coursework may be completed with the various types of credit for prior learning.

Students must meet the competencies of the specific course for which they request credit for prior learning. All students seeking any form of credit for prior learning will begin the process with the Student Affairs Office. Student Affairs may refer the student's request to the appropriate division dean. After the evaluation is completed, Student Affairs will notify the student in writing regarding the result of the evaluation. If credits are granted, they will be entered on the student's permanent transcript record. An appeal of the final decision may be made through the Academic Appeals process.

Credit for Prior Learning Definitions

Articulated Credit–Advanced placement for courses taken in high school (AC)
Through a cooperative program between area high schools and MSTC, qualified students can receive credit at MSTC for selected high school courses. Students must have completed specific requirements in high school and have obtained a 3.0 out of a 4.0 GPA in the articulated coursework to receive technical college credit. For more information, contact your high school counselor, the MSTC high school career coach, or MSTC Student Affairs Office.

Credit by Standardized Examination (CE)
MSTC staff will review test results from the College-Level Examination Program (CLEP), subject examinations, Advanced Placement (AP) exams, and other third party administrators for possible credit toward completion of an associate degree or technical diploma. Credit toward a degree or diploma completion will be awarded only for courses that fulfill a published MSTC graduation requirement or that are an acceptable degree elective at MSTC. College staff will use the guidelines published by the testing agencies to identify appropriate test scores for credit recognition. Students must provide MSTC with an official, sealed transcript of test results from the testing agency for a review to occur. Credit awarded for successful performance will appear on an MSTC transcript as "CE" for "Credit by Examination." This credit will not be part of a student's grade point average calculation. The appropriate academic division dean is responsible for the final decision on the recognition of credit.

Credit for Life Experience (EX)
Students initiate the process of applying for Credit for Life Experience (Military or Occupational) with Student Affairs. Students are then referred to the dean/associate dean in the appropriate department for the evaluation of prior learning. Students must demonstrate proficiency in the course competencies by methods of evaluation that will be identified by the dean/associate dean. A nonrefundable fee of $30 per credit for each course related to the evaluation request is required. This fee is due from the student prior to determining the award of credit and is due regardless of whether credit is or is not awarded.

Transfer of Credits from Regionally Accredited, Postsecondary Institutions (TR)

- Credit for courses may be accepted from regionally accredited institutions of higher education provided the student has received a letter grade of "C" (2.0 on a 4.0 scale) and the course credit and content are similar to the course content at MSTC.
- Students who plan to take courses at another institution and transfer them to MSTC toward program requirements are strongly encouraged to meet with their program counselor to review how the coursework from the other college/university would be applied to their MSTC program.
- The student must provide Student Affairs with an official transcript of credits and an official description of the courses(s) for which the credit is requested.
- The grade from the transferred course will not show on the MSTC transcript. Courses that do not meet program requirements may be accepted by MSTC for elective credit.

DISMISSAL/SUSPENSION

If there is reasonable cause to believe a student has pursued a course of conduct requiring suspension or dismissal, the student may be suspended or dismissed by the class instructor, director of student support, campus dean, or division dean. The student will be informed of the specific charges in writing without unreasonable delay. A student may be withdrawn from a class or a program under the following circumstances: disciplinary reasons, code of conduct violation, past due financial obligations, and failure or refusal to obtain professional help and/or to accept professional advice.

ELECTIVES

Program electives may be fulfilled by successfully completing any MSTC associate degree level course or through various Credit for Prior Learning options. See Credit for Prior Learning for additional information.

ENROLLMENT STATUS CLASSIFICATION

- Full-time student: A student who is enrolled in 12 or more undergraduate semester credits.
- Part-time student: A student who is enrolled in less than 12 undergraduate semester credits.
- Unassigned student: A student who is not admitted into a degree, diploma, or certificate program, but is taking undergraduate classes.

Although a student is considered full-time by carrying 12 semester credits, a semester course load of 15-18 credits is typically needed to complete a one-year program within one year, or a two-year program within two years. Students may choose to extend the length of their program by taking a lighter course load.

FEES AND OTHER EXPENSES

MSTC established a fee structure in accordance with the Wisconsin Technical College System and state statutes. Fees may vary annually and are subject to change. Payment of fees is required to complete the admission and registration process.

- **Application fee:** $30, required when application form is submitted. The application fee is non-refundable and does not apply toward other fees. Application fee is only applicable to those applying to a program and not just taking a class.
- **District tuition:** $122.20 per credit, subject to change annually. Tuition is charged for all associate, technical, and apprenticeship credits.
- **Out-of-State Tuition:** $183.30 per credit, subject to change annually.
- **Incidental fee:** 5% per credit, charged each semester to help cover student activities, such as student government, and to help support various clubs and social events.
- **Online fees:** $10 per credit. Charged for classes taught solely over the Internet.
- **Criminal History Record check:** For some Service & Health programs, students need to pay for a criminal background check and provide documentation of required healthwork to a private vendor, Certified Background. Fees may vary.
- **Material fee:** Varies with each course, and covers the cost of materials used by a student in each course.
- **Program update fee:** Students wishing to change the program they are admitted to are required to submit a Program Change Card along with a $5 program update fee.
- **Textbooks and supplies:** Students are required to purchase their own textbooks and supplies. The cost varies by program. In accordance with the Higher Education Opportunity Act (HEOA), students have access to the cost and when applicable the ISBN number for required textbooks and supplemental materials. This information is available on the MSTC website and the students' online Class Schedule.
- **Student ID:** The first student ID is issued at no charge. Should a replacement ID card be required, there is a $5 fee for each additional card. ID's are available in campus libraries.

GRADING

Grade Point Average

Grade point averages (GPA) are figured on a 4.0 scale. When calculating the GPA, the sum of all points awarded is divided by the total credits attempted. Grade point averages are calculated on a cumulative basis as well as for the individual semester. Upon graduation from an associate degree program or technical diploma program, the program specific GPA is indicated on the student's official transcript. The letter grading scale used at MSTC is as follows:

Grade	GPA
A	4.00
A-	3.67
B+	3.33
B	3.00
B-	2.67
C+	2.33
C	2.00
C-	1.67
D+	1.33
D	1.00
D-	0.67
F	0.00

No credits or grade points are awarded for the following grades:

AC.....Articulated Course
Advanced placement for courses taken in high school
AU..... Audit Status
CE..... Credit by Examination
IC .....Incomplete
IP.....In-Progress
R .....Repeated Course
S.....Satisfactory (non-credit course)
SP .....Satisfactory Progress
TR ..... Transfer Credit
U .....Unsatisfactory (non-credit course)
UP .....Unsatisfactory Progress
W .....Withdrawn from Class

Audit Status (AU)
Audit (AU) status means the student attends class but does not receive a grade for the class. Only during the first 10 academic days for 17-week courses (or within the first 10% of the class) may a student change from credit to audit or audit to credit status. Audit students are required to pay the same tuition and fees as credit students and a permanent record is maintained. Students are required to process any change through the Campus Office. Audit status is dependent upon instructor approval. Classes taken for audit are not applied toward enrollment status, graduation, and/or financial aid eligibility.

Incomplete (IC)
An incomplete grade may be awarded when a student is unable to complete a class due to extenuating circumstances. Incomplete grades must be made up before the end of the ninth week following the class end date for 17-week courses. For less than 17-week courses, an IC must be made up within 50% of the class length. Failure to do so will convert the IC grade to "F". Students are not allowed to register for advance sequential courses until incompletes are made up in preceding prerequisite.

In-Progress (IP)
An in-progress grade is awarded in cases where the end-date of the class follows the official end-date of the semester in which it was offered (e.g., independent study, flexible online learning courses). If the student fails to complete the class the IP grade is converted to "F".

Repeated Course (R)
Students may retake a course to improve a grade. The most recent grade a student has earned in a course is the grade that is used to calculate a student's semester and cumulative grade point averages. Students must request a grade replacement through the Office of Student Records for the original grade and a recalculation of their GPA. Course catalog numbers for the original and repeated courses must match in order for a grade replacement to occur (exceptions: some Microsoft Office and math courses). The student's most recent course grade will appear on transcripts. Previous enrollments in the same course are listed with a grade of "R" (indicating repeat of course).

Withdrawal (W)
Students may drop a class by completing and submitting a Drop/Add Form or by a drop transaction online. The "W" grade will be applied to a dropped class according to the percent of classes having met at the time the class is dropped, as follows:

- 0-10% — No record of the class will appear on the transcript
- 11-89% — "W" grade appears on transcript
- 90-100% — Grade of "F" appears on transcript

HOLD STATUS

Hold Status is placed on a student's account for any amount of tuition, fees, library fines, bookstore charges, financial aid repayment, or any other outstanding balance due MSTC until such charges have been satisfied. This status prevents the student from registering for classes and prevents the release of, and online access to, transcripts/grades and diplomas/degrees.

HOME SCHOOL ATTENDANCE

MSTC complies with all education statutes and policies as regulated and promulgated by the Department of Public Instruction. Students under 18 years of age are not able to participate in the following courses: nursing core, licensed practical nursing, fire training, or police academy training.

- A home-schooled child age 15 or younger may attend night classes (after 4:00 p.m.) at MSTC for secondary non-required courses or post-secondary courses for which they meet the prerequisites.
- A home-schooled child age 16-17 may attend MSTC during the school day (with the prior written consent of their parent) or in the evenings for secondary non-required courses or post-secondary courses for which they meet the prerequisites.
- A home-schooled child age 17 or younger may not attend the Academic Success Center during the day, but may do so after 4:00 p.m., for secondary non-required academic support.
- A home-schooled child age 18 or older who has completed high school may attend any MSTC classes at any point during the school day.
- Home-schooled students are not eligible for federal financial aid until completion of their high school degree.

Questions regarding home-schooled students should be directed to Admissions at any MSTC location.

INTERNATIONAL STUDENT ADMISSION

The United States Department of Homeland Security has approved MSTC for acceptance of non-immigrant students with F-1 or M-1 visas. International students seeking an I-20 for full-time attendance as a non-immigrant student need to comply with the International Student Application procedures outlined at mstc.edu/admissions/international-students

MIDWEST STUDENT EXCHANGE PROGRAM

Students who enroll at MSTC in associate degree programs and are from states that are members of the Midwestern Higher Education Compact (MHEC) may be eligible for a program and fee rate that is 150% of the in-state tuition rates. Students whose permanent addresses are located in Illinois, Kansas, Michigan, Missouri, Nebraska, and North Dakota are eligible for this discount upon admission to MSTC.

MINNESOTA RECIPROCITY FOR TUITION AND FEES

Students whose permanent address is located in Minnesota are eligible under the Wisconsin–Minnesota Tuition Reciprocity agreement to pay in-state tuition rates and fees as long as they are enrolled.

STUDENTS CALLED TO ACTIVE MILITARY

Students who are ordered or inducted into active service in the armed forces of the United States, or requested to work for the federal government during a national emergency or a limited national emergency, shall be afforded one of the options below:

- The student may withdraw from college receiving a 100% refund of tuition and fees upon presentation of a document demonstrating a call to active duty to the Registrar. The refund will not include books. No grades will be assigned to the classes. Students choosing this option may be readmitted to MSTC at the start of the next term and will be placed in the first spot of any programs with waiting lists.
- The student may receive a grade of IC (Incomplete) which will allow the student to complete the coursework with instructional support upon return from active military duty. There is no refund with this option.

The student must contact the Financial Aid Office for advisement regarding the handling of financial aid processing and awards.

TUITION REFUND POLICY

MSTC

Refunds are issued per the official refund schedule available at any campus office. Refund amounts are determined by the Wisconsin Technical College System (WTCS) Refund Policy and Federal financial aid regulations. Refunds will be issued to the student unless a documented third party sponsorship or contract exists. In such cases the refund will be returned to the sponsor or contracting party.

WTCS

If the college cancels a course, 100% of student fees shall be refunded. If a student applies for a refund before the first class meeting which the student is scheduled to attend, 100% of student fees shall be refunded.

- 80% of all applicable student fees are to be refunded if application for refund is made before or at the time 10% of the course's potential class meetings of instruction have been completed.
- 60% of all applicable student fees are to be refunded if the application for refund is made after 10% but before more than 20% of the course's potential class meetings of instruction have been completed.
- No refund is to be made if the application for refund is made after 20% of the course's potential class meetings of instruction have been completed.

WITHDRAWAL FROM COLLEGE

It is highly recommended that students wishing to withdraw from the college meet with a counselor to discuss personal, financial, and grading implications of this decision. The effective date of the withdrawal from college is determined by the date that the Office of Student Records receives the Drop/Add Form or the date the student completes the drop transaction online. Grades and refunds are calculated based on the effective date of withdrawal from college. The student will receive a copy of the completed, date-stamped Drop/Add Form; it is the student's responsibility to retain a copy of the form.

APPEALS

APPEALS PROCESS

MSTC seeks to ensure fair and just treatment of students. Opportunities are available to appeal academic and non-academic decisions. Before an academic appeal is filed, the student is required to contact the instructor or other staff member directly involved with the decision to clarify the issue(s). Every effort to resolve the issue(s) should be made at this level. Opportunities for appeal are detailed in the following policies and procedures:

Classroom Misconduct (academic)
Students who wish to appeal a decision pertaining to sanctions for classroom misconduct (e.g., dismissal, suspension) may use the appeal process outlined in the Final Grade appeal section below.

Credit for Prior Learning Appeal
Students not satisfied with the decision regarding transfer credit, life experience credit, or other credit for prior learning awarded may submit a formal written appeal to the division dean of the area where the decision was issued. The written request must be made no later than 10 school days after receiving the decision and should contain rationale for reconsideration of the decision. A meeting with the division dean and student will be held within five school days of receipt of the request.

If the student and the division dean are unable to reach an agreement, the student may appeal in writing to the vice president of academic affairs within five school days after meeting with the division dean.

An Ad Hoc Appeals Committee convened by the Vice President of Academic Affairs will meet with the student. The Vice President of Academic Affairs will inform the student in writing of the decision of the Ad Hoc Appeals Committee within five school days of the meeting.

Final Grade
If a student believes that the final grade in a course is inaccurate or unjustified, an appointment should be made with the instructor to present the appeal in writing and discuss the reason(s) for the appeal. Every effort to resolve the issue should be made at this level. The final grade appeal process must occur within 90 days of the issuance of the grade.

If the student and instructor are not able to reach an agreement, the student may request in writing, no later than five school days after the meeting with the instructor, that the division/department supervisor arrange a meeting. The division/department supervisor, the instructor, and the student, will meet within five school days of this request to attempt to resolve the issue. The student will receive written notice of the decision within five school days of the meeting.

If the issue is still unresolved, the student may appeal in writing to the Vice President of Academic Affairs within five school days of receipt of the decision. The written appeal should describe in detail the events leading up to the appeal.

An Ad Hoc Appeals Committee consisting of the vice president of academic affairs, the division/department supervisor, and a faculty member will meet with the student to attempt to resolve the issue. The vice president of academic affairs will inform the student in writing of the decision within five school days of the meeting.

Financial Aid Appeal
If a student believes a financial aid action is inaccurate or that satisfactory progress requirements were not met due to extenuating circumstances, he or she may file a written Appeal/Petition for Reinstatement to the Financial Aid Supervisor. The appeal should include

detailed information on the inaccuracy or extenuating circumstances along with supporting documentation. The Appeal/Petition for Reinstatement form is available at mstc.edu/paying-for-college/financial-aid-appeal-process.

If a student and the financial aid supervisor are unable to reach an agreement, the student may appeal in writing within five school days of receiving notification to the director of enrollment management. The director of enrollment management will meet with the student and the financial aid supervisor within five school days of receipt of the appeal. The student will be notified in writing of the decision within five school days of the meeting.

Graduation Requirements
Students who wish to appeal a decision pertaining to graduation requirements may use the appeal process outlined in the Credit for Prior Learning appeal section.

Student Account Appeal
Students are responsible for charges and payments to their account. In extenuating circumstances a student may be eligible for a refund or a reduction in outstanding charges outside of the general tuition refund policy determined by the Wisconsin Technical College System. Before a student account appeal is filed, the student should seek assistance from the Campus Office regarding charges and payments on their account.

The student account appeals process must be initiated within 90 days of the charge being posted to the student's account or within 90 days of the official semester start date, whichever is later. To file an appeal, the Student Account Appeal Form must be completed by the student with all supporting documentation attached and submitted:

- **In person**
  Any MSTC Campus Office
- **Mail**
  Student Records Office
  Mid-State Technical College
  500 32nd Street North
  Wisconsin Rapids, WI 54494
- **Fax**
  715.422.5561
  Attention: Student Records

The appeal will be reviewed by the Student Account Appeals Committee. Appeals are reviewed biweekly. The student will receive written notification within two weeks following the appeals meeting.

Student Conduct Appeal (non-academic)
Whenever possible, alleged misconduct issues should be resolved informally through a conference with the complainant and the alleged student. The parties may ask a neutral party (e.g., dean, director of student support) to act as a mediator.

In the event alleged misconduct cannot be resolved informally, faculty/staff/administrator/student may initiate action by filing an incident report. Any faculty/staff/administrator/student of the college community may charge a student with alleged acts of misconduct. The faculty/staff/administrator/student will submit the incident report to the director of student support or campus dean and forward a copy to his/her dean/supervisor.

Students accused of conduct violations are entitled to the following protections:

- To be informed of the charge and relevant evidence.
- To respond to the charge.
- To request that the director of student support or campus dean resolve the case in an informal disciplinary meeting.
- To be assured confidentiality, in accordance with the federal Family Education Rights and Privacy Act.

The review process outlined in the Student Code of Conduct will be followed. Once completed, the outcome will be communicated in writing to both parties involved within five school days. Any disciplinary action will take effect on the date of notification.

Either party may appeal the decision. The burden of proof is on the party submitting the appeal. Appeals must be submitted in writing to the director of student support within five days of the notice/receipt of the decision. Disciplinary decisions can be appealed only under the following conditions:

- To determine if there was significant error in the process that impaired either party, including failure to follow appropriate procedures either prior to or during the initial review.
- To consider significant new evidence or material that was not known, not available, or could not be discovered at the time of the review.

In the event of an appeal, the initial decision shall be upheld until a final decision is made by the Student Conduct Committee regarding the appeal. The appealing party will be notified within ten days of a decision. The decision of the Student Conduct Committee is final, and no further appeals can be submitted.

For specific information on the appeal process, please consult the Student Code of Conduct at mstc.edu/student-resources/policies.

Complaint Procedure-Wisconsin Technical College System (WTCS)
Students who attend a college that is part of the WTCS can file complaints at the state level in three categories defined by U.S. Department of Education:

- Complaints that allege violations of Wisconsin consumer protection laws, including but not limited to false advertising.
- Complaints that allege violations of Wisconsin laws related to the licensure of postsecondary institutions.
- Complaints relating to the quality of education or other State or accreditation requirements.

A student who reasonably believes that a violation has occurred in one or more of these categories may file a written complaint. Complaints must be signed by the student and submitted on the official student complaint form. Complaints must be filed within one year from the date of the alleged violation or the last recorded date of attendance, whichever is later. The WTCS will review complaints only after students attempt to resolve the matter through applicable college appeals or complaint processes.

The student complaint form can be found at www.wtcsystem.edu/student_complaints.htm.

DISABILITIES

It is the policy of MSTC to comply with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA). Individuals with disabilities are provided with reasonable and effective accommodations, when requested, to afford equal access to educational opportunity at MSTC. Services are provided to prospective and enrolled students who are otherwise qualified with or without accommodations for admission and participation in postsecondary education.

MSTC campuses are physically accessible under ADA guidelines. For issues related to ADA/504 contact Patti Lloyd, disabilities services coordinator, at 715.422.5452.

To access reasonable and effective accommodations, students can self-identify their disability and directly contact the Disabilities Services staff for assistance. These personnel are available on each campus and have offices in Student Affairs. In addition to self-identification, an instructor can make referrals to the Disabilities Services staff after a student has begun classes.

The Disabilities Services staff, student, and individual instructors together determine what services and accommodations are needed and how they are to be provided. Although students can self-refer or be referred at any time, adequate and reasonable time is required to develop and provide appropriate accommodations, which are provided at no cost to the student. When possible, accommodations should be requested a semester before they are to be put in place. However, Disabilities Services staff will assist students at any time to provide services in a timely manner. Students may use accommodations starting the date they are approved. Coursework and exams that have occurred prior to approval are considered completed and are not eligible for accommodations. MSTC does not provide attendant care services. Students in need of personal care are expected to make their own arrangements for these needs.

To be eligible for accommodations, students are required to provide documentation of a disability which substantially limits one or more major life activities, show a history of such impairment, or be regarded as having such an impairment. Reports from medical doctors, licensed psychologists, the Division of Vocational Rehabilitation, a licensed social service agency, or high school exceptional education needs (EEN) staff are examples of acceptable documentation. When requested, MSTC Disabilities Services staff works in collaboration with community agencies in coordinating services for students with disabilities.

Students with questions about availability of disability support services or establishing eligibility for services should contact the Disabilities Services staff at the campus the student attends. MSTC does not provide testing to diagnose disability, but can refer students to appropriate agencies for testing. MSTC does, however, provide evaluation and testing to assist students with a disabilities plan and develop educational and vocational goals.

Reasonable and effective accommodations are individually determined and based on disability. Disabilities Services staff work with students, faculty, and staff to provide adjustments and modifications within our educational environment that provide students with disabilities an equal access to education and the ability to participate. They are not designed to give students with disabilities an unfair advantage over other students. Accommodations provide students with disabilities an equal opportunity to demonstrate their abilities.

Appeal Procedure: If you are denied accommodations or disagree with decisions about services or accommodations, there is a process to resolve your issues under the Student Discrimination Policy. A copy of this policy is available online at mstc.edu/student-resources/policies.

FINANCIAL AID

Financial aid is designed to supplement the resources of the student and/or family to help students achieve their educational and career goals. Every student in an approved program is eligible to apply for financial aid. All student financial aid is based on financial need. This need is established by an analysis of the Free Application for Federal Student Aid (FAFSA). Students should complete the FAFSA every year to determine eligibility.

Financial aid is offered to students only after they have been accepted for admission into an eligible program of study. Department of Education regulations require courses funded by financial aid be required toward graduation for that program of study.

Types of Financial Aid Available at MSTC

Pell Grant
Federal grant based on financial need. Grants range from $595 to $5730 per academic year. There is a 12-semester lifetime limit (or its equivalent) a student can receive Pell Grants.

Wisconsin Higher Education Grant (WHEG)
State grant range from $500 to $1084. Eligibility is limited to 10 semesters.

Supplemental Education Opportunity Grant (SEOG)
Grants range from $100 to $300 per year at MSTC.

College Work-Study (CWS)
Part-time jobs are provided on-campus with faculty and staff or off-campus at community service sites such as public libraries, Boys & Girls Clubs, and Head Start. Worksites are also established through elementary and secondary schools for tutors in math and reading as part of the America Reads Program. Students are paid biweekly.

Student Loans

- Federal Direct Subsidized Stafford Loan: A student may borrow up to $3500 for the first year and $4500 for the second year (if working towards an associate degree) depending on need. The Federal government pays the interest while the student is enrolled at least half time. Effective July 1, 2013 the Department of Education is monitoring all new borrowers or first-time borrowers' loan periods. If the borrower exceeds 150% of the published length of their academic program, the borrower becomes ineligible to receive additional Direct Subsidized Loans and becomes responsible for accruing interest during all periods as of the date the borrower exceeds the 150% limit.
- Federal Direct Unsubsidized Stafford Loan: This loan assists students with their education if they are ineligible for a Subsidized Stafford Loan or in addition to the Subsidized Loan.

Conditions are the same with one exception - interest starts accruing immediately. The student has the choice to pay the interest monthly while in college or it can be deferred and added to the principal of the loan. A student must complete the FAFSA and be considered for all types of financial aid prior to receiving a Federal Unsubsidized Loan.

- Private-Alternative Loans for Education: All loans for education must be calculated as a resource towards meeting the student cost of attendance according to federal regulations. Students are encouraged to apply for federal and state grants and the federal loan program prior to considering private-alternative loans due to the repayment provisions and interest rates offered. Private education loans must be processed directly with a lender of choice. MSTC District Board Policy Bulletin D08-17 on the MSTC website outlines the Financial Aid Lender Policy and Code of Conduct on Lender Relations.
- Plus Loans (Parent Loan for Undergraduate Students): A loan parents of "dependent" students may apply for to assist their son or daughter with educational expenses. Detailed information is available at mstc.edu/paying-for-college/loans.

Scholarships

Various scholarship opportunities through the MSTC Foundation are available online at mstc.edu/foundation-and-alumni/scholarships as they become available throughout the year. For further information, contact the Foundation & Alumni Office at 715.422.5322 or foundation@mstc.edu.

For information on other financial resources, visit mstc.edu/paying-for-college.

Application For Financial Aid

To apply for federal aid, you must complete a Free Application for Federal Student Aid (FAFSA). You can apply online at www.fafsa.gov. Paper FAFSA applications are available by calling 1.800.4FED.AID or by printing a PDF copy at www.fafsa.ed.gov/options.htm. Students must have a high school diploma, HSED, GED, or home school completion to be eligible for federal and state financial aid.

Financial Aid Continued Assistance

Federal regulations require that schools monitor the academic progress of students. It includes all periods of enrollment even if the student did not receive financial aid. Students can receive aid only for classes that are required for their program.

To continue to receive financial assistance for each term, a student must progress toward their degree/diploma by meeting the following standards:

- GPA: Cumulative 2.0 or higher
- Pace: Must complete 67% of all classes attempted. Attempted credits must include withdrawals (W), incompletes (IC), in-progress (IP), repetitions (R), and transfer credits (TR). Due to the cumulative nature of these requirements, it is very important that students take adding and dropping of classes under careful consideration.
- Maximum Timeframe: Successfully complete the program before attempting more than 150% of the credits required for graduation. Example: A program that requires 68 credits for graduation. 68 credits x 150% = 102. Students are not eligible for aid at the point when they cannot complete their program within 102 credits.

Financial Aid Warning/Suspension

If students do not meet the above standards, they will be placed on financial aid warning for one semester to allow them to get back in good standing. During that warning semester, students are eligible for financial aid but must meet the standards at the end of the term or face suspension. If there are extenuating circumstances, students have the right to submit a Petition/Appeal for Reinstatement for one semester. Students are strongly encouraged to utilize the services provided by MSTC such as the Academic Success Center, tutoring, and counseling.

Appeal Process

Students who believe their circumstances merit reconsideration may appeal their suspension by submitting a Petition/Appeal for Reinstatement. This form can be found at mstc.edu/paying-for-college/financial-aid-forms. An appeal cannot be based on need for aid or lack of knowledge of the warning status. An appeal must be based on an unusual situation or condition (e.g., illness, injury, death of a family member) which prevented the student from being successful. Documentation may be required. Students whose appeals are approved but will not be able to meet the Satisfactory Academic Progress Standards by the end of the probationary term, will be required to meet with a counselor to develop a Financial Aid Career Plan. This plan must ensure that the student will be able to meet the standards within a specific timeframe. Students must follow this plan successfully completing all courses to remain eligible for financial aid.

Financial Aid Emergency Financial Situations

If the student has an emergency situation that could jeopardize his or her education at MSTC, the student should contact the Financial Aid Office to discuss resource options.

Financial Aid Enrollment Changes

The Financial Aid Office will verify enrollment as of the financial aid census date which is the 14th calendar day of the semester. Eligibility must be determined on the student's enrollment level (full-time, half-time, three-quarter time, or less-than half-time); therefore, changes in enrollment may affect how much money the student receives.

The Financial Aid Office must recalculate a student's award if a change of enrollment occurs before the 14th day or the student's initial disbursement date. If a class is refunded at 100%, financial aid must be recalculated, and a repayment may be required. If the Financial Aid Office is notified that the student does not attend classes they registered for (no-show), the student is not eligible to receive financial aid and is required to repay 100% of any financial aid received. It is important to notify the Financial Aid Office any time a student decides to change enrollment to determine what impact that may have on financial aid eligibility.

Financial Aid Enrollment Definitions

- Full-time = 12 or more undergraduate credits
- Three-quarter time = 9 to 11 undergraduate credits
- Half-time = 6 to 8 undergraduate credits
- Less than half-time = 5 or less undergraduate credits

Financial Aid Payment Procedures
All financial aid funds are generated electronically through student accounts. Financial Aid funds must satisfy MSTC financial obligations of tuition and fees. Students should prepare to purchase their books independent of financial aid. Students whose aid exceeds the amount owed to MSTC will have the remaining funds disbursed to them. Students have the option to have their funds direct deposited or checks will be mailed to their address on file.

Financial Aid Re-Evaluation Of Income
If a student or family member has a significant change in income caused by unemployment, death, divorce, separation, etc., he/she should contact the Financial Aid Office to determine if their eligibility may be reviewed.

Financial Aid Refunds & Repayments
Return of Federal Funds: Federal law states that if a student receives federal financial aid and withdraws, quits attending, or drops out of all of his or her classes before completing at least 60% of the semester, the student will have to return a portion of the federal aid that was received. Withdrawal date is defined as the date on which the student officially notifies the school of withdrawal from the courses, the last date of class attendance or academically-related activity, or the midpoint of the semester if the student leaves without officially withdrawing. Students who receive all "F" grades at the end of the semester will be subject to review for return of federal funds. If courses are offered as modules and the student withdraws before the end of the term, return of Title IV repayment calculations must be applied. As a result, students may owe a repayment of a portion of their financial aid. The college will consider only amounts received during the semester or payment period. Students are encouraged to discuss withdrawal with the financial aid staff to determine how they will be impacted. Federal funds included in this policy are Direct Stafford Loan (unsubsidized and subsidized), PLUS Loans, Pell Grant, and SEOG. Students are billed by MSTC for any repayment that is due.

Students are not able to receive further financial aid at this or any other institution until the repayment is made in full. Academic transcripts withheld, and a student will not be able to register for the next semester. It is important that repayment is made in the Financial Aid Office as promptly as possible. A student is not eligible to receive federal financial aid at any college until repayment is made.

Clock Hour Programs-Cosmetology
The MSTC Cosmetology Program provides the theoretical and practical instruction to meet the Wisconsin requirement of 1800 hours for licensure. Title IV Federal regulations require such programs must use clock hours in all areas of administering financial aid. The program is broken into three payment periods based on 600 clock hours and 16 week blocks of instruction. Funds will be disbursed for the first payment period prior to the first term of entry to the program. Students must complete the clock hour and weeks of instruction for each payment period before establishing eligibility for their second and third disbursements.

Federal regulations require that schools monitor satisfactory academic progress (SAP) standards in both qualitative (grades) and quantitative (time) measures. SAP will be measured at the point when the student's scheduled clock hours for the payment period have elapsed, regardless of whether the student attended them. Student must maintain at least a 2.0 cumulative grade point average and complete at least 90% of the scheduled class time each session to remain eligible for financial aid. Evaluation will be done at the end of each payment period. Students must complete 1800 hours within a maximum of 150% timeframe or 71 weeks.

If students do not meet the above standards, they will be placed on financial aid warning for one semester to allow them to get back in good standing. During that warning semester, students are eligible for financial aid but must meet the standards at the end of the next session or face suspension. If there are extenuating circumstances, students have the right to submit a Petition/Appeal for Reinstatement for one semester.

Financial Aid Remedial Education
Students enrolled in remedial courses must be accepted into an academic program of study in order to receive financial aid. Undergraduate level college prep courses are eligible for financial aid as prerequisites to core program courses. A maximum of 30 credits in remedial education and college prep is fundable by financial aid while enrolled at MSTC. Students must meet all other eligibility requirements for state and federal student financial aid. Examples include program enrollment, need, satisfactory academic progress, and citizenship. Remedial courses are calculated in the satisfactory progress requirements.

Financial Aid Repeating A Course
Any course in which a "D" or better grade was received may not be repeated to qualify for financial aid unless a higher grade is required by the individual academic program in which case only one repeat is allowable.

Shared Programs/Consortium Agreements
Shared programs are technical college programs that may be delivered at multiple locations based on an agreement between districts. The "home" college disburses the aid to the student; therefore, MSTC has no way to defer the student's tuition until the aid is received. It is the student's responsibility to pay the visiting college. Students must apply for financial aid at the college granting the degree/diploma. The "home" college submits a list of students in the shared program that are attending MSTC. We identify the number of credits the student is attending at MSTC so their aid can be based on the total credits at both colleges. At the end of the term, MSTC will verify grades received at the "home" college for satisfactory progress standards.

Consortium agreements are used for students who are enrolled at more than one college and are not in a shared program. It may also be used for students who are accepted in a program at one college but are not enrolled in any courses at that college. Students can legally only get paid from one college for the same semester. It is the student's responsibility to pay the secondary college. Contact the Financial Aid Office for more information.

Financial Aid Summer School
Financial aid may be available for the summer session if a student received financial aid the previous award year and has a complete file for the new aid year. Eligibility is determined by the results of the FAFSA, what aid was previously awarded, overall need, and enrollment. Awards are based on credit load.

Financial Aid - Transferring Colleges Mid-Year
If a student plans to transfer to another college and wants to receive financial aid through that college, the student must

notify the MSTC Financial Aid Office so funds can be cancelled for the next term if necessary. Financial aid staff can also discuss the steps a student needs to complete for transferring financial aid eligibility.

GAINFUL EMPLOYMENT AND CONSUMER INFORMATION

Federal regulations require institutions that participate in the student financial assistance programs authorized under the Title IV of the Higher Education Act of 1965 report certain information about students who enrolled in Title IV-eligible educational programs. The diversity report, gainful employment information, and the net price calculator are available to current and prospective students at mstc.edu. Please contact the Financial Aid Office if you have any questions.

VETERANS' BENEFITS

Financial assistance is available to qualified veterans, National Guard members, and reservists. Benefits are also available to widows and dependents of deceased or service-connected disabled veterans. In addition, WI GI Bill and Veteran's Tuition Reimbursement are available for Wisconsin Veterans. Further information is available from the County Veterans Service Office or the MSTC Financial Aid Office. Forms and procedures are available at mstc.edu/admissions/veterans-benefits.

Service Member Priority Registration Wisconsin Act AB201

Priority registration allows eligible service members to register for MSTC classes one day ahead of the official open registration date for any given semester. Eligible service members are those who have served, or are serving, on active duty under honorable conditions in the U.S. armed forces. Service members do not need to be using veteran benefits in order to be eligible for priority registration. Priority registration is extended to service members only and not their spouses or dependents. To learn more about receiving service member priority registration, visit mstc.edu/student-resources/service-member-priority-registration or call 888.575.MSTC.

CREDIT FOR PREVIOUS TRAINING

All students who are requesting veterans' benefits when enrolling at MSTC will be given credit for previous training, where appropriate. The total length of the training program will be reduced proportionately. The student and the United States Department of Veterans Affairs (USDVA) will be advised in writing of the credit given to the student and the appropriate deduction in the total reduction in the total length of the program. All students receiving veterans' benefits must have transcripts and other documents showing credit for previous training reviewed through the Student Affairs Office by the end of the first semester or term. Failure to do so will result in no further certification for veterans' benefits until those transcripts have been provided.

SPOUSE/DEPENDENT BENEFITS

Qualifying spouses and children of eligible Wisconsin veterans receive a waiver of 100% of the program fees (tuition) and material fees at a Wisconsin Technical College System college. To be eligible, the spouse or child of the eligible veteran must be a Wisconsin resident. Spouses are only eligible for a set time period following the death or disability (30% or greater) of the veteran, and children must be between 18 and 26 years old. There are some limitations to the total number of credits and semesters covered. All veteran eligibility determinations are made by the Wisconsin Department of Veterans Affairs. For more information, contact your local County Veterans Service Officer.

Post 911/Chapter 33 Federal benefits may be able to be transferred to qualifying spouses and children by the qualifying veteran. Contact your County Veterans Service Office for more details. Forms and procedures are outlined at mstc.edu/admissions/veterans-benefits.

Satisfactory Progress

Students applying for federal veterans benefits must be accepted in a VA-approved academic program of study and progressing toward graduation. All courses taken must be related to that program of study and cannot be certified for payment if not required for graduation.

All students receiving veterans' benefits must maintain a minimal semester grade point average of 2.0. If students do not meet these standards, they are be placed on probation for one term. At the end of that semester, students must meet satisfactory progress standards or will be required to write a letter of appeal to the VA Certifying Office demonstrating mitigating circumstances (defined by the VA as unanticipated and unavoidable events beyond a student's control with supporting evidence or documentation) to receive further federal veterans benefits. Students may be asked to submit an educational plan approved by his or her program counselor as a condition of the appeal.

Students will not be certified for federal veterans benefits for any future enrollment period unless the requirements for satisfactory progress have been met or a formal appeal has been approved. If the student fails to come off probation, the USDVA will be notified of suspension which may result in repayment to the Veterans Administration.

Failing Grade and Last Date of Attendance

If a student receiving federal veterans' benefits is given a failing grade or grades, the college must report the last date of attendance in that class or classes to the Department of Veterans Affairs which may result in a repayment of benefits.

Withdrawal and Last Date of Attendance

If a student receiving veterans' benefits officially withdraws from a class or classes, he/she must inform the MSTC Veterans Certification Office. If a student is receiving veterans' benefits and fails to officially withdraw or walks away from a class or classes, the MSTC Veterans Certification Office is required to inform the USDVA of the last date of attendance. The Veterans Administration may require repayment of benefits for classes due to withdrawal or nonattendance.

Summer School – Continuous Payment

Veterans enrolling in summer school courses should be aware that the VA will consider start and end dates of each course to determine benefit calculation. Break or interval pay is no longer payable under any VA education benefit program unless under an Executive Order of the President or due to an emergency, such as a natural disaster or strike. This means that when your semester ends (e.g. December 15), your housing allowance is paid for the first 15 days of December only and begins again when your next semester begins (e.g. January 10) and is paid for the remaining days of January. If you need to request summer certification, be sure to notify your campus Veterans/Financial Aid Supervisor.

Wisconsin GI Bill Tuition Remission Veterans

Under the Wisconsin GI Bill, eligible Wisconsin veterans who entered active military duty as a Wisconsin resident receive 100% remission of the program

fees (tuition) and material fees at a Wisconsin Technical College System college. The Wisconsin GI Bill sets no income limits, ending periods following military service during which the benefit must be used or limits on the level of study. There are, however, some limitations to the total number of credits and semesters covered. If a Veteran is receiving Chapter 33 Post-911 benefits, waiver amounts may be affected. Wisconsin GI Bill-Funded students must maintain a minimum GPA of 2.0 to remain eligible.

GRADUATION

EARLY RELEASE FOR EMPLOYMENT

"Student Early Release" is a procedure whereby a potential graduate of one of MSTC's programs may be permitted to terminate his/her attendance at MSTC for employment, subject to the following conditions:

- Early release will be granted only if the employer requires the potential graduate to begin employment immediately. Students will be given early release only for full-time employment related to their training received at MSTC.
- Early release, if granted, cannot exceed two weeks prior to the last day of the semester. Such time will not be counted as absences. For additional policy information and procedures for receiving the early release, please contact your division dean or the student records manager.

GRADUATE EMPLOYMENT FOLLOW-UP STUDIES

MSTC is required by the Wisconsin Technical College System (WTCS) to conduct graduate follow-up studies at intervals of one year and five years. Every four years the WTCS conducts an employer follow-up survey to measure the employer satisfaction with WTCS graduates. This allows WTCS and MSTC to maintain important statistics regarding graduate employment and placement. Data is collected to provide information to prospective students, high school counselors, special interest groups, and the general public. In the six months following graduation from MSTC, an employment survey is mailed to each graduate to complete and return to the college for the graduate follow-up study.

Phone calls are placed to graduates who do not return the surveys in an effort to obtain the most information possible. The Graduate Success information can be found at mstc.edu/gradfollowup.

GRADUATING WITH HONORS

Honor lists include all graduating students with high academic levels as outlined below. Students graduating with honors are recognized with honor cords based on program GPA through the semester preceding the final semester. Those students whose academic history with MSTC is limited to the current semester are not eligible for honor cords.

Description:

- Graduation with Distinction
  Gold Cord 3.75-4.00 GPA
- Graduation with High Honors
  Silver Cord 3.50-3.74 GPA
- Graduation with Honors
  Bronze Cord 3.25-3.49 GPA

The Office of Student Records will determine program GPA for all MSTC graduates. A nominal fee is charged for students wishing to receive honor cords. Honor cords are available for purchase at campus bookstores.

GRADUATION POLICY

MSTC is authorized by the Wisconsin Technical College System to grant associate degrees and technical diplomas. The confer date is determined by the completion of all graduation requirements. To be eligible for a diploma or degree from MSTC, a student must fulfill the following requirements:

1. Applied and accepted into the program from which the student intends to graduate.
2. Satisfactorily complete all curriculum requirements based on the catalog year admitted into program or later. Division deans may, upon request, apply credit for prior learning and/or course substitutions towards program requirements.
3. Earn a program GPA of 2.0.
4. Technical diploma students must complete a minimum of 25% of their program's Occupational Specific courses at MSTC. Associate degree students must complete a minimum of 25% of their program's Technical Studies courses at MSTC.
5. Students enrolled in Service & Health Division programs may have specific graduation requirements. Please see the division dean, appropriate associate dean, or program counselor for additional information.

Students should petition to graduate by completing and submitting a Graduation Application Form available at any MSTC Campus Office, or by submitting an application via MyMSTC student online services. Petitioning to graduate will invoke an evaluation to determine graduation eligibility.

Commencement exercises are held in December and May in Marshfield, Stevens Point, and Wisconsin Rapids. If you are scheduled to complete coursework by the end of the summer session, you may participate in the May commencement ceremony. If your coursework goes beyond summer, you may participate in the December commencement ceremony. Students with a substantiated Code of Conduct violation are not permitted to participate in commencement ceremonies.

Students must fulfill all financial obligations to MSTC prior to receiving their certificate, degree, or diploma. Diplomas are mailed to the student's home address on file approximately six weeks after the close of the semester in which they have completed all graduation requirements.

RETRAINING GUARANTEE

MSTC guarantees up to six free credits of additional instruction to graduates of programs of at least one year in length who do not obtain or maintain employment in their program or related area within six months after graduation. The following two scenarios apply to the retraining guarantee:

1. To be eligible, graduates must certify, in writing, to the vice president of academic affairs:

- They have not secured employment in the occupational field in which they received the degree or diploma.
- They have actively pursued employment in their occupational field.
- They have not refused employment in their occupational field or in a related field.
- They have actively sought the assistance of the district career services office.

- or -

2. Within 90 days after their initial employment, the graduate's employer certifies to the vice president of academic affairs that the graduate lacks entry-level job skills and specifies in writing the specific areas in which the graduate's skills are deficient.

Per Section 38.24 (4), Wisconsin Statute
The graduate is responsible for all expenses other than tuition (e.g., textbooks, supplies, and incidental fees). The courses must be within the same occupational program that the graduates degree or diploma was received. The credits must be courses offered by MSTC and be currently scheduled for the general public. Once a graduate accepts a position in their program or related area, they are no longer eligible for this guarantee.

TRANSCRIPT REQUESTS

Academic records are kept on permanent file by the Office of Student Records. All requests for official transcripts must be submitted either online at mstc.edu/mymstc, in writing, in person, by fax, or by mail. Telephone or email requests are not accepted. Requests for the release of your transcripts are made to:

Mid-State Technical College
Office of Student Records
ATTN: Transcripts
500 32nd Street North
Wisconsin Rapids, WI 54494

Fax: 715.422.5561

Include the following information to expedite the processing of your transcript:

- Name and complete mailing address to whom you want the transcript released
- Complete name and any other name used while you were in attendance at MSTC
- Social security number or MSTC student ID number
- Current mailing address
- Telephone number
- Signature and date accompanied by a statement authorizing MSTC to release records to a third party

Your letter must include your signature or your request will not be honored. Per the Family Education Rights and Privacy Act (FERPA), your signature is required for release of education records to a third party.

There is a $6 charge for on-demand processing of official transcripts. All other transcript requests are free of charge. Official transcript fees and any outstanding financial obligations to the college must be paid before a transcript is issued.

Unofficial transcripts are also available to students and graduates. There is no charge for unofficial copies of student transcripts.

In accordance with the Family Educational Rights and Privacy Act (FERPA), MSTC does not fax transcripts.

PRIVACY

NOTICE OF FINANCIAL PRIVACY RIGHTS

MSTC is committed to ensuring the privacy and accuracy of all confidential information. As part of the College's commitment to maintaining the privacy of students, MSTC has developed this privacy statement. The statement has two purposes:

1. To educate users about privacy issues.
2. To inform users about specific privacy policies and guidelines employed at MSTC. MSTC complies with the Family Educational Rights and Privacy Act (FERPA), which prohibits the release of education records other than public directory information, without student permission. For additional details on FERPA, the document is available for review at www.ed.gov/offices/OII/fpco/ferpa/. MSTC complies with the Gramm-Leach-Bliley Act (GLB) of 1999 which requires institutions of higher education that disburse federal aid to maintain student (customer) privacy through FERPA and to maintain safeguards for protecting private financial information of students (customers). See www.ftc.gov/privacy/glbact/index/html for more information.

For purposes of FERPA and GLB, MSTC considers students, employees, alumni, or any other third party engaged in a financial transaction with MSTC as "customers." Customer information that must be safeguarded is "any record containing nonpublic personal information about a customer, whether in paper, electronic, or other form." It includes financial information, academic and employment information, and other private paper and electronic records.

Sharing of Customer Information
MSTC will only collect personal information which is knowingly and voluntarily provided by customers, for example, sending emails; completing forms; registering for classes, events, or other programs; responding to surveys; or ordering merchandise. If personal information is provided to MSTC, the college will use this information to respond to the customer's needs. MSTC may also contact customers to provide information about college activities, programs, membership, and development opportunities and special events that may be of interest. MSTC only shares information with other parties when one or more of the following conditions apply:

- MSTC requested your consent to share the information
- MSTC needs to share personal information to provide the service or product requested by the customer
- MSTC needs to send information to companies who work on behalf of the College to provide a service or product to customers
- MSTC is responding to subpoenas, court orders, or any other legal process
- MSTC finds it necessary to protect and defend the legal rights and/or property of MSTC

MSTC does not actively share personal information about students gathered through web servers or via forms. Because MSTC is a public institution, some information collected from MyMSTC, and student data forms may be subject to the Open Records Law. This means that while information is not actively shared, in some cases the college may be compelled by law to release directory information regarding students. The college collects student social security numbers to provide student financial aid and to provide data to the State of Wisconsin for state purposes. MSTC is also required to share student information, including social security numbers, with the State of Wisconsin and the United States Government for purposes of receiving aid for programs and funding for the college or for the purposes of federal student aid. Sharing of this information is permitted under state and federal statute. MSTC will also share directory information regarding students with educational partners for purposes of promoting educational programs.

Opt Out From Sharing of Information
MSTC does, upon explicit request of users, share directory information with other parties to provide services or information to students. Consistent with FERPA, the college does not release personal student information other than public directory information to other parties unless an explicit written authorization is submitted requesting the institution to do so. Students who wish to have their information removed from the campus directory should visit their local Campus Office or contact 888.575.MSTC.

Privacy Provisions
MSTC is in compliance with FERPA. Directory information (e.g., name, address, enrollment at the college, and degree information), the list of which is published yearly in the Student Handbook, is considered public (unless a student has requested otherwise in writing). All non-directory information is restricted or confidential, what GLB calls "non-public." Under FERPA, restricted information (e.g., academic or financial records) is released outside the college only with the student's written consent. Designated school officials, including faculty, key employees, and outside service vendors, have access to restricted, "non-public" information on a need-to-know basis only. In compliance with GLB and long standing good practice, the college extends FERPA privacy protections to all customers of the college. The Student Records Office will provide guidance in complying with all FERPA privacy regulations. Each department is responsible for securing customer information in accordance with all privacy guidelines.

Security Provisions
With respect to the safeguarding provisions of the GLB Act, MSTC GLB Information Security Plan herein is designed to ensure the security, integrity, and confidentiality of non-public customer information, protecting it against anticipated threats, and guarding it against unauthorized access or use. Covered under the Plan are administrative, technical, and physical safeguards used in the collection, distribution, processing, protection, storage, use, transmission, handling, or disposal of nonpublic customer information. The Plan covers actions by both employees of the college and vendors that the college partners with to provide services to students. MSTC does its best to ensure that the personal information retained about individuals is accurate. Every faculty member, staff member, and student has the ability to check personal information such as his or her name, address, and phone number through MyMSTC and to update it at any campus office. MSTC has deployed extensive security measures to protect against the loss, misuse, or alteration of the information under college control.

Changes to This Privacy Statement
This document was last updated August 29, 2005. We will occasionally update this privacy statement. When we do, we will also revise the "last updated" date.

PHOTOGRAPHIC IMAGES (CONSENT OF)

Registration as a student and attendance at or participation in classes and other campus and MSTC activities constitutes an agreement by the student to MSTC's use and distribution (both now and in the future) of the student's image or voice in photographs, videotapes, electronic reproductions, or audiotapes of such classes and other campus and MSTC activities. Students who wish to opt out of this consent should address this in writing to the director of communications.

SOLOMON AMENDMENT

The Solomon Amendment, a federal law, mandates that institutions receiving certain federal agency funding must fulfill military recruitment request for access to campus and for lists containing student recruiting information. Recruiters may receive recruiting information for either the immediately previous, current, or future term for all students age 17 and older who are/were registered for at least one credit hour in the requested semester/term. MSTC complies with the regulations of the Solomon Amendment.

STUDENT & EMPLOYEE RIGHT TO KNOW REPORT

Mid-State Technical College is committed to maintaining an environment that supports student learning and achievement.

The Student Right to Know Report complies with various state and federal laws requiring that certain information be provided to all students and staff annually to promote a safer environment. It includes information from policies concerning alcohol & drugs, sexual harassment, and equal opportunity, as well as student privacy information, campus security information, and crime statistics for the previous three years. This report is an excellent tool to learn what is necessary to protect yourself, assist your friends, and join us in efforts to make a difference in our campus communities.

To view the Student & Employee Right to Know Report online, go to mstc.edu/student-resources/policies/right-to-know.

Paper copies of the report are provided upon request. Please contact Student Affairs at 715.422.5445 or Human Resources at 715.422.5321. For individuals who are hearing impaired use the Wisconsin Relay Service number 711.

STUDENT HEALTH CARE RECORDS (CONFIDENTIALITY)

In accordance with Wisconsin State Statute 146.82, all student health care records shall remain confidential, released only to the persons designated in the statute, provided that informed consent of the student is obtained prior to the release of information. Exceptions to the above reside within Wisconsin Statutes 48.981, 48.90, 146.995, 69.14, 979.01, 146.025, 143.04, 143.07, and 143.12, which requires mandatory reporting of specific circumstances to public authorities regardless of whether the individual involved has consented to the release of such information.

Upon review by, or if shared with an MSTC educational professional, medical, and counseling records become part of the student's educational records and will be treated in accordance with FERPA (Family Educational Rights and Privacy Act) and HIPAA (Health Insurance Portability and Accountability Act) recordkeeping requirements.

STUDENT RECORDS & PRIVACY RIGHTS

The Family Educational Rights and Privacy Act (FERPA) of 1974 protects the privacy of educational records, establishes the rights of students to inspect and review their educational records and provides guidelines for the correction of inaccurate or misleading data through informal and formal hearings.

Education Records
Education Records are defined as "records, files, communications, and other materials in any recorded medium that relate directly to a student and are maintained by MSTC." These records include but are not limited to academic records, financial records, disabilities information, counseling documentation, and instructional progress. Health records that are shared with counselors or staff of MSTC for instructional or counseling purposes are classified as student records by FERPA.

Release of Non-Directory Information
Records are not released to parents without consent of the student. Parents should arrange with their children for sharing of information. Non-directory information is not released to anyone without written permission from the student, except for the following agencies which can receive this data without the student's permission as provided by the Privacy Act:

- Agencies providing financial assistance to the student, such as employers, Division of Vocational Rehabilitation and the Veterans Administration.
- The Wisconsin Technical College Board as part of the process of securing state funds.
- MSTC designated school officials who have a legitimate educational need for the information. Designated school officials are defined as faculty, employees, auditors, and outside service vendors, who require non-directory information to perform a task or assignment.
- Courts or legal officers on the basis of a subpoena.
- Properly authorized educational authorities for the purpose of research, provided that the information is not given in personally identifiable format.
- State and local officials to whom disclosure is required by state statute adopted prior to November 19, 1974.
- Other colleges should an MSTC student seek to enroll in another college or university to complete a course or degree.

MSTC may disclose personally identifiable information from an education record to appropriate parties, including parents of an eligible student, in connection with an emergency if knowledge of the information is necessary to protect the health or safety of the student or other individuals.

MSTC maintains a record of all releases of student records. A student may request to view a copy of what was shared by contacting the Registrar at 715.422.5502.

Right to Review and Inspect Education Records

Students have the right to the following:

1. Inspect and review information contained in educational records. All requests to review educational records must be made in writing to the Student Records Manager. Students are provided this opportunity for review within 45 days from the date of receipt of the request. Students may be provided with copies of their education records with appropriate written consent should they be unable to come to the appropriate campus location for review of their records. Official copies of student records may not be removed from MSTC.
2. Challenge the contents of their educational record in writing to the Student Records Manager.
3. Request a hearing in writing if the outcome of the challenge is unsatisfactory.
4. Submit an explanatory statement for inclusion in the educational record if the outcome of the hearing is unsatisfactory.
5. Prevent disclosure with certain exceptions of personally identifiable information.
6. Secure a copy of the institutional policy. Copies of the policy can be obtained from the Student Records Manager.
7. File complaints regarding alleged violations of FERPA with the Family Policy and Compliance Office.

Directory Information
In complying with FERPA guidelines, MSTC will release the following directory information <u>without</u> the consent of the student:

- Student's name
- Student ID number
- Date of Birth
- Student Status
- Address
- Email address
- Telephone number
- Program(s) of study
- Dates of enrollment
- Degree(s) and award(s) received (including honors)
- Past and present sports and student activities
- Educational institutions attended

Students have the right to inform MSTC that any or all of the above information should not be released without their prior consent. Students who wish to do this must complete the Request to Prevent Disclosure of Directory Information form revoking any or all of the public information listed. Revocation remains in effect until the student notifies MSTC of a change. Forms are also available at mstc.edu/student-resources/registration or any Campus/Student Affairs Office.

Request for Nondisclosure of directory information does not apply to registered sex offenders whose information has been provided to MSTC under the Wetterling Act, including information made available by the Wisconsin sex offender registry and community notification program.

STUDENT CODE OF CONDUCT

MSTC believes that all members of the college community have the responsibility to contribute to a positive learning environment. Every student has the right to be educated under the conditions of respect, dignity, and safety. Students are expected to conduct themselves in a manner that does not interfere with the educational process, endanger the safety or welfare of others, or represent a violation of established statutes, ordinances, or public laws.

Standards of conduct are enforced on all MSTC property, any facility used by the college for educational purposes, and at college sponsored events. The following student conduct regulations are intended to give students general notice of prohibited conduct. However, they are not meant to define misconduct in every circumstance. Standards violations include (but are not limited to) the following:

1. Noncompliance with all MSTC policies including, but not limited to, those found at mstc.edu/students/policies.htm.
2. Noncompliance with civil and criminal laws.
3. All forms of dishonesty including knowingly furnishing false information to MSTC, or the alteration or use of MSTC documents or instruments of identification with intent to defraud.
4. Conduct which disrupts the normal operations of MSTC and/or classroom instruction.
5. Conduct which is disorderly, lewd, or indecent including physical abuse, verbal abuse, threats, intimidation, harassment, sexual offenses, coercion, and/or any conduct which threatens or endangers any person.
6. Theft of, or damage to, MSTC or personal property.
7. Failure to comply with a reasonable request or directive of an MSTC staff member.
8. Use, possession, or distribution of illegal drugs or alcohol.
9. Possession of firearms, explosives, dangerous articles, and/or incendiary devices.
10. Abuse or misuse of computers per Network Policies.

Incident reports should be completed and filed with the director of student support or campus deans. Students found in violation of the Student Code of Conduct may be subject to disciplinary sanctions. Sanctions may include, but are not limited to, verbal and/or written warning, probation, suspension, expulsion, restitution, or other discipline deemed appropriate.

The appeal process (academic and nonacademic) is outlined in the "Appeal Process/Grading System/Graduation" section of this handbook and the Student Code of Conduct. Sanctions may be imposed for violations of these rules whether or not criminal or civil sanctions are pursued. Apparent or alleged violation of local ordinances and federal or state law on college premises or at college sponsored or supervised activities will be forwarded to local law enforcement authorities. The current Student Code of Conduct can be found at mstc.edu/pdf/StudentCodeofConduct.pdf.

TECHNOLOGY

TECHNOLOGY COMPUTER NETWORK & PUBLIC WIRELESS ACCESS

All users of MSTC information technology resources are required to abide by the acceptable use agreement terms and agree to all terms in the Network Policies found at mstc.edu/student-resources/technology/network-policies. These terms govern the access to and use of the information technology applications, services, and resources of MSTC and the information they generate. This access is considered a necessary privilege in order to perform authorized functions. Users shall not knowingly permit use of their entrusted access control mechanism for any purposes other than those required to perform authorized functions. The college reserves the right to, without notice, limit or restrict access and to inspect, remove, or otherwise alter any data, file, or system resource that may undermine the authorized use of any MSTC IT resources. Violations of the Acceptable Use Policy are subject to disciplinary action.

COMPUTERS & INSTRUCTIONAL TECHNOLOGY AT MSTC

In an effort to prepare graduates for today's workplace, MSTC integrates computers and other technology into many of its courses. Students should expect to use a computer for a variety of tasks in classes and for homework assignments including but not limited to word processing, presentation, and web-based instruction, as well as to receive important college communications via college-assigned email.

EMAIL

All students are granted an email address through Microsoft Office 365. Students will retain their email address for 180 days after the end date of the last semester the student was enrolled in. Important information regarding registration, billing, financial aid, grades, and scheduling information are distributed to students via their MSTC email account. It is the student's responsibility to open and read their email regularly. **MSTC email is the college's primary means of communicating with students.** Instructors may utilize the college-assigned email system to mail student academic progress information that is private. It is the student's responsibility to ensure that their email and network account password is not shared with other persons.

Please go to mstc.edu/student-resources/email-assistance for instructions on accessing your email account. Problems or questions may be directed to the Help Desk at 877.469.6782.

HELP DESK SERVICES

Students who have questions about accessing MSTC online services can contact the Help Desk at 877.469.6782. All student online services and MSTC Help Desk services are available 24 hours a day, seven days a week, including holidays.

Additional information regarding technology at MSTC can be found at mstc.edu/student-resources/technology.

ONLINE SERVICES-MYMSTC

Student online services are available to all enrolled students at MSTC. Services provided online via MyMSTC include accept/decline/review financial aid awards, search/add/drop classes, enrollment verification, grades, request official transcripts, view unofficial transcripts, pay by check or credit card, payment plan enrollment, review holds, student class schedules, transfer credit summary, and apply to graduate.

Admitted students can gain initial access to MyMSTC by navigating to mstc.edu/mymstc and selecting "Need to Create a Password." Passwords should be kept confidential and not shared with other persons for any reason. Parents are not issued login information for their children.

Executive Team

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President
BS, Marquette University
MEd, University of Wisconsin-Stevens Point
EdD, Nova Southeastern University

Dahl, Nelson
Vice President, Finance
BBA, University of Wisconsin-Whitewater
MBA, Cardinal Stritch University

Lang, Mandy
Vice President, Student Affairs
BA, University of Wisconsin-Madison
MS, University of Wisconsin-Platteville
EdD, Edgewood College

O'Sullivan, Richard
Vice President, Human Resources
AA, Wright College
BGS, Roosevelt University
MS, Loyola University-Chicago
JD, The John Marshall Law School

Willfahrt, Connie
Vice President, Academic Affairs
BS, University of Wisconsin-Eau Claire
MEd, University of Wisconsin-Stevens Point

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MS, University of Minnesota-Minneapolis

Alt, Pam
Instructor, Medical Assistant
BSN, Viterbo University
MSN, University of Wisconsin-Eau Claire

Altmann, Kelly
Instructor, Surgical Technologist
RN, Mercy Medical Center
BSN, Viterbo University

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MA, PhD, Indiana State University

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MS, Philadelphia University

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MS, Iowa State University

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MS, Silver Lake College

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MEd, National-Louis University
MBA, Walden University

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Professional Hair Design Academy

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BSN, Viterbo University
MSN, University of Wisconsin-Eau Claire

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INDEX

		LOCATION				ONLINE	
		Adams	Marshfield	Stevens Point	Wisconsin Rapids	50% or more	100%
Associate Degree	Accounting	●	●	●	●	●	
Associate Degree	Administrative Professional	●	●	●	●		
Technical Diploma	Automotive Technician				●		
Technical Diploma	Barber Technologist				●		
Associate Degree	Business Management	●	●	●	●		●
Technical Diploma	Central Service Technician		●			●	
Associate Degree	Civil Engineering Technology-Highway Technician				●		
Associate Degree	Clinical Research Coordinator	●	●	●	●	●	
Technical Diploma	Cosmetology				●		
Associate Degree	Court Reporting			●			
Associate Degree	Criminal Justice-Corrections				●		
Associate Degree	Criminal Justice-Law Enforcement				●		
Technical Diploma	Diesel & Heavy Equipment Technician				●		
Associate Degree	Early Childhood Education	Available at Stevens Point Campus. Hybrid/Evening Format: Evening program courses are available in Marshfield, Stevens Point, and Wisconsin Rapids.					
Associate Degree	Electrical Power Engineering Technician				●		
Technical Diploma	Emergency Medical Technician		●	●	●		
Technical Diploma	EMT-Paramedic				●		
Technical Diploma	Farm Business & Production Management	Available at MSTC's outreach centers, including Adams-Friendship, Almond, Amherst, Auburndale, Chili, and Vesper.					
Technical Diploma	Farm Operation		●				
Associate Degree	Gerontology			●		●	
Associate Degree	Health and Wellness Promotion	●	●	●	●	●	
Associate Degree	Health Informatics and Information Technology	●	●	●	●	●	
Associate Degree	Industrial Mechanical Technician				●		
Associate Degree	Instrumentation & Controls Engineering Technology				●		
Associate Degree	IT Network Specialist			●	●		
Associate Degree	IT Software Developer			●	●		
Technical Diploma	Machine Tool Technician				●		
Associate Degree	Marketing		1st year only	●	●		
Technical Diploma	Medical Assistant		●	●			
Technical Diploma	Medical Coder	●	●	●	●	●	
Associate Degree	Nursing		●		●	●	
Technical Diploma	Nursing Assistant		●	●	●		
Technical Diploma	Office Support Specialist	●	●	●	●		
Associate Degree	Paramedic Technician				●		
Technical Diploma	Pharmacy Technician			●			
Technical Diploma	Phlebotomy Technician		●	●		●	
Technical Diploma	Practical Nursing		●		●	●	
Associate Degree	Process & Biorefinery Technology				●		
Associate Degree	Renewable Energy Specialist				●		
Associate Degree	Respiratory Therapist		●				
Associate Degree	Solar Electric Technician				●		
Associate Degree	Supervisory Management	●	●	●	●		
Technical Diploma	Surgical Technologist		●				
Associate Degree	Sustainable Heating & Cooling Technician				●		
Associate Degree	Urban Forestry Technician				●		
Technical Diploma	Welding				●		