

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE
COLLEGE CATALOG
2013-2014

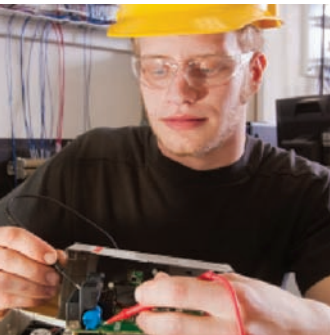


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Minnesota State Community and Technical College is committed to a policy of nondiscrimination in employment and education opportunity. No person shall be discriminated against in the terms and conditions of employment, personnel practices or access to and participation in programs, services and activities with regard to race, sex, color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, gender identity or gender expression or membership or activity in a local commission as defined by law. Inquiries regarding compliance, rights and other information may be addressed to Affirmative Action Officer Doug Andring, 1900 28th Avenue South, Moorhead, MN 56560, Office B152, 218-299-6870, fax: 218-299-6513. Inquiries regarding the education opportunities or equal employment policies of the Affirmative Action program should be directed to the:

**Minnesota State
Community and Technical College**

Compliance Officer
Doug Andring
1900 28th Avenue South
Office B152
Moorhead, MN 56560
Telephone: 218-299-6870
Fax: 218-299-6513

**Office for Civil Rights
U.S. Department of Health and Human Services**

233 N. Michigan Ave., Suite 240
Chicago, IL 60601
Telephone: 800-368-1019
Fax: 312-886-1807
TDD: 800-537-7697
Email: OCRMail@hhs.gov

**Office for Civil Rights
U.S. Department of Health and Human Services**

200 Independence Avenue SW
Room 509F HHH Bldg.
Washington, D.C. 20201
Telephone: 1-800-421-3481
Fax: 202-205-9862
TDD: 877-521-2172
Email: OCRMail@hhs.gov

Printed copies of the campus drug-free policy, security policy, athletic gender equity policy, and student right to know are available by contacting: Student Services Office; Minnesota State Community and Technical College; 1414 College Way; Fergus Falls, MN 56537-1000; (218) 736-1500.

Minnesota State Community and Technical College is accredited by the Higher Learning Commission; Member of the North Central Association (NCA), with additional program-specific accreditation information found in the M State Catalog. Information about NCA can be found on its website at www.ncahc.org or by writing to the association at 230 South LaSalle Street, Suite 7-500; Chicago, IL 60604; telephone (800) 621-7440.

Information contained in this Catalog is periodically updated from time to time without notice. None of the information contained in this Catalog should be regarded as contractual in nature. Data contained in this Catalog is thought to accurately reflect information available at the time of publication (Fall Semester). However, Minnesota State Community and Technical College reserves the right to make substantial changes in curricula, course content and goals, procedures, policies, program requirements and tuition rates / costs at any time deemed necessary between editions. All revisions will take priority over the contents of this edition.

To reach M State with a TTY, contact the Minnesota Relay Service at (651) 297-5353 or 1-800-627-3529 and ask to have a call placed to the college. Upon request this information will be made available in alternate formats.



A member of the Minnesota State Colleges and Universities System.
An Equal Opportunity Educator/Employer
Un Educador/Empleador de Oportunidad Igual

The purpose of the Catalog is to provide students, advisors, counselors, faculty and college administration a convenient vehicle for viewing information about M State's programs and courses. While M State is committed to communicating in a timely and accurate manner, it is important for all Catalog users to understand that this publication is not intended to create any guarantees about current program/course offerings. M State reserves the right to change or vary the content of this publication, without notice to current or potential users, when in its sole discretion such changes, updates or variations are warranted. It is the user's responsibility to seek clarification and/or assistance from a college advisor or administrator regarding any content questions. The most current publication of M State's Online Catalog supersedes all prior print or online publications and can be found by visiting our website at www.minnesota.edu.

Discover the difference at Minnesota State Community and Technical College.

Our mission is to provide “dynamic learning for living, working and serving.”

Minnesota State Community and Technical College, with campuses in Detroit Lakes, Fergus Falls, Moorhead and Wadena, offers opportunities to discover your future at multiple locations and online through our eCampus, whether you are interested in career and technical training, academic transfer programming, advancing your existing career or just enriching your life and personal interests through life-long learning.

There is something for everyone at M State, and I invite you to visit any of our campuses or our website at minnesota.edu to explore the many possibilities available to you. You can schedule a campus tour or just stop by. You will find caring and helpful student services staff ready to assist you; engaged and experienced faculty who are experts in their career fields and disciplines; satisfied and involved students well on their way to careers or transfer institutions; and community and administrative members who care deeply about the success of the College and its students and employees.



M State is completing its first decade as a combined college, and we will be celebrating that milestone all year! Although each campus has a rich history spanning more than 50 years, coming together as one college has proven to be a strategy for success, as we have more to offer each year. Learn more about M State and the people, services, programs and student life activities available by exploring our website or by scheduling a campus visit. This Catalog is also filled with useful information.

On behalf of our faculty, staff and administrators, I want to thank you for considering M State as your educational partner and pathway to a bright future. We look forward to meeting you and working with you to reach your career and transfer goals.

Best wishes for success with your college plans and your personal goals. Remember, we are *Your Regional College of Choice!*

A handwritten signature in black ink that reads "Peggy D. Kennedy". The signature is written in a cursive, flowing style.

Peggy D. Kennedy, Ed.D.
President

Directory of College Services

Detroit Lakes

Academic and Student Services

Academic Dean	218.846.3723
Campus Director of Student Services.....	218.846.3714
Dean of Student Access.....	218.736.1528
Dean of Student Success.....	218.299.6535
Solution Center.....	877.450.3322

Academic Advising	218.846.3670
Assessments/Accuplacer	218.846.3777
Bookstore	218.846.3727
Child Care	218.847.1145
Disability Services	218.846.3734
English Language Learner.....	218.846.3734
Enrollment	218.846.3777
Facilities	218.631.7906
Financial Aid.....	218.846.3754
Food Service.....	218.847.2309
Foundation	218.846.3705
Housing.....	218.846.3670
Information.....	218.846.3670
IT Help Desk.....	218.846.3764
Library	218.846.3772
Multicultural Services/ Diversity and Inclusion.....	218.846.3756
Student Life	218.846.3768
Learning Services/Tutoring	218.846.3734
Student Records.....	218.846.3789
Veterans Services.....	218.299.6881

eCampus

Academic and Student Services

Academic Dean/eCampus.....	218.347.6216
Director of Student Services.....	218.631.7936
Dean of Student Access	218.736.1528
Dean of Student Success	218.299.6535
Solution Center	877.450.3322

Academic Advising	218.299.6590
Assessments/Accuplacer	218.736.1569
Bookstore	218.736.1569
Disability Services	Contact campus associated with your program
Enrollment	218.736.1661
Financial Aid.....	Contact campus associated with your program
Information.....	218.736.1569
IT Help Desk.....	Contact any campus help desk
Library	Contact any campus library
Student Success Center/Tutoring.....	Contact any campus
Student Records.....	218.347.6222
Veterans Services.....	218.299.6881

Directory of College Services

Fergus Falls

Academic and Student Services

Academic Dean	218.736.1507
Campus Director of Student Services	218.736.1530
Dean of Student Access	218.736.1528
Dean of Student Success	218.299.6535
Solution Center	877.450.3322
Academic Advising	218.736.1533
Assessments/Accuplacer	218.736.1529
Athletics	218.736.1648
Bookstore	218-736.1556
Box Office/Fine Arts.....	218.736.1600
Counseling.....	218.736.1539
Disability Services	218.736.1595
English Language Learner.....	218.736.1530
Enrollment	218.736.1549
Facilities	218.736.1560
Financial Aid.....	218.736.1534
Food Service.....	218.770.8487
Foundation	218.736.1514
Housing.....	218.736.1635
Information.....	877.450.3322
IT Help Desk.....	
Library	218.736.1650
Multicultural Services/ Diversity and Inclusion.....	218.736.1530
Security	218.770.6161

Student Life	218.736.1537
Learning Center/Tutoring.....	218.736.1624
Student Records.....	218.736.1529
Veterans Services.....	218.299.6881

Moorhead

Academic and Student Services

Academic Dean/Liberal Arts	218.299.6544
Academic Dean/Trades and Technology ...	218.299.6594
Campus Director of Student Services	218.299.6620
Dean of Student Access	218.736.1528
Dean of Student Success	218.299.6535
Solution Center	877.450.3322
Academic Advising	218.299.6880
Assessments/Accuplacer	218.299.6824
Bookstore	218.299.6570
Counseling.....	218.299.6618
Disability Services	218.299.6882
Enrollment	218.299.6583
Facilities	218.299.6522
Financial Aid.....	218.299.6539
Foundation	218.299.6826
Information.....	218.299.6500
IT Help Desk.....	218.299.6568
Library	218.299.6530
Multicultural Services/ Diversity and Inclusion.....	218.299.6806

Directory of College Services

Student Life 218.299.6853
 Learning Center/Tutoring..... 218.299.6882
 Student Records.....218.299.6593
 Veterans Services..... 218.299.6925

Student Life 218.631.7827
 Learning Center/Tutoring..... 218.631.7870
 Student Records and Transcripts 218.631.7819
 Veterans Services..... 218.299.6881

Wadena

Academic and Student Services

Academic Dean218.631.7817
 Campus Director of Student Services..... 218.631.7832
 Dean of Student Access 218.736.1528
 Dean of Student Success218.299.6535
 Solution Center877.450.3322

Academic Advising 218.631.7821
 Assessments/Accuplacer 218.631.7827
 Bookstore 218.631.7825
 Child Care 218.632.2348
 Disability Services 218.631.7870
 English Language Learner.....218.632.2450
 Enrollment 218.631.7818
 Facilities218.631.7906
 Financial Aid..... 218.631.7820
 Foundation 218.631.7931
 Information.....218.631.7800
 IT Help Desk..... 218.631.7872
 Library 218.631.7865

K12 Collaborations

Career Articulation Agreements..... 218.347.6215
 Center for College Readiness 218.347.6213
 Concurrent Enrollment..... 218.347.6215
 eCampus in the High School..... 218.347.6215

Vision, Mission and Values

Vision

A success story for every student and stakeholder.

Mission

Provide dynamic learning for living, working and serving.

M State's mission is to provide accessible education with vigor and integrity to diverse learners, preparing them for dynamic living, working and serving.

Values

M State is focused on excellence, integrity, respect and innovation.

- Excellence in teaching and service
- An environment conducive to learning and working
- A culture of diversity and inclusiveness
- Responsiveness to communities served
- Respect and civility in communications
- Openness to innovation and change
- Accountability and transparency in decision-making

Strategic Goals

Aligned with the Strategic Framework of the Minnesota State Colleges and Universities System

Ensure access to an extraordinary education for all Minnesotans

M State embraces the challenge to excel in teaching, learning and service so all students — career, transfer and life-long learners — are ensured of opportunities for success.

Be a partner of choice to meet Minnesota's workforce and community needs

M State recognizes its role as partner and leader in preparing our students, the region and the state for current and future economic competitiveness in a global market.

Deliver to students, employers, communities and taxpayers the highest value and most affordable option for higher education

M State uses sound financial management practices and continually assesses how to productively meet current and future educational needs through innovation, efficiencies and shared services.



Detroit Lakes

900 Highway 34 East
 Detroit Lakes, MN 56501-2698
 218.846.3700 • 1.877.450.3322 • Fax: 218.846.3794

About the Campus

The Detroit Lakes campus, with a total enrollment of 700, offers unique programs including PowerSports Technology and Marine Engine Technology – both fitting for a campus in the heart of Minnesota lake country. Additional programs prepare students to meet growing market demand in the areas of radiologic technology, computer network security and Web development. Students also can choose career and technical programs in the automotive, business, child care, drafting and health care professions. The campus offers food service, child care, a variety of student organizations, a veterans resource center and the Business & Entrepreneurial Services Center. With small class sizes, the faculty-to-student ratio allows for one-on-one attention, while exceptional student support services are available to promote academic success.

About the Community

The beautiful Detroit Lakes area has 412 lakes within a 25-mile radius and offers some of Minnesota's premiere outdoor recreation opportunities. Summer is the busy time in lake country with fishing, boating, water sports and events that draw visitors from around the nation. Thousands descend upon the spectacular mile-long beach for the 4th of July to enjoy the water, fun and free fireworks show. Each August, Detroit Lakes draws music fans from around the country to WE Fest, the world's largest outdoor country music festival. Detroit Lakes isn't only about the summer, though. There is an array of activities during the rest of the year, including ice fishing, snowmobiling and hunting, plus the community celebrates its vibrant downtown commercial district and is just a short drive from the Fargo-Moorhead metropolitan area. The city's population is approximately 8,600 in the off-season and 30,000 in the summer, and it is home to 14 challenging golf courses, go-carts and batting cages, cross-country skiing and downhill skiing.



Fergus Falls

1414 College Way
 Fergus Falls, MN 56537-1000
 218.736.1500 • 1.877.450.3322 • Fax: 218.736.1510

About the Campus

The Fergus Falls campus, with a total enrollment of 900, has been providing high-quality academic programs in the liberal arts and health sciences for more than 50 years. Degree options include Associate in Arts, Associate in Fine Arts in Music, Associate in Fine Arts in Visual Arts, Associate of Science in Biological Sciences, Medical Laboratory Technology, Engineering, Environmental Science, Accounting and Business, degrees in Nursing and a diploma and AAS in Equine Science. The college is recognized for its rich tradition in arts, music and athletics, where it competes in the National Junior College Athletic Association and the Minnesota College Athletic Conference in eight sports: football, volleyball, men's and women's for both golf and basketball, baseball and softball. Visitors are amazed by the extensive art collection displayed across the campus, making art an everyday part of the student experience. The music program is renowned for both vocal and instrumental excellence, and student musicians enjoy new chorale and instrumental rehearsal rooms, along with computers and software for music composition. The campus offers food service, two options for on-campus living and many scholarship opportunities through Fergus Area College Foundation, which has an endowment of nearly \$3 million.

About the Community

Fergus Falls is located in west central Minnesota, less than three hours from Minneapolis-St. Paul and an hour from the Fargo-Moorhead metropolitan area. The city of 14,000 is home to an active arts community and has a wide array of outdoor recreational opportunities, including the trailhead of the 55-mile Central Lakes Trail for bikers and snowmobilers. With more than 1,000 lakes in Otter Tail County, there is no shortage of outdoor and water activities. A Center for the Arts and the Kaddatz Galleries, both located in downtown Fergus Falls, are venues for theater, concerts, independent films and rotating art exhibits. Otter Tail Power Company has its headquarters in Fergus Falls, and the city is a regionally-recognized health care provider through Lake Region Healthcare and its Athletic Republic sports training center and new Cancer Care and Research Center.



Moorhead

1900 28th Avenue South
Moorhead, MN 56560-4899
218.299.6500 • 1.877.450.3322 • Fax: 218.299.6810



Wadena

405 SW Colfax Avenue
Wadena, MN 56482-1447
218.631.7800 • 1.877.450.3322 • Fax: 218.631.7904

About the Campus

The Moorhead campus, with a total enrollment of 2,600, is truly a comprehensive community college, offering both technical/career programs and general education classes. The many choices enable students to pursue their career goals in programs that range from six months to two years. Students also have the option of completing an Associate in Arts degree with the intent of continuing on to earn a bachelor's degree or beyond at a four-year college or university. Innovative new programs allow students to prepare for careers in the exciting and expanding fields of biotechnology and engineering. Campus highlights include food service which features homemade meals made by students in the culinary program, student support services, intramural sports and student life opportunities with nearly 20 student organizations.

About the Community

Fargo-Moorhead, with a population of 210,000, has a growing reputation as a vibrant college town, with students from M State, Minnesota State University Moorhead, Concordia College and North Dakota State University. Moorhead is small enough to feel comfortable, yet it offers all the benefits of a larger metropolitan area with its cultural, recreational and commercial diversity. Arts and culture flourish in Fargo-Moorhead, where local talent supports a community theater, symphony and civic opera company. The cities boast numerous parks, bike trails, ice facilities, playgrounds, swimming pools, ball diamonds, cross country ski trails and golf courses. The business community is thriving, too, as a center for agri-business, marketing, technology and research in the heart of the Red River Valley.

About the Campus

The Wadena campus, with a total enrollment of 600, offers degrees in a range of fields, including business, health care, cosmetology, electrical line worker and construction. Small class sizes mean a more personal education, and most programs offer the kind of hands-on classroom and real-life experiences that are ideal for preparing students for careers. Strong interest in its highly regarded Electrical Line Worker program recently prompted the college to open a satellite campus for the program in Baudette, on the Canadian border. Students also can earn an Associate in Arts degree, a springboard for continuing education at a four-year college or university. The campus provides food service, student organizations and support services to promote academic success. Housing options are available near the campus.

About the Community

The welcoming community of Wadena, with a population of 4,500, is located at the gateway of Minnesota lake country. It offers many opportunities for outdoor recreation with 1,000 lakes within 50 miles and more than 300 acres of parks that provide opportunities for cross-country skiing, snowmobiling, canoeing, biking, hunting, golfing, in-line skating, horseback riding and fishing. The city serves as a regional trade center for area communities and has a small-town atmosphere with the attractions of a larger community.

GENERAL INFORMATION

eCampus:

1.888.696.7282 • ecampus@minnesota.edu

About the Campus

With an enrollment of 2,400, M State's eCampus provides both an affordable and innovative way to advance your education. Whether you are taking classes or earning your degree, eCampus offers more than 300 classes and 25 programs and majors online so you can discover your future without commuting to a campus. Classes are taught by caring faculty members. There is easy online access to your instructors and advisors, as well as other resources such as an electronic library and tutoring that will help you along the way. M State is fully accredited and offers transfer, career and technical course and program options.



About Us.

As a member of the Minnesota State Colleges and Universities system, Minnesota State Community and Technical College serves more than 9,000 students in credit courses each year in more than 120 career and liberal arts programs at its four campuses in Detroit Lakes, Fergus Falls, Moorhead and Wadena, and through eCampus.

M State was created July 1, 2003, with the merger of Fergus Falls Community College and three campuses of Northwest Technical College. This new college was developed to better serve the needs of the communities in west central Minnesota and the Red River Valley through a combination of strong technical programs and comprehensive community college curriculum. M State currently has a total of 612 employees across Minnesota, on four campuses and the M State Processing Center in Perham.

Each of the campuses has been meeting the educational and workforce needs of its community for nearly a half century or more. The Detroit Lakes, Moorhead and Wadena campuses were established when state leaders recognized the need to provide technical education and training to meet workforce demands. The three campuses have experienced a series of name changes. Wadena was founded in 1959, Moorhead in 1965 and Detroit Lakes in 1966. True to the goal of meeting workforce needs, each campus has added and enhanced programs as demands have changed. The Fergus Falls campus was established in 1960 thanks to the initiative of community leaders determined to create a community college where area students could complete the first two years of a four-year degree.

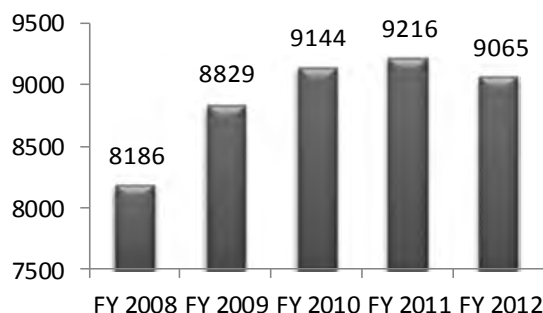


Healthy Enrollment.

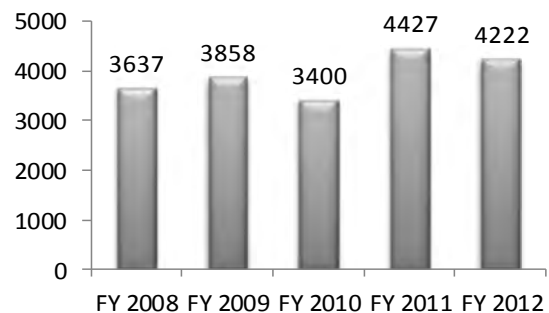
M State has made steady progress in College-wide enrollment since 2007. We have experienced **tremendous growth in online courses and programs and in site-based workplace training** in business and industry. Custom training staff work closely within each of our communities to meet the ever-changing needs of local businesses and industries.

By partnering with communities, the College also provides custom training services and other responsive training programs to more than 4,000 people through our business partnerships. In addition, the College has five entrepreneurial incubator sites in central Minnesota with more than 58 offices. The Business and Entrepreneurial Services Center is nationally recognized for its efforts to provide incubator space and business support to regional economic development and revitalization by supporting business concepts of entrepreneurship.

Credit Based Headcount



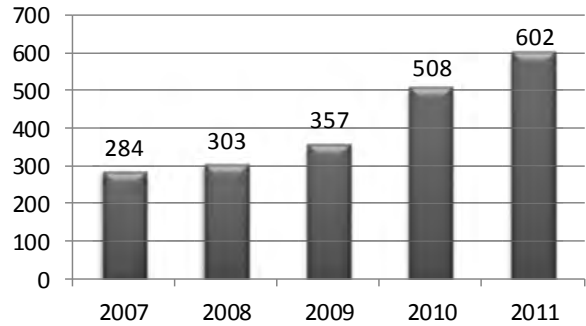
Custom Training Head Count



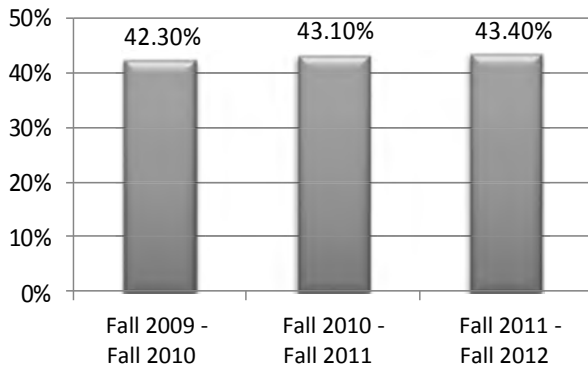
Quality of Graduates.

Student success is measured by student persistence, program completion, graduation and transfer rates. We also measure success by looking at the pass rates for licensure exams. In 2012, **M State graduated 1,650 students - the most in the history of the College!** Within the past three years, 54.9 percent of M State students graduated or transferred to continue their education at another college. For licensure programs such as nursing, dental hygiene and assisting, criminal justice and radiology, M State students **had a pass rate of 84.6 percent on their licensure exams.**

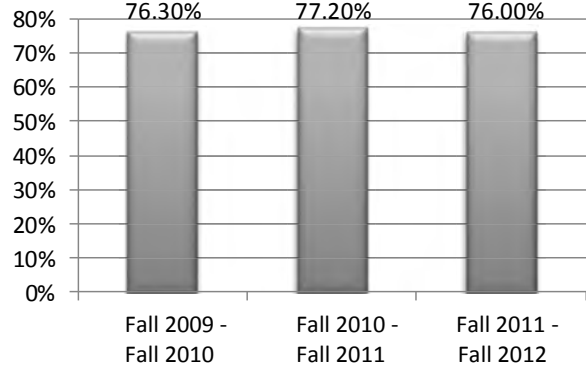
Students Transferring from M State to a Two-Year or Four-Year University



Fall to Fall Persistence Rate



Fall to Spring Persistence Rate



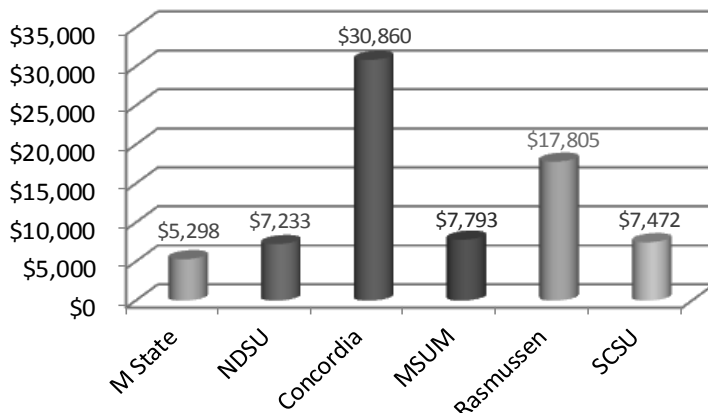
Serving a Diverse Student Population.

M State is in the business of changing lives, and we have the privilege of serving and educating a diverse student population. Every student who walks in our doors, meets our instructors in their place of employment, or logs in to our virtual classrooms has a story. The diversity of their stories is represented in our student demographics. **In 2012, 12 percent of our students were of an ethnic background other than Caucasian/white, 47 percent had high financial need, 23 percent were first-generation students and 56 percent were traditionally underrepresented in some way.**

Affordable Education.

We provide a cost-effective higher education option for our stakeholders by focusing on stabilizing tuition rates and aggressively monitoring our spending and assets. In 2011, **M State had a 3.37 composite financial index (CFI).** The CFI is a measure of our financial health, and 3.0 is the baseline recommended by the System Office.

2012-2013 Tuition & Fees Comparison



The chart to the left compares tuition rates for full-time students who are state residents. These statistics were referenced from the Minnesota Office of Higher Education website <http://www.ohe.state.mn.us/>.

Accreditation.

M State is **accredited by The Higher Learning Commission**: Member of the North Central Association (1972-present). M State was admitted into the Commission's **Academic Quality Improvement Program (AQIP) in 2009**.



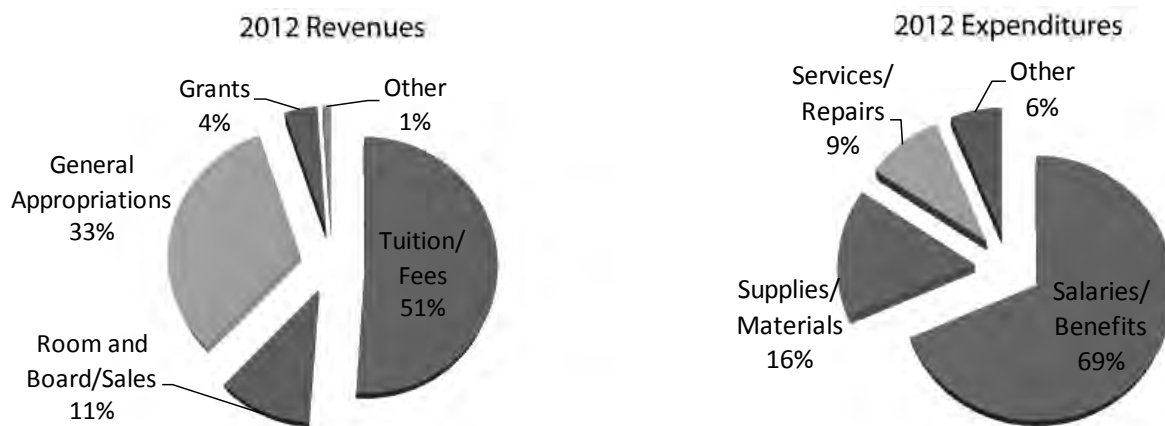
Website: <http://www.ncahigherlearningcommission.org>

Website: <http://www.hlcommission.org/AQIP/AQIP-Home>

M State has numerous career/technical programs that are additionally accredited by boards, agencies, commissions or professional organizations in specific fields or disciplines.

Financial Outlook.

Stakeholder support of the College is more critical than ever. The College has experienced significant changes in revenue and funding sources. In the past two fiscal years, M State has reallocated \$1,873,000 to budget reductions and College initiatives. We remain committed to providing cost-effective education and to creating efficiencies to respond to changes in funding.



K-12 Collaborations.

M State has a strong history of working **collaboratively with high schools** and other educational institutions within our region.

- ✓ *We developed an interactive Web-based college-readiness tool that connects junior high and high schools students to college faculty through the **Center for College Readiness**. Using this Web-based tool, M State provides individualized guidance to more than **1,000 students each year** on their level of readiness for college.*
- ✓ *M State was the lead institution in the development of an initiative to bring **online college courses to high school students in rural schools** throughout the state and continues to offer this option through the eCampus in the High School program.*
- ✓ *M State has partnered with high schools to offer **concurrent courses to high school students** for more than 20 years.*

Through these combined efforts, M State works collaboratively to provide credit-based offerings and college readiness services with **46 high school partners in the region** and throughout the state.

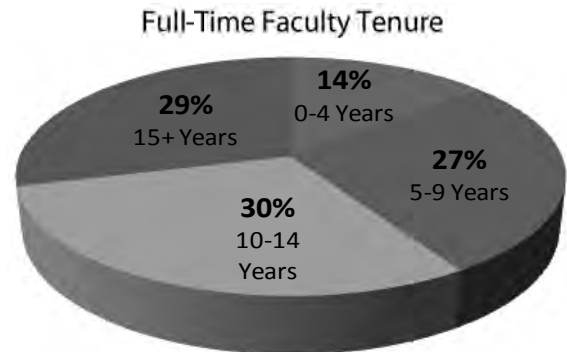
M State Partners with Regional Colleges.

In addition to numerous articulation agreements and collaborative projects and grants with area colleges, M State has partnered with Minnesota State University Moorhead, Bemidji State University and Northland Community and Technical College to form the Northwest Alliance. The Alliance meets on a regular basis to collaborate, create efficiencies, reduce duplication of efforts and focus on meeting the educational needs of our region and its workforce.

Points of Pride.

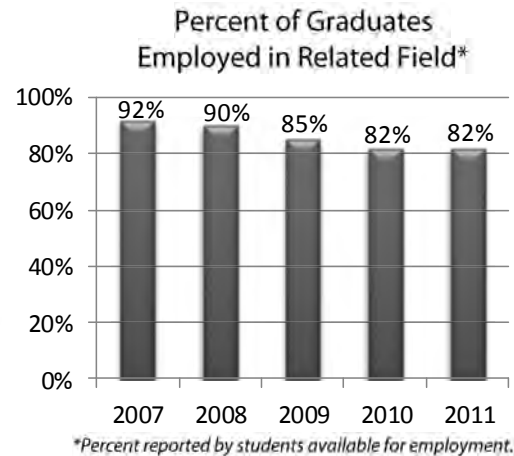
M Instructors are Recognized for Quality

M State faculty members do an outstanding job of providing our students with a quality education; this quality is recognized in a number of ways each year. Two of the most prestigious awards given are through a peer nomination and portfolio process for the National Institute for Staff and Organizational Development (NISOD) and through the System Office Excellence in Teaching award. Faculty are nominated by students, faculty peers or staff, with their selection based on teaching strategies and materials; content expertise; service to students, their profession, their institution and the system; and assessment of student learning and performance. During the 2011-2012 academic year, a faculty member received the Educator of the Year award, the system's highest academic honor.



M Employment of Graduates

Not only is M State committed to educating our communities, we are invested in them! From 2006 to 2010, M State has assisted in **educating more than 4,350 graduates available for employment** in their fields of study. The College's 120 career and technical program options boast vigorous advisory committees, sponsorships and scholarship opportunities. Last year, a large majority of the graduates successfully transferred to universities or found employment with nearly 400 employers in the M State region. The response rate to our graduate survey has averaged 97 percent over the last five years.



M Focus on Innovation and Efficiency

The College has illustrated stewardship in state funding by becoming a leader in shared service initiatives. As part of a focus on increased efficiency by the Minnesota State Colleges and Universities system, M State is now providing onsite payroll, financial aid direct lending and other related services for five other MnSCU colleges and the system's Office of the Chancellor in St. Paul. M State will continue to expand payroll processing to include additional state colleges and universities. M State is offering the services through the system's new Campus Service Cooperative, a strategic initiative to increase efficiency and allow MnSCU schools to focus on their core mission of serving and educating students. As MnSCU Chancellor Steven Rosenstone recently said, **"In the face of (our) challenges, the greatest risk is the risk of business as usual."**

M Student Life

Student life opportunities at M State focus on engaging students in active learning, helping students develop coherent values and ethical standards, communicating high expectations for student learning, effectively using resources to achieve institutional missions and goals, forging educational partnerships which advance student learning, and building supportive and inclusive communities. M State has vocal and performance **fine arts opportunities, athletics** and a large number of student **clubs and organizations**.

Custom Training and Workforce Development

About CTS

For more than 20 years, M State's Custom Training and Workforce Development division has partnered with business clients to assess their organizational needs and develop custom products and services.

Service Area

CTS primarily serves 15 counties in west central Minnesota and bordering counties in east central North Dakota, an area of more than 20,000 square miles and 250,000 people. CTS also provides associate degree programs to workers on-site or online to companies headquartered in Minnesota.

Flexible Hour-Based and Credit Options

CTS offers both hour-based and credit courses. Hour-based training usually focuses on a specific training or production need within a company. To develop the internal workforce for new responsibilities and advancement, companies often use credit courses and degree programs. Credit courses are considered to be a key workforce recruitment and retention tool.

Research and Development

Although our primary focus is the incumbent workforce, CTS also serves as the research and development arm of the college. Because CTS staff members are in daily contact with businesses and economic developers, they are in a position to continuously feed information back to the college. CTS develops new programs for businesses that can be offered on the campuses, secures new equipment through grants and serves as an industry connection to the campuses.

Targeted Products and Services

- Health & Emergency Services
- Applied Technology & Manufacturing
- Information Systems & Technology
- Leadership Development
- Sales and Management

Training products can be customized to fit a particular business need or, in some cases, new products can be developed to meet a new technology or strategic focus. Products and services offered through each area of expertise include:

Health and Emergency Services

- Continuing Education for Nursing, Dentistry and Allied Health
- CPR and First Aid
- Fire Training
- First Responder (Initial and Refresher)
- Lean Health System Analysis and Implementation
- Medication Assistant (North Dakota and Minnesota approved)
- Nursing Assistant Training and Competency Examination
- RN and LPN Refresher Courses

Applied Technology and Manufacturing

- APICS
- Automation/Robotics
- Carpentry
- CNC Machining
- Computer Aided Drafting
- Drive & Power Systems for Maintenance Technicians
- Electrical and Mechanical Troubleshooting
- Electrical Training Series
- Forklift Operation
- High-Low Pressure Boiler Systems
- IT Pro Series
- Manufacturing Employee Series
- Manufacturing Flow
- Manufacturing Procurement
- MN Commercial Vehicle Inspection Re-certification
- NEC Electrical Code Update & Refresher
- Power Limited CE
- Print Reading & Schematics Interpretation
- Programmable Logic Controllers
- Quality Systems-Lean
- Related Safety Training
- Statistics
- Welding (Manual and Robotics)

Medical Coding

- ICD-10

Information Technology

- Assessment and Consulting
- Customized Hardware/Software Computer Training
- Microsoft Applications
- Networks
- Web Design and Marketing

Leadership Development

- Business Writing
- Customer Service
- Leading and Managing Effective Customer Service
- Employee and Management Coaching
- Performance Appraisal Systems
- Lean It Up!
Learn about lean tools and methods and how they apply to your organization
- Strategic Planning
- Supervisory Skills that Build Productive Employees
- Train the Trainer

Sales and Management

- Customized Sales Applications
- Field Sales
- Phone Selling
- Sales Management Training

High-Quality Trainers, Instructors and Consultants

CTS uses a network of dozens of full-time, adjunct and contract instructors and consultants. Business and industry experience is considered essential, and instructors have varied practical and instructional experiences.

Convenient On-Site and Campus Delivery

CTS provides training and services primarily on each company's site. In some cases staff will work with companies to set up training classrooms and labs. If a business is located near a campus, training can be held there.

Partnerships

CTS believes that the best way to serve its customers is to develop working partnerships with industry councils, higher education institutions and economic development organizations. Project partnerships have been formed with a large number of economic development groups, as well as regional higher-education institutions.

CONTACT CUSTOM TRAINING SERVICES

GL Tucker, Dean of Custom Training Services/ Business & Entrepreneurial Services

Custom Training Services
900 Hwy 34 East
Detroit Lakes, MN 56501
218.846.3765 (office)
218.846.3706 (fax)
218.849.0243 (cell)
GL.tucker@minnesota.edu

Mary Ryan, Director of Client Services

Custom Training Services
1414 College Way
Fergus Falls, MN 56537
218.736.1510 (fax)
218.849.2655 (cell)
mary.ryan@minnesota.edu

Karen Schumacher, Director of Health and Emergency Services

Custom Training Services
1900 S 28th Ave
Moorhead, MN 56560
218.299.6586 (office)
218.291.4266 (fax)
218.556.5297 (cell)
karen.schumacher@minnesota.edu

Business & Entrepreneurial Services

About BES

Since 2008, Business & Entrepreneurial Services has encouraged entrepreneurship in the region through professional development training and services for new and existing businesses and entrepreneurs. BES is committed to providing life-long learning opportunities for businesses and individuals in west central Minnesota.

BES Resources and Services

At its administrative offices on the Detroit Lakes campus, BES offers an array of services designed to support and encourage entrepreneurial ventures, including a business resource library, business counseling, business incubator offices, professional speakers, community outreach, certificates and training, as well as college-credit curriculum. For an up-to-date listing of offerings and to register online, go to www.BESMState.com. The Small Business Development Center partners with BES to offer office hours and free business consulting services at BES locations. To make an appointment with an SBDC counselor, please register at www.cord.edu/sbdc/.

Detroit Lakes: 2nd Tuesday of each month from 9 a.m.-1 p.m. in the DL – BES Conference Room at 900 Hwy 34 East.

Hawley: 2nd Tuesday of each month from 2-3:30 p.m. in the Hawley – BES Conference Room at 407 6th Street.

Perham: 2nd Wednesday of each month from 9 a.m.-1 p.m. in Perham – BES Conference Room at 665 3rd St SW.

BES also is host to a branch of SCORE, a nonprofit association dedicated to helping small businesses get off the ground, grow and achieve their goals through education and mentorship. The work is supported by the U.S. Small Business Administration and, thanks to a network of volunteers, we are able to deliver these services at no charge. For more information, email score@arvig.net.

Incubator Locations

BES opened its first business incubator in Detroit Lakes in October 2009 and has since developed incubators in Hawley and Perham. Through its incubators, BES offers the support structures for a successful business venture start-up including professional office and meeting space, office equipment and computers, conference room technology such as Skype and shared services. Tenants — either new entrepreneurs or small businesses that need support to grow — have access to start-up help, training and mentoring programs.

BES offers physical office space with affordable terms to new business owners and entrepreneurs seeking help to launch their business or idea. The incubators have on-site research libraries, business counseling, SBDC and SCORE services and on-site shared work rooms and conference rooms. All individual offices come equipped with a desk, office chair, client chair, computer and software. For more information call 218.844.5420 or go online for an application to www.BESMState.com.

Detroit Lakes

900 Hwy 34 East, Detroit Lakes, MN 56501
218.844.5420 (phone)
218.844.5423 (fax)
BES.dl@arvig.net

Hawley

407 6th Street, Hawley, MN 56549
218.486.4600 (phone)
218.486.4601 (fax)
BES.hawley@arvig.net

Perham

665 3rd Street SW, Perham, MN 56573
218.346.4300 (phone)
218.346.4303 (fax)
BES.perham@arvig.net

THE HIVE

900 Hwy 34 East, Detroit Lakes, MN 56501
218.844.5420 (phone)
218.844.5423 (fax)

The incubator co-op marketing agency offers collaboration for creative and marketing professionals in an agency-like setting.

Accreditation and Approvals

Minnesota State Community and Technical College is accredited by the Higher Learning Commission: Member of the North Central Association

30 North LaSalle Street, Suite 2400
Chicago, IL 50502-2504
Website: <http://www.ncahigherlearningcommission.org>
Phone: 312.263.0456

Programs accredited by additional accrediting agencies include:

Automotive Service Technology

(Moorhead, Detroit Lakes)
NATEF Certified
National Automotive Technicians Ed Foundation
101 Blue Seal Drive, Suite 101
Leesburg, VA 20175
Phone: 703.669.6650
Fax: 703.669.6125
Website: <http://natef.org>

Construction Electricity

(Moorhead, Wadena)
Approved as one year of credit toward journeyman's license by the:
Minnesota State Board of Electricity
443 Lafayette Road N.
St. Paul, MN 55155
Phone: 651.284.5012
Fax: 651.642.0441
Website: www.dli.license@state.mn.us

Cosmetology

(Wadena)
Minnesota Board of Cosmetologist Examiners
829 University Ave. SE, Suite 710
Minneapolis, MN 55414
Phone: 651.201.2742
Fax: 612.617.2601
Email: bceboard@state.mn.us

Criminal Justice

(Moorhead)
Minnesota Board of Peace Officer Standards & Training
1600 University Avenue, Suite 200
St. Paul, MN 55104
Phone: 651.643.3060
Fax: 651.643.3072

Dental Hygiene and Dental Assisting

(Moorhead)
Commission on Dental Accreditation of ADA
211 East Chicago Avenue
Chicago, IL 60611-2678
Phone: 312.440.2500
Fax: 312.440.2915

Health Information Technology

(eCampus)
Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM)
233 N. Michigan Ave, 21st Floor
Chicago, IL 60601-5800
Phone: 312.233.1100
Fax: 312.233.1948

Medical Laboratory Technician

(Fergus Falls)
National Accrediting Agency for Clinical Laboratory Sciences
5600 N. River Rd.
Suite 720
Rosemont, IL 60018-5119
Phone: 847.939.3597
Phone: 773.714.8880
Fax: 773.714.8886

Nursing (AS)

(Detroit Lakes, Fergus Falls, Moorhead, Wadena)
Minnesota Board of Nursing
2829 University Ave. Southeast, #200
Minneapolis, MN 55414-3253
Website: www.nursingboard.state.mn.us
Phone: 612.617.2270
Toll Free: 888.234.2690 (MN, IA, ND, SD, WI)
Fax: 612.617.2190

Pharmacy Technology

(eCampus)
American Society of Health Systems Pharmacists
7272 Wisconsin Avenue
Bethesda, MD 20814
Phone: 301.657.3000
Fax: 301.657.1258

Radiologic Technology

(Detroit Lakes and eCampus)
Joint Review Committee on Education in Radiologic Technology
20 N. Wacker Drive Suite 2850
Chicago, IL 60606-3180
Phone: 312.704.5300
Fax: 312.704.5304
Website: www.jrcert.org

Plumbing

(Moorhead)
32-credit program approved as 800 hours toward student's apprenticeship care in Minnesota and 1600-2000 hours in North Dakota:
Minnesota Department of Labor & Industry Construction Codes & Licensing Division, Licensing Unit
443 Lafayette Road N.
St. Paul, MN 55155-4342
Phone: 651.284.5067
Fax: 651.284.5748
Website: www.doli.state.mn.us

Practical Nursing (Diploma/AAS)

(Detroit Lakes, Fergus Falls, Moorhead, Wadena)
Minnesota Board of Nursing
2829 University Ave. Southeast, #200
Minneapolis, MN 55414-3253
Website: www.nursingboard.state.mn.us
Phone: 888.234.2690 / 612.617.2270
Fax: 612.617.2190

Access to Information

The College will make available the following information to all enrolled and prospective students:

Student Right to Know

(Graduation/Completion Rate)

The purpose of this information is to disclose annual student completion and graduation rates. This report is available on the College website at www.minnesota.edu or by calling 1-877-450-3322.

Campus Security Report

The purpose of this report is to inform the campuses of campus crime prevention programs, crime reporting procedures, emergency response and a three-year statistical history of criminal activity on the College campuses. A copy of the Campus Security Report is distributed annually to students and employees and is available from the Student Services office on each campus. Prospective students and employees can obtain this information from the College website at www.minnesota.edu or by calling 1-877-450-3322.

Cost of Attendance

Information on tuition, fees, estimated book and supplies costs and any additional known costs associated with particular programs can be obtained online at www.minnesota.edu. Visit www.minnesota.edu for laptop requirements and costs.

Tuition Refund

Information regarding the Tuition Refund Policy for the return of Title IV grants or loans is provided in the student Handbook, in the College Catalog and at www.minnesota.edu.

Drop/Add/Withdrawal

The purpose of this policy is to explain how to make course enrollment changes. Refer to the College Drop/Add/Attendance/Non-Attendance Policy in the student Handbook and in the College Catalog.

Academic Program Information

A listing of faculty associated with programs and other instructional personnel is available on the College website at www.minnesota.edu.

Family Education Rights and Privacy Act (FERPA)

The purpose of the Family Education Rights and Privacy Act is to afford certain rights to students concerning their education records. Primary rights include the right to inspect and review education records, the right to seek to have the records corrected and the right to have some control over the disclosure of information from the records. The College FERPA Policy is located in the Catalog and is included in the Handbook.

Financial Assistance

Information on the availability (types of aid available), eligibility, selection criteria, criteria for amount determination, satisfactory progress standards, re-establishing satisfactory progress status, disbursement methods, student work conditions and conditions for repayment of loans is provided in the Student Handbook and the College Catalog, on the website and in campus financial aid offices.

College Policies

Many M State policies are under review. M State may make changes to existing policies during the academic year. Please visit www.minnesota.edu for current updates to policy information which may include the following topics:

- Academics**
- Admission**
- Campus Environment**
- Degree Completion (Graduation)**
- Financial Aid**
- Nondiscrimination in Education and Employment**
- Online Majors**
- Registration**
- Student Records**
- Student Support Services**

If you do not have access to the Internet, please contact a college representative to receive the policy in an alternate form.

Admission

As an open door institution, M State provides students with the opportunity to advance their education regardless of prior academic preparation. We offer comprehensive academic offerings and student support services to educate and train students with diverse backgrounds, academic and personal experiences and life goals. For specific information about the admission process, visit www.minnesota.edu.

Advanced Standing/Placement

M State awards credit for previously gained knowledge and skills that are equivalent to coursework at the College. Such credit may be granted through various means such as direct transfer of courses of equivalent nature that were completed at regionally accredited institutions of higher education, through Articulation Agreement for College Credit, AP, CLEP, credit for prior learning or credit by examination.

The amount of credit granted by the College for an exam or other method will not exceed the credit the College grants for an equivalent course or course sequence. The College will not grant credit for exams that overlap completed coursework or for standardized tests for which the student has already gained credit. Credit granted through AP and CLEP may be used for partial fulfillment of the general education distribution requirements for the AA, AS and AAS degrees. Please contact the College Registrar's Office with any questions about advanced standing/placement.

Assessment for Course Placement

Assessments in reading and math are required of all new students who enroll in more than eight credits at M State. Testing must be completed before registration. Schedules of test dates and times are available online at www.minnesota.edu. Accommodations for students with disabilities who need to complete assessment testing should be arranged in advance through the College's Center for Students with Disabilities.

Students who do not meet minimum test scores in reading and math will be required to enroll in developmental courses in those areas. Students must demonstrate proficiency in those courses by receiving passing grades before enrolling for the next course in the particular discipline. These courses provide the basic skills required for success in all college courses.

Developmental courses are not intended for transfer; credits earned in these courses will not meet distribution or elective requirements for graduation.

Immunization Requirement

All students must show proof of immunization against diphtheria, tetanus, measles, mumps and rubella. There are two exceptions: 1) if born prior to 1957, or 2) if graduated from a Minnesota high school in 1997 or after. Immunization forms are available at www.minnesota.edu.

Notice to Students Regarding Possible Impact of Criminal Records

Students who have been arrested, charged or convicted of any criminal offense should investigate the impact that the arrest, charge or conviction may have on employment in a specific field or on access to federal, state or other higher education financial aid.

The following sites may provide information regarding the impact of criminal records on future employment: Minn. Stat. Ch.609B COLLATERAL SANCTIONS, <https://www.revisor.leg.state.mn.us/statutes/?id=609B>, Minnesota Legislature's Overview of Background Check Statutes, <http://www.house.leg.state.mn.us/hrd/pubs/bkgdchck.pdf>.

Visiting Students

A student who registers for seven credits or less in a semester and who does not intend to immediately pursue a certificate or degree program need not go through formal admission procedures. No proof of high school graduation is required of this type of student. If the course has a prerequisite, the Visiting Student will have to provide appropriate documentation.

Veterans Benefits

The majors offered by M State have been approved by the Minnesota State Approving Agency for veterans and their dependents eligible for educational benefits under Chapters 30, 31, 32, and 35 of the Veterans Readjustment Act of 1977. Under the new GI Bill, Chapter 106 (educational assistance program), Reserve and National Guard personnel may be eligible for educational benefits. Students should contact the Veterans Certifying Official or their local Veterans Administration office to obtain applications and determine eligibility and entitlement. Veterans may receive credit for appropriate military training. The college transfer specialist will determine the number of credits acceptable to transfer.

Registration

All students who have completed the requirements for admission and attended a registration event are eligible to register for courses.

Independent Study

In special circumstances, a student may obtain permission to take a regular course on an independent study basis. Students also have the opportunity to expand on an area of special interest by developing an independent study project with an instructor and obtaining the approval of the dean of academic affairs.

Preparing To Transfer

Preparing to Transfer to a Four-Year University

Colleges and universities are working to make transfer easier. Students must plan ahead, ask questions and use pathways created by transfer and/or articulation agreements.

Students Currently Enrolled at M State:

Students should discuss plans with an M State advisor. Call or visit the intended transfer institution. Obtain the following materials and information:

- College Catalog
- Transfer brochure
- Information on admissions criteria and on materials required for admission (e.g. portfolio, transcripts, test scores). Note that some majors have limited enrollments or their own special requirements such as a higher grade point average.
- Information on financial aid (how to apply and deadlines for application)

After reviewing these materials, make an appointment to talk with a program advisor or counselor at the transfer institution. Be sure to ask about course transfer and admission criteria.

If not currently enrolled in a college or university, students might begin to plan by meeting with a transfer specialist or admission officer from the intended transfer institution.

Understanding How Transfer of Credit Works:

Completion of the 40-credit Minnesota Transfer Curriculum at M State assures the acceptance of these credits as having satisfied the general education requirements of Minnesota State Colleges and Universities and some colleges within the University of Minnesota system. In addition, the four-year institutions in the state strongly recommend that students complete their associate degrees before transferring. The College has articulation agreements with several of these institutions guaranteeing the acceptance of the associate degree as completing the first two years of a baccalaureate degree. Check with an Academic Advisor for more information.

For students who transfer without completing an associate degree or the Minnesota Transfer Curriculum, the receiving college or university will decide which credits transfer and whether those credits meet its degree requirements. The accreditation of both sending and receiving institution can affect the transfer of credits earned.

Institutions accept credits from courses and programs like those they offer. They look for similarity in course goals, content and level.

Baccalaureate degree programs usually count credits in three categories: general education, major/minor courses and prerequisites and electives. The key question is whether credits fulfill the requirements of the degree or program. Not everything that transfers will apply toward graduation.

Students who change career goals or majors may not be able to complete all degree requirements within the usual number of graduation credits.

Students interested in transfer will find additional resources on which credits may transfer at: www.MnTransfer.org and www.transfer.org/uselect.

Preparing to Transfer to M State:

Application for admission is the first step in transferring to M State. Fill out the application prior to the deadline. Enclose the application fee. Request that official transcripts be sent from every institution attended. Be prepared to provide a high school transcript or GED test scores as well.

After the College notifies students of acceptance for admission, transcript credits will be evaluated for transfer. How courses specifically meet degree requirements is dependent on the student's declared program of study/major. Some courses may not meet specific department or major requirements.

Questions about the evaluation may be addressed to the registrar's office. Transfer credit decisions can be formally appealed.

Your Rights as a Transfer Student:

- A clear, understandable statement of an institution's transfer policy.
- A fair credit review and an explanation of why credits were or were not accepted.
- A copy of the formal appeals process and the ability to appeal any decision made.

Usual Appeals Steps:

- A student fills out an appeal form online. Supplemental information provided to reviewers (a syllabus, course description or reading list) can help.
- The department or instructor reviews.
- The student receives, in writing, the outcome of the appeal.
- The student can appeal decision to the Chief Academic Officer.

Transfer of Credit to M State

Students wishing to transfer credit from another institution to M State must request an official transcript from each institution previously attended. If the student has taken courses at other institutions that are part of the Minnesota State Colleges and Universities system (MnSCU), the M State Transfer Specialist will be able to access this information electronically in most cases. For all other college transcripts or for transcripts from MnSCU institutions that are not available electronically, it is the student's responsibility to request that official transcripts be sent to M State. The transfer evaluation process will begin once all transcripts have been received and the student has been accepted to M State with a declared major. Students may be required to provide course descriptions, outlines and/or other information regarding their coursework as part of the transfer evaluation process. Technical courses need to have been completed within the last five years unless this requirement is waived (for more information, refer to the College's Recency Policy).

Transfer of D grades:

If the student's overall GPA at another institution is lower than 2.0, courses in which the student earned a grade of D at that institution will not be transferred to M State. These courses are listed on the student's Degree

Audit Report (DARS) and noted as NTD (non-transfer D). If the student's GPA at the sending institution is above a 2.0, courses at that institution in which a D grade was earned are transferred to M State for credit and are noted on the student's DARS as TD (transfer D). An exception to this requirement is made for any course taken at another Minnesota State Colleges and Universities (MnSCU) institution if the course has met any of the Minnesota Transfer Curriculum (MnTC) goal area(s). If the student earned a grade of D in a course that meets any MnTC goal area(s) and was taken at a MnSCU institution, the course will transfer to M State regardless of the student's GPA at the sending institution.

Individual programs/departments reserve the right to not accept grades of D in fulfillment of program requirements. In these cases, the requirement is applied to all students in the program and to all courses taken, regardless of whether the course was taken at M State or at another institution.

Change of Major/Program or Campus at M State

Students who wish to change their major or move to another campus of M State may request to do so by completing a Change of Major/Program or Campus form online. The request will be reviewed and approved based on space availability in the program and/or campus requested by the student. The student will be notified by the College if the request cannot be accommodated.

Student Records

Confidentiality of Student Records / FERPA Notification and Student Directory Data

M State maintains records about students in various places within the College.

Under the Minnesota Government Data Practices Act (MGDPA) and the Family Educational Rights and Privacy Act (FERPA), students have the right:

- To inspect and review their educational records.
- To request an amendment of records for the purpose of correcting inaccurate or misleading records, or records that violate student privacy or other rights in some fashion.
- To have a hearing regarding records which the student believe are inaccurate or misleading, if the College does not amend records upon request.
- To place a written statement explaining the disagreement with the College in their records, if the College does not amend records after the opportunity for hearing about whether the records are inaccurate or misleading.
- To consent to disclosures of information that identify the student personally, except to the extent that disclosures are allowed without consent under state and federal law.
- To file a complaint with the United States Department of Education if the student believes the College is not meeting the requirements of the federal law. Written complaints should be sent to: Family Policy Compliance Office, U.S. Department of Education, 600 Independence Avenue, S.W. Washington,

DC 20202-4605.

- To obtain a copy of the College's complete policy regarding education records. The College has policy information available in the College Catalog and the Student Handbook.

FERPA and the MGDPA permit disclosures of student information without consent to College officials with legitimate educational interest. A college official is a person employed by the College in an administrative, supervisory, academic support or support staff position, a person or company with whom the College has contracted, a student serving on an official College committee, a person serving on the Board of Trustees or in the Office of the Chancellor, a person assisting another College official in performing his or her tasks, and/or contractors, consultants, volunteers and other service providers. A College official has legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.

Records maintained on students are categorized as follows:

- Public Data – Data that has been designated as directory data is considered public. The Student Directory Data policy defines directory data for M State.
- Private Data – Almost all educational data is private. Private data is accessible to the subject of the data and to those who have a business need for access to the data. Students must provide the College with prior written consent for disclosure of private data.
- Confidential Data – Confidential data is not accessible to the subject of the data. Confidential data is accessible only to individuals or agencies authorized by law to have access to the data.

Student Directory Data

Student directory data is considered public data, and the college may release it without a student's written consent. A student may, however, make a written request to prevent the college from releasing directory data without the student's written consent. Minnesota State Community and Technical College defines directory data to include:

1. Name
2. Items needed to be accepted to the college and/or to a selective admissions program
3. Categories of holds preventing a student from registering for classes (i.e., academic or business office).
4. Major field of study
5. College email address
6. Honors and awards
7. Most recent educational agency or institute attended
8. Dates of attendance
9. Weight and height (used for student athletes only)
10. Dates of graduation, certification and awards

Notice to students: If you are currently enrolled in or receiving services from one college or university within the Minnesota State Colleges and Universities (MnSCU), your academic records from that institution are available to officials of other schools within MnSCU while you are in attendance. M State forwards education records to other agencies or institutions that have requested the records and in which the student seeks or intends to enroll or is already enrolled so long as the disclosure is for

purposes related to the student's enrollment or transfer. Disclosures of your records to other schools under other circumstances may require your prior written consent. Students should contact the dean of student success if they have questions about their rights.

Change in Student Record

The College expects students to report any name, address, program/major, telephone number or other record changes to the Student Services Office. This ensures accuracy of student information and allows the College to communicate important information to students. Students should use the appropriate online form to make such changes.

Students who have name changes must provide legal documentation to the College. Contact Student Services with questions.

Academic

Classification of Students

A student who has earned fewer than 30 credits is classified as a freshman. One who has earned 30 credits or more is classified as a sophomore. Two other terms are used occasionally to refer to a student's status: "Part-time" refers to students who carry less than 12 credits, and "visiting" refers to occasional students who are not currently pursuing a degree or certificate.

Graduation Policy

M State grants Associate in Arts (AA) degrees, Associate in Science (AS) degrees, Associate in Applied Science (AAS) degrees, Associate in Fine Arts (AFA) degrees, diplomas and certificates. The following general requirements apply to all candidates for each of the degrees.

General Requirements:

- Achieve a minimum cumulative GPA of 2.00.
- Successfully complete all required coursework for the program major(s) according to criteria established by the College. The actual graduation date will be within the semester in which all coursework, transfer credits and related materials required for program completion are finalized.
- Programs may have additional graduation requirements. These requirements are published and available from program faculty and advisors.
- Students must earn 20 semester credits/equivalent or one-third of the credits required for graduation at the granting institution, whichever is less.
- Requirements are established at the time of admission to the program.
- Students must complete an application for graduation. The application can be obtained at www.minnesota.edu.

Career Exploration and Placement Services

The College assists students with career exploration through one-on-one and/or group assistance and counseling. Each campus offers career

interest inventories and other resource information and customized coursework and services to help students create and meet their educational and career goals.

For technical programs, the College also assists students with placement services for one year following graduation. While the College does not accept responsibility for a student securing employment, the College offers services designed to assist students in the job-seeking process. The College services include assistance with portfolio and resume development, and interviewing and job searching techniques.

Carl D. Perkins Vocational Career and Technical Education Act of 2006

M State partners with Lakes Country Service Cooperative and various education, business and community agencies to carry out services as part of the Carl D. Perkins Vocational Career and Technical Education Act of 2006.

The purpose of the Act is to improve career and technical education and create opportunities to enter high-skill, high-wage and high-demand employment in Minnesota for all learners. The Act places special emphasis on improving access and services for special student populations defined by law. These special populations include:

- Individuals with disabilities
- Individuals from economically disadvantaged families, including foster children
- Individuals preparing for non-traditional fields
- Single parents, including single pregnant women
- Displaced homemakers
- Individuals with limited English proficiency

Non-traditional fields also receive special emphasis in the Act. A non-traditional field is defined as a high-skill career field for which students from one gender comprise fewer than 25 percent of the students enrolled in the field. Examples include women in construction electricity or men in dental hygiene. M State encourages students to consider non-traditional fields, and we welcome questions and inquiries from all students and members of the public. For more information about non-traditional fields, please contact the enrollment manager at any M State campus. For eCampus programs, contact the dean of student access for the College.

For information about how to access Perkins services and programs at any M State campus, contact Carrie Brimhall, associate vice president of academic and student affairs, at carrie.brimhall@minnesota.edu.

Academic Assessment

Program faculty assess the effectiveness of student learning in programs and disciplines each year. Career programs share results with their industry-based advisory committees and then adjust their curriculum as appropriate.

Academic Support Services

The College provides students with numerous services to support their educational experience. Each campus has tailored its services to meet the needs of its student population and may include:

- Academic advising, counseling and support
- Career counseling, resources and assessment
- Career placement services
- English Language Learner services
- Free tutoring, study skills assistance and other learning services

- Career counseling and referrals to other agencies
- Library services
- Multicultural programming and services
- Services for students with disabilities
- Writing assistance

For more information or to obtain any of these services, contact Student Services.

International Students (F-1, M-1 Visa)

International students are required to be enrolled in 12 or more credits each semester (fall and spring). Upon arrival at the college, students must present their visa and passport bio page to the international student advisor. International students must purchase health insurance through MnSCU. International students are responsible for maintaining their legal status while enrolled at M State.

English Language Learners (ELL)

The ELL and academic advisors offer assistance to English language learners who seek aid in getting admitted and enrolled at M State. M State offers courses and support services to assist ELL students reach their educational goals. See the ELL advisor, multicultural advisor or Learning Center staff for more information on support services.

Student Credit Load

The maximum number of credits that a student is allowed to take in any one semester is 20. A student may complete the appeal form to petition the academic dean to take more than 20 credits in one semester.

Credit by Examination

A student may challenge any program-level course at M State through an examination for credit with the appropriate department by the drop/add date. The student should obtain a Credit by Examination form at www.minnesota.edu to secure approval for such an examination from the appropriate faculty. A \$50 per credit (lecture or lab) fee will be assessed for the course that the student intends to challenge. If the student passes the test, a grade of CR (credit) is recorded on the student's transcript and the credits are awarded toward his or her degree. If the student fails the test, the attempt is not recorded on the student's transcript. A student MAY NOT repeat a challenge examination.

Financial aid amounts are based in part on the number of credits students register for each semester. Any test-out credits are not counted toward determining a student's status of full-time, three-quarter-time, half-time, or less than half-time to determine financial aid awards.

A student may not test-out of a course which already appears on the student's record. Students are encouraged to complete the credit by examination process well in advance of the term but must complete it by the drop/add date.

Refer to the Residence Credits Policy to determine any limitations to earning credits by examination.

Auditing Courses

Students intending to audit a course (earn no credit) are required to register for the course, pay the course tuition and fees and submit a Audit Grade Request form online. Auditing students may not need to meet regular course requirements but should confer with the instructor as to their privileges and responsibilities in the course. A student may change from credit to audit status or audit to credit status any time during the

first five days of the semester. Courses audited are not included in determining the total credits earned toward a major or the cumulative grade point average.

Drop/Add/Withdraw

A student must drop a class through the first five instructional days of a semester to avoid being billed tuition and fees for the course. No entry will be made on the student's academic record if a course is dropped within the first five instructional days of a semester.

A student may add a class through the fifth day of instruction for the semester. Proportional time limits may be applied to courses of shorter duration.

A student may withdraw from a course no later than the point at which eighty percent (80%) of the course has elapsed. To verify the exact last date to withdraw for each course, students may log into their E-Services account, view their class schedule and check the information listed in the "Last Dates to Drop/Withdraw" column.

A course from which a student withdraws after five instructional days and before 80 percent of the course has elapsed will appear on the student's record as a withdraw (W).

Tuition and fees will be assessed for all courses for which the student is registered after the fifth instructional day of the semester. Courses from which a student withdraws after the fifth instructional day will not reduce the student's tuition obligation.

Student financial aid is calculated based on the number of credits a student is registered for at the end of the drop/add period. Accumulated withdrawals will impact financial aid eligibility and may require repayment of received funding per federal guidelines.

The college does not automatically drop or withdraw a student for non-attendance. Should a student fail to begin attendance by the fifth instructional day of the semester, a grade of FN may be issued by the instructor. An FN grade will prevent the disbursement of financial aid for that course. Should a student cease attendance and/or participation in a course for 14 consecutive calendar days without prior arrangements having been made with the instructor, a grade of FW may be issued by the instructor.

When students do not officially drop or withdraw, they receive the earned grade in each course for which they are registered and will be responsible for tuition and fees for those courses. It is the student's responsibility to drop or withdraw from a course.

The College reserves the right to administratively drop a student for non-attendance in special circumstances.

Withdrawing from the College

Students needing to initiate a withdrawal from all their college courses can do so online at www.minnesota.edu. Please note that tuition and fee refunds do not apply to withdrawing from individual courses.

The College encourages students to visit with their academic advisor prior to making a decision to complete the withdrawal process. Withdrawing may have an impact on student repayment of financial aid, eligibility to receive financial aid and satisfactory academic progress.

The College refunds tuition and fees to students who withdraw in accordance with MnSCU policy. Students receive a proportionate refund for tuition and fees provided the withdrawal process is completed within the established deadline.

After the fifth day of the semester, the College issues refunds according to the following schedule:

Fall and Spring semesters:

Date of Withdrawal	Refund allowed
6th through the 10th day of the term.....	75%

11th through the 15th day of the term	50%
16th through the 20th day of the term	25%
21st day and after.....	No refund allowed

Summer sessions and other terms at least three weeks in length but less than 10 weeks in length:

Date of Withdrawal	Refund allowed
6th through the 10th day of the term	50%
11th day and after.....	No refund allowed

Minnesota Transfer Curriculum (MnTC)

The Minnesota General Education Transfer Curriculum is the result of a collaborative effort by all of the two- and four-year public colleges and universities in Minnesota to define a common philosophy toward general education. The goal of this effort is to help students transfer their work in general education. Completion of a defined transfer curriculum at one institution enables a student to receive credit for all lower-division general education courses upon admission to any other MnSCU institution.

Students who complete a general education transfer curriculum are certified in 10 areas of competency by faculty at the sending institution. Beginning January 1, 2002, all Minnesota Transfer Curriculum Courses offered by MnSCU institutions must transfer within MnSCU into the goal areas as designated by the original institution. The following are the 10 goal areas of the Minnesota Transfer Curriculum:

Minnesota Transfer Curriculum Goal Areas:

1. Written and Oral Communication
2. Critical Thinking
3. Natural Sciences
4. Mathematics/Symbolic Systems
5. History and the Social and Behavioral Sciences
6. The Humanities—the Arts, Literature and Philosophy
7. Human Diversity
8. Global Perspective
9. Ethical and Civic Responsibility
10. People and the Environment

The College Catalog contains a complete listing of all the Minnesota Transfer Curriculum courses and their corresponding goal areas. The College website also contains this listing.

Degree Requirements

The requirements for the AA, AS, AAS and AFA degrees, diplomas and certificates are detailed in the College Catalog, in addition to being located on the M State website.

Please consult an academic advisor with questions about the course requirements for a specific degree, diploma or certificate.

Academic Program Assessment

All academic programs at the College develop and implement plans for assessing effectiveness of student learning. These plans include assessment of all approved Program Learning Outcomes to provide evidence of student learning at the entry-level and/or at the level deemed appropriate for graduates of College programs. The results of these assessments are used by the program faculty to plan strategies for improved student learning.

In addition to assessing student learning, the College works in other ways to assess the quality of student experiences at the College, both inside and outside the classroom. As a result, students will be asked to participate in a variety of surveys and other assessments, such as course surveys, satisfaction surveys, comment cards and focus groups. The College uses the feedback from these assessments to determine ways to improve.

Academic Advising

It is the College's philosophy that academic advising is essential to the growth and development of each individual student. Academic advising will be available to all students to assist with scheduling and academic issues. It is the intent of the College to provide the student with personally relevant information and instructional assistance.

Mid-Term Progress

Students should meet with their advisors to review mid-term progress each semester.

Final-Term Grades

Final grades are provided to students upon completion of an academic term.

Grading

The College will use the following letter grades to document student achievement:

A = Excellent	CR = Credit by examination
B = Above Average	NC = No Credit
C = Average	P = Pass
D = Below Average	W = Withdraw
F = Failing	
I = Incomplete***	

Other Designations:

H = Honors project**** AU = Audit of a class for no credit**
 Z = Designator to indicate course is in progress or a faculty member has not submitted a final grade.
 FN = Unearned F/Never attended.
 FW = Earned F/Ceased attendance prior to the end of the term.

** A student auditing a course will pay the normal tuition rate.

***A student may request faculty to assign the student a grade of incomplete (I). A grade of "I" (Incomplete) will convert to an "F" at the end of the subsequent semester (excluding summer semester) unless the faculty member submits a grade change with the earned grade to replace the I.

**** The H designation does not impact grade point average or satisfactory academic progress.

An incomplete grade must be removed by completing course requirements at the end of one semester, excluding summer semester. Any incomplete grade not removed will be changed to an "F."

Repeating Courses

All courses taken at M State may be repeated. A student may repeat a course an unlimited number of times, unless stated otherwise. Both the original and the repeat grade will appear on the student's transcript. The highest grade will be used to compute the student's GPA. Exceptions include choir, music lessons and student newspaper. Financial aid may not cover the cost of repeated courses. The College advises students to check this with the financial aid office.

Grade Point Average

Academic progress will be evaluated, in part, in terms of grade point average. The following system will be used to establish a student's grade point average and will be the only grades included in the GPA calculation:

A = 4 grade points per credit
B = 3 grade points per credit
C = 2 grade points per credit
D = 1 grade points per credit
F = 0 grade points per credit

A GPA is determined by the sum of all grade points divided by total credits attempted, except those credits that carry grades other than the usual A - F grades.

Academic Forgiveness

Academic forgiveness gives an undergraduate student a one-time opportunity to establish a new grade point average.

Academic forgiveness cannot be granted if a student has earned a post-secondary degree following his/her initial M State attendance and has applied M State credits toward that degree. Courses that have been used for completion of certificate, diploma or degrees are not subject to academic forgiveness.

Please see the College website at www.minnesota.edu for the current Academic Forgiveness Policy.

Satisfactory Academic Progress

All students in a program of study must meet satisfactory academic progress standards in order to remain enrolled and maintain eligibility for financial aid. Students must maintain an acceptable grade point average and completion rate for their registered credits to meet M State's standards for satisfactory academic progress. The acceptable grade point average and completion rate is progressive based on cumulative registered credits and is detailed below:

Qualitative Measure

Grade Point Average (GPA): All students are required to meet the minimum cumulative GPA as shown below.

<u>Cumulative Registered Credits</u>	<u>Minimum Required GPA</u>
0 - 5	0.00
6 - 23	1.75
24 or more	2.00

Quantitative Measure

Completion Percentage: All students are required to earn a minimum of their cumulative registered/attempted credits. Grades of F, FN, FW, I, NC, W, and Z (or blank/missing) are treated as registered credits but NOT earned credits and thus negatively impact the percentage of completion.

Formula:
 Percent earned
 =
$$\left[\frac{\text{cumulative earned credits}}{\text{cumulative registered credits}} \times 100 \right]$$

<u>Cumulative Registered Credits</u>	<u>Minimum Required Completion</u>
0 - 5	0%
6 - 23	58%
24 or more	66.6%

Evaluation Period

The College will evaluate satisfactory academic progress after each term which includes fall, spring and summer. All students with registered credits during a term will be evaluated at the end of that term.

Failure to Meet Standards

Warning Status: If at the end of the evaluation period a student has not met either the College's GPA or completion percentage standard, the student will be placed on warning status for one evaluation period. Students on warning status are eligible to register and receive financial aid.

Reinstatement of Students on Warning Status: If at the end of the academic warning period a student who has been on warning status has met both the cumulative GPA and cumulative completion percentage standards, the warning status is ended and the student is returned to good standing.

Suspension of Students on Warning Status

If at the end of the warning period a student who has been on warning status has not met both the College's cumulative GPA and completion percentage standards, the student shall be suspended. Students on suspension are not eligible to register or receive financial aid. Without an appeal (see "Appeals and Probation" below), the suspension period is for one calendar year. Students seeking to return after the one-year suspension period must still appeal for potential financial aid reinstatement.

Suspension of Students for Other Reasons

Suspension for Inability to Meet Program Requirements within the Maximum Time Frame: If at the end of the evaluation period the College determines it is not possible for a student to raise her or his GPA or course completion percentage to meet the standards before the student completes his or her program of study at the College, the student shall be suspended from financial aid eligibility.

Suspension for Exceeding the Maximum Time-Frame: If at the end of the evaluation period a student has failed to meet the College's standard for measurement of maximum time-frame, the student shall be suspended from financial aid eligibility.

Suspension for Extraordinary Circumstances: The College may immediately suspend students in the event of extraordinary circumstances, including but not limited to previously suspended (and reinstated) students whose academic performance falls below acceptable standards during a subsequent term of enrollment; students who register for courses, receive financial aid, and do not attend any classes; and students whose attendance patterns appear to abuse the receipt of financial aid.

Suspension at another MnSCU Institution: Students who have been suspended from another MnSCU institution who have an active suspension on their record will not be allowed to register for courses at the College. Students whose suspension period has elapsed may enroll at the College, but may not be eligible for financial aid until they've academically performed at an acceptable term level (75 percent completion and a term GPA of 2.25 or greater). These students will enter the College on Probationary status.

Appeals and Probation

Appeals: Students may appeal their suspension based on unusual or extenuating circumstances. Extenuating circumstances include:

- Serious illness or injury to a student or immediate family member (parent, spouse, sibling or child) that required extended recovery time
- Death of an immediate family member (parents, spouse, sibling or child)
- Significant trauma in a student's life that impaired the student's emotional and/or physical health

- Other unexpected documented circumstances beyond the control of the student
- Suspension due to an excessive number of credits without completing a degree, diploma or certificate

The student shall submit, as part of the appeal, information as requested regarding why the student failed to make satisfactory academic progress, and what has changed in the student's situation that would allow the student to demonstrate satisfactory academic progress (SAP) at the end of the next evaluation period.

An appeal may only be approved if the College:

1. Has determined that the student should be able to meet SAP standards at the end of the next evaluation period; or
2. Develops an academic plan with the student that, if followed, shall ensure that the student is able to meet SAP standards by a specific point in time; and
3. Maintains a standard of term performance of a minimum of 75 percent completion rate AND a minimum GPA of 2.25 until such time as satisfactory cumulative measures are met.

Probation: A student whose suspension period of one year has passed or who has been granted reinstatement through the appeal process shall be placed on probation. If, at the end of that evaluation period, a student on probation status:

- Has met the College's cumulative grade point average and completion percentage standards, the student shall be returned to good academic standing.
- Has not met the College's cumulative grade point average and completion percentage standards but has met the conditions specified in his/her academic plan AND a standard of term performance of a minimum of 75 percent completion rate AND a minimum GPA of 2.25, the student shall retain his/her financial aid and registration eligibility under a probationary status for a subsequent evaluation period.
- Has not met the College's cumulative GPA and completion percentage standards and has also not met the conditions specified in his/her academic plan, the student shall be re-suspended immediately upon completion of the evaluation period. The suspension period is for one calendar year; students must appeal for potential financial aid reinstatement.

Notification of Status and Appeal Results

Status Notification: Students are notified in writing (email or letter) when the evaluation of satisfactory academic progress results in "Warning," "Suspension," or "Probation." The notice includes the conditions of the current status and the conditions necessary to regain eligibility for registration and financial aid (where applicable). Notice of suspension also includes the right and process necessary to appeal suspension.

Appeal Result Notification: Students are notified in writing (email or letter) of the results of all appeals. Approved appeals may include specific conditions under which the appeal is approved and any conditions necessary to retain eligibility for registration and financial aid.

Reinstatement

Students who have been suspended from financial aid eligibility may be reinstated after an appeal has been approved or the minimum cumulative GPA and completion percentage standards have been achieved. Students suspended from the College may be reinstated to enroll for classes after an appeal or after the suspension period of one year has passed, but may not be eligible for financial aid until they've met the conditions of their appeal for financial aid reinstatement.

Definitions

Credits: The unit by which academic work is measured

Registered (Attempted) Credits: The total number of credits for which a student has officially enrolled at the end of the registration drop/add period each term.

Cumulative Registered Credits: Cumulative registered credits are the total number of credits registered for all terms of enrollment at the College, including summer terms and terms for which the student did not receive financial aid.

Earned Credits: Earned credits include the grades of A, B, C, D, AH, BH, CR and P. They are successfully completed credits that count toward the required percentage of completion (66.6 percent) as defined by the quantitative measure.

Attempted, NOT earned: Grades of F, FN, FW, I, NC, W, Z (or a blank/missing grade) will be treated as credits attempted but NOT successfully completed (earned).

Academic Forgiveness: Credits for which a student has been granted academic forgiveness WILL be included in all financial aid satisfactory progress measurements.

Audited Courses: Audited courses are not financial aid-eligible courses and are not included in any financial aid satisfactory academic progress measurements.

Consortium Credits: Consortium credits are those credits for which a student is registered at another college/university, which are accepted in transfer by this College and are included for purposes of processing financial aid at this College. These credits are included in all satisfactory academic progress measurements.

Developmental Credits: Developmental credits are those awarded for remedial course work (below 1000 level). Students may receive financial aid for developmental credits up to a maximum of 30 credits (excluding ELL). These credits are included in all satisfactory academic progress measurements. However, up to 30 developmental credits are excluded from the maximum timeframe calculation.

Incompletes: The grade of "I" (incomplete) is a temporary grade which is assigned only in exceptional circumstances. It will be given only to students who cannot complete the work of a course on schedule because of extraordinary circumstances beyond their control. An "I" grade will automatically become an "F" grade at the end of the next term (not including summer sessions) if requirements to complete course work have not been satisfactorily met. Faculty have the option of setting an earlier completion date for the student. A grade of "I" is not included when calculating grade point average or earned credits. Thus, it does not impact GPA but does negatively impact earned credits and, therefore, negatively impacts the student's percent of completion.

Repeat Credits: Repeat credits are credits awarded when a student repeats a course in order to improve a grade. A student may repeat a class as allowed by the College. The College will determine, based on its Repeating Courses Policy, which grade will become the grade calculated in the GPA. All repeated credits are included in the percent of completion and maximum time frame calculations.

Transfer Credits: Transfer credits are credits earned at another institution which are accepted by this College. Transfer credits which are accepted by M State and are applicable to the student's program of study shall be counted as credits attempted and completed for calculation of completion percentage and maximum time frame. Grades associated with these credits are not included in calculating GPA.

Withdraw: The grade/mark of "W" (withdrawal) is assigned when a student withdraws from a class after the drop period. It is not included in calculating grade point average or earned credits. Thus, it does not impact GPA but is counted as attempted credits, therefore negatively impacts the student's percentage of completion.

Academic Appeals

Students may appeal any academic issue and discuss it with the appropriate employee(s) and/or administrator(s) as established by College policy or procedure. Students have the right to seek remedy through the College's designated academic appeal process. Students should use available informal means (direct conversation) to resolve disputes before filing an appeal. There will be no retaliation of any kind against students, faculty or staff who participate in the appeal process. For more information about filing an academic appeal, contact Student Services.

Student Grievances

Students have the right to file a grievance in writing if they have allegations of improper, unfair, arbitrary or discriminatory action by an employee involving the application of a specific provision of a college rule or regulation. Students should use available informal means to have decisions reconsidered before filing a grievance. No retaliation of any kind shall be taken against a student for participation in a complaint or grievance. These procedures shall also protect data privacy rights. For more information on filing a grievance, contact your campus Director of Student Services.

Program Interruption

The academic calendar of M State is subject to modification or interruption due to occurrences such as fire, flood, labor disputes, interruption of utility services, acts of God, civil disorder and war. In the event of any such occurrences, the College will attempt to accommodate students. The College will not, however, guarantee that courses of instruction, extracurricular activities or other college programs or events will be completed or rescheduled.

Financial

Tuition

Tuition for all students is set annually by the Minnesota State Colleges and Universities Board of Trustees and charged on a per credit basis.

All applicable tuition charges are billed to the student and are payable on or before the tuition and fee due date. Tuition not paid by this date as defined by the registration cancellation for non-payment policy (listed below) will result in the cancellation of all courses.

Drop for Non-payment

Minnesota State Colleges and Universities policy requires that minimum payment criteria must be met one week prior to the first day of each semester to avoid an administrative drop of all courses a student is enrolled in for the term. To ensure courses are not canceled, a student must have one of the following payment criteria in place one week prior to the first day of classes.

1. Pay in full using cash, check or credit card.
2. Create a payment plan. The student has made a down payment of 15 percent of tuition and fees charges or \$300, whichever is less, and an active payment plan with FACTS Management Company is in place.
3. Apply for federal financial aid. Once the student has applied for financial aid and M State has received the application (FAFSA) results from the Department of Education, courses will be confirmed. To access the FAFSA application, go to www.fafsa.ed.gov.

4. Submit a scholarship or third-party authorization. As soon as M State has received payment in the form of scholarships, third-party authorizations or tuition waivers that meet the minimum down payment of 15 percent or \$300, courses will be confirmed.
5. Apply for Veteran's Education Benefits and complete the Veteran's Sign-Up form.
6. For international students, an active I-20 or DS20.19 is on file.

Create an Active File

Students can manage their account online at SpartanNet by clicking on the E-Services link. Once student tuition and fee bills are posted, there will be messages to indicate whether the payment criteria to avoid an administrative drop have been met. If any known payment or financial aid information does not appear on the online screens, students should contact Student Services for resolution as early as possible.

Students who register and later change their plans for attendance should not rely on the cancellation for nonpayment (drop for non-payment) process to complete administrative drops for them. Students who do not wish to be enrolled must drop their courses via the online registration process and officially withdraw from M State for accurate determination of their financial obligation to the College, if any.

Tuition Reciprocity

Reciprocity agreements exist between the state of Minnesota and the states of North Dakota, South Dakota, Wisconsin, Michigan, Missouri and Nebraska. Students of these states and the province of Manitoba are permitted to pay tuition at a rate below the nonresident rate. Reciprocity application forms are available from high school counselors, online or see Student Services for assistance.

Non-resident Tuition

M State allows students from states other than Minnesota and from states that do not have reciprocity agreements to attend and pay resident tuition rates.

General Fee for Senior Citizens

As defined in Minnesota Statutes §135A.51, senior citizens who have reached 62 years of age before the beginning of any term, or a person receiving a railroad retirement annuity who has reached 60 years of age before the beginning of the term, can pay an administrative fee of \$20 per semester credit to be enrolled in credit courses on a space-available basis after all students who pay regular fees have been accommodated.

Residency

Students who seek to qualify for in-state tuition must first meet the following threshold requirements:

- Students must have resided in Minnesota for at least one calendar year immediately prior to applying for in-state tuition.
- Residence in Minnesota must not be merely for the purpose of attending the College.

Each of the following additional facts and circumstances will be considered when responding to a petition for in-state tuition. Not one of these factors is either necessary or sufficient to support a claim for in-state tuition.

- Continuous presence in Minnesota during period when not enrolled as a student
- Sources for financial support are generated within Minnesota

- Domicile in Minnesota of family, guardian or other relatives or persons legally responsible for student
- Ownership of a home in Minnesota
- Permanent residence in Minnesota

The following circumstances, standing alone, shall not constitute sufficient evidence of domicile to affect eligibility for in-state tuition under these regulations but may be considered as part of the demonstration of the facts and circumstances listed above.

- Voting or registration for voting
- The lease of living quarters
- A statement of intention to acquire a domicile in Minnesota
- Domicile of student's spouse in Minnesota
- Automobile registration
- Other public records, e.g. birth and marriage records

College Fees

Various fees will be assessed to students depending upon enrollment status, courses attempted and services offered by the campus attended. The following is a list of the fees that may be assessed. Fees unique to a program or a class offering are detailed in the course requirement list. Fees shall be established annually by the president. A fee schedule is available from the campus business office for the current academic year. Fees may vary based on the campus where the student is enrolled.

Application Fee

All students entering the College will be assessed a one-time, non-refundable application fee.

Art Fee

All students in studio art courses are assessed a fee to partially cover the cost of studio materials.

Athletic Fee

Students in varsity courses may be assessed a fee to cover the costs of travel uniforms and road trip expenses.

Clinical Makeup Fee

In the event that a student is absent from excessive clinical time, he or she will be required to make up some or all of that time. Because this is extra time for the faculty and extra expense for the College, this fee will be assessed to the student.

CNA/HHA Testing Fee

Any nursing assistant or home health aide student wishing to take the certification test through the College is assessed this fee. The fee is used to pay for the cost of scoring the exam.

Credit by Examination Fee

When a student wishes to test out of a course through credit by examination, a credit by examination fee shall be assessed.

Culinary Arts Fee

All students in the chef training program are assessed a fee to cover meals the student consumes during the courses.

Equine Fee

All courses taught at Red Horse Ranch require a fee to cover the costs of tack and the use of ranch horses.

Golf Green Fee

Students taking golf will be assessed a fee to pay for the green fees at the community golf courses.

Late Payment Fee

Late payment fees will be assessed on the 21st day of each semester to any student who has not paid tuition, when no proof of financial aid or other funding is provided. The fee is based on the number of credits for which a student is registered.

Nursing Application Deposit

A deposit is required of all students applying for the nursing programs. The deposit is returned to the applicant if he or she is not accepted into one of the College's nursing programs. If the student is accepted, the deposit is credited toward the student's first term tuition.

Parking/Common Area Fee

Parking fees will be assessed on a per credit basis. The proceeds from this fee are used to upgrade and maintain the College parking facilities.

Pottery Clay Fee

Students taking the pottery course will be creating and keeping clay projects throughout the course. Each student will be assessed a fee to pay for the cost of the clay projects.

Private Music Lessons

Students wishing to take private vocal or instrumental music lessons will be assessed a fee for the lessons.

Pre-Test Assessment Fee

All nursing students are required to take an initial assessment of skills when entering the program. This fee is used to pay for the analysis of the assessment.

Post-Test Assessment Fee

In order to ensure that the nursing students have a firm understanding of the curriculum that has been delivered to them, each student is required to take a post-test assessment exam. This fee is used to pay for the analysis of the assessment.

Professional Liability Fee

Professional liability fees will be assessed to students enrolling in courses requiring clinical/internship experience. This fee is used to purchase professional liability insurance on the student's behalf.

Replacement of Student Identification Card

Each student will receive a student identification card at no charge. In the event the card needs to be replaced, a fee will be assessed to the student.

Technology Fee

Technology fees shall be assessed on a per credit basis as outlined in the technology fee plan. Proceeds from this fee shall be used to upgrade and maintain the technical infrastructure of the College and to assist in the staffing of technology-related positions.

Student Activity Fee

A student activity fee shall be charged to students. The activity fee is allocated to Student Life activities.

Student Association Fee

All students shall be assessed a fee which is passed on to the Minnesota State College Student Association for College membership dues. This fee shall be assessed on a per credit basis.

Uniform Deposit Fee

This fee will be assessed to all students who rent a uniform from the College. The deposit is charged to ensure all uniforms are returned to the College in the same condition they were received (less ordinary wear). The fee is refundable at the end of the year if all uniforms are returned undamaged.

Uniform Rental Fee

This fee is assessed to students in programs that require student uniform rental. The fee is used to pay for the rental of the uniform.

Add Wellness Fee (Moorhead campus only)

This fee is assessed to students enrolled in courses on the Moorhead campus. The fee is used to operate the M State Fitness Center located on the Moorhead campus.

Student Payments

All tuition and fees are due on the tuition and fee due date which will be established annually by the College. All courses will be cancelled unless the student has met the payment definition outlined in the Drop for Non-Payment section of the College Catalog or Student Handbook.

In the event that the student does not receive enough financial aid, scholarship or third-party agency payment to cover all charges, the account will be considered delinquent. Also, if the student does not stay current with the agreed-upon payment plan, the account will be considered delinquent.

In the event that the account becomes delinquent, a written notice will be sent to the student which will make the student aware of the delinquency and notify him or her that payment in full must be received immediately.

Any student who does not make payment after the above notice is received will be sent a State of Minnesota 20-day letter. This letter will inform the student that the account will be turned over to the Minnesota Collection Entity if payment is not received.

In addition, no student with an outstanding account will be allowed to register for future courses, and his or her College transcript will be held until payment in full has been received.

Deferment/Payment Plan

In accordance with MnSCU policy 5.8 Minnesota M State has the ability to grant deferments and payment plans to students demonstrating the need for such arrangements.

A deferment is defined as an agreement between the College and the student to delay payment until financial aid, which is sufficient to cover all student charges, arrives at the College. Financial aid, for this purpose is described as grants, loans, scholarships or third-party authorizations. Deferments may be granted from authorized representatives of the financial aid or business offices.

M State has made arrangements with FACTS Tuition Management Services which allows students to pay for their charges throughout the term. To access these services, go to our website at www.minnesota.edu and click on the e-Cashier link.

All payment plans must be paid in full before students will be allowed to register for future terms. Failure to stay current with a payment plan will put a student's account in a delinquent status, and collection efforts will begin.

Tuition Refund

Tuition will be refunded to students canceling their registration at the College through a formal withdrawal process and in accordance with MnSCU policy. Refunds are only applicable to complete withdrawals from the College.

The following refund schedule is for students who do an official complete withdrawal from the College. To constitute a complete withdrawal, a student must withdraw from all courses for which he or she is registered in the term.

Refund for fall and spring term courses (at least 10 weeks in length):

- Withdrawal from 1st through 5th instructional day: 100% refund
- Withdrawal from 6th through 10th instructional day: 75% refund
- Withdrawal from 11th through 15th instructional day: 50% refund
- Withdrawal from 16th through 20th instructional day: 25% refund
- Withdrawal after the 20th instructional day: 0% refund

Refund for summer session courses (at least three weeks in length):

- Withdrawal from 1st through 5th instructional day: 100% refund
- Withdrawal from 6th through 10th instructional day: 50% refund
- Withdrawal after 10th instructional day: 0% refund

Courses that start after the fifth instructional day of the term or courses that are less than three weeks in length will have a 100 percent refund of tuition if the student withdraws prior to the end of the first business day following the first class meeting. If the withdrawal request is made on the second or third business day following the first class meeting AND the withdrawal results in 100 percent course withdrawal, the student is entitled to a 50 percent refund. There is no refund for withdrawal from such short-term courses after the third business day following the first class meeting.

Federal pro rata refund will apply to federal financial aid recipients enrolled for the first time at the College.

Return of Title IV Funds for Financial Aid Recipients

Students who receive Federal Title IV financial aid (Pell Grant, SEOG Grant, Direct Loan, Stafford Loan or Perkins Loan) and who completely withdraw prior to completion of 60 percent of the term shall be required to repay the unearned portion of that aid. Federal financial aid is earned

on a pro rata basis up to the 60 percent point of the term (e.g. after 40 percent of the term has elapsed, 40 percent of the federal aid has been earned while 60 percent is unearned and subject to repayment). After the 60 percent point in the term, the student will be considered to have earned 100 percent of his or her federal aid. Students should consult with financial aid office personnel before completely withdrawing from college to accurately determine repayment liability to federal financial aid sources. Students who earn all F's for a term will be considered to have unofficially withdrawn from the course at 50 percent of the term for the purpose of determining if the student has earned their financial aid. If a student did attend at least 60 percent of the term, and that student can get documentation from the instructor within the 15 days of the end of the term, the student will not have to repay the financial aid.

Financial Aid and Satisfactory Academic Progress

In addition to meeting and maintaining the standards set forth in the college Satisfactory Academic Progress Policy, student recipients of financial aid must complete their degree, diploma or certificate within a maximum allowable period of time.

Measuring the time period: All students must complete their degree, diploma or certificate within 150 percent of the published length of the program (e.g. 60 credit programs must be completed within 90 attempted credits). When it becomes clear that a student cannot complete the program within the maximum allowable period, the student becomes ineligible for financial aid.

Seeking a second degree, diploma or certificate: The credits a student has earned in the successful completion of a degree, diploma or certificate program shall not be counted in the maximum time period calculation for a subsequent program, excepting for those credits which apply to both programs.

Changing programs prior to completion: Students who change programs (majors) without successfully completing a program shall remain subject to the 150 percent rule.

Appeals: Students may appeal the suspension of financial aid for exceeding the maximum allowable time frame based on special circumstances. The appeal form can be found on the forms page of the M State website.

Student Information

Academic Advising

Academic advising is a teaching and learning process focused on student success. Students partner with their academic advisor to develop a plan for achieving their academic and career goals. The desired outcome of academic advising is that students learn to make informed and increasingly independent decisions about their educational plans and other academic issues.

Academic planning is a continual process during a student's enrollment at M State. Current students meet at least once each semester with their academic advisor to review their Degree Audit Report (DARS), discuss educational goals, determine progress towards graduation and receive their access code to register for the next semester. Students should

schedule an appointment with their assigned academic advisor and bring a copy of their DARS report and sample schedule to their advising session.

There are two types of academic advisors at M State, program advisors and professional advisors. Each admitted student is assigned an advisor based on their program of study.

Program advisors

- Faculty members advise students who are enrolled in technical/career programs

Professional advisors

- Advise all Liberal Arts & Sciences - Associate in Arts (AA) students
- Advise students completing the Minnesota Transfer Curriculum (MnTC)
- Advise candidates for programs with selective admission (e.g. criminal justice, dental assisting, dental hygiene, nursing and radiological technology)
- Advise Engineering - Associate in Science (AS) students
- Advise students who are undecided or undeclared

Detroit Lakes:

Karen Buboltz: Radiologic Technology candidates, Liberal Arts & Sciences AA, Registered Nursing candidates, Online RN Mobility candidates (218) 846-3670

Sarah Hofmann: Practical Nursing candidates (218) 846-3670

Mark Nelson: Accounting, Paralegal, Early Childhood & Paraprofessional Education (DL and White Earth), Carpentry (White Earth) (218) 846-3670

eCampus:

Joni Massie: Liberal Arts & Sciences AA Online, Operations Management Online, Undecided Online, PSEO Online (218) 299-6590

Fergus Falls:

Jennifer Bieniek: Liberal Arts & Sciences AA, Post Secondary Enrollment Option (PSEO), Biological Sciences AS, Engineering AS, Environmental Science AS, (218) 736-1533

Ann Nelson: Liberal Arts & Sciences AA, Nursing candidates, Accounting AS, Business AS, Management AS, Management Information Systems AS, Music AFA (218) 736-1533

Moorhead:

John Edmonds: Nursing candidates (218)-299-6880

Penny Brynildson: Dental Assisting candidates, Dental Hygiene candidates, Liberal Arts & Sciences AA (Last Names A-I), PSEO, Social Sciences Emphasis AA (Last Names A-K) (218) 299-6880

Amanda LeGare: Criminal Justice candidates, Engineering, International Students (Last Names L-Z), Liberal Arts & Sciences AA (Last Names M-Z), Social Sciences Emphasis AA (Last Names L-Z) (218) 299-6880

Kate Johnson: English Language Learners, International Students (Last Names A-K), Liberal Arts & Sciences AA (Last Names J-L) (218) 299-6880

Claudia Simon: Dual-Enrolled and Course Exchange, (218) 299-6880

Wadena:

Christian Breczinski: Nursing candidates (A-M), Liberal Arts & Sciences AA (A-M) (218) 631-7800

Suzie Rethemeier: Nursing candidates (N-Z), Liberal Arts & Sciences AA (N-Z), PSEO (218) 631-7800

Bookstores

Each M State campus has a bookstore where students can purchase textbooks, school-related supplies and M State apparel. Bookstores are usually open Monday through Friday during the academic year, with special hours during the first week of each semester and holidays. Credit cards and personal checks are accepted.

Textbook Return Information

Students may return texts and items within 10 business days from the date of sale, or by the fifth day of the semester, whichever is later. Items must be in new, salable condition. A sales receipt is required, and returns are subject to these conditions:

- For books for courses that are less than 10 days in length, books returned within the 10-day window will be considered used.
- Full credit will be given if no markings have been made in or on the book.
- Tool/supply kits must be complete.
- New books, if marked, are considered used and will be refunded at 50 percent if the book will be used in future semesters. If the book will not be used again, a refund will not be issued.
- Books purchased used may be returned for full credit.
- Flawed books or materials may be returned for full credit with a receipt, with the exception of computer software. The Computer Help Desk at the campus must validate that the software is faulty in order to be returned.
- Returns are subject to the discretion of the bookstore coordinator and do not include clearance items.

In addition to processing returns, each campus bookstore offers book buybacks at the end of fall and spring semesters.

Please contact your campus bookstore with specific questions:

Detroit Lakes: 218-846-3727

Fergus Falls: 218-736-1556

Moorhead: 218-299-6570

Wadena: 218-631-7825

eCampus: 218-736-1569

Bulletin Boards

Bulletin boards are specified on each campus for general use, while others are for office or faculty use only. All bulletins are to be placed on regular bulletin boards only. Check the bulletin boards for announcements of meetings, activities and part-time job opportunities.

Campus Dining

Each College campus offers dining services to provide students and guests with a variety of snacks, light meals and entrees. Food items are served Monday through Friday during the regular academic year. Students may ask campus dining about options to pre-pay. Campus dining services may also cater events upon request. Vending machines are also available for the convenience of students and guests.

Child Care

Child care resource information may be available from the Student Services office at each campus. Contact Child Care Resource and Referral for information about child care options in specific communities. Minnesota

Child Care Resource and Referral can be reached at 1-888-291-9811 or www.mnchildcare.org. North Dakota Child Care Resource and Referral can be contacted at 701-772-1106 or www.ndchildcare.org.

Consumer Information

The College, in compliance with Title IV of the Educational Amendments of 1976 to the Higher Education Act and subsequent federal legislation, will provide and disseminate consumer information to all prospective and enrolled students. This information shall include but not be limited to the following: admission requirements, financial aid programs, costs, job placement, probation/suspension policy and refund policy.

Counseling Services

M State counselors assist in the total development of each student and his or her personal and life-career planning goals. College counselors strive to provide an accepting environment in a confidential setting. They can assist with career guidance, career selection, transfer process information, personal and life-career planning resources, short-term individual counseling and in making referrals.

Campus Counselors

Fergus Falls campus: Lon Laager 218.736.1539

Moorhead campus: Tom Dubbels 218.299.6516, Maronda Robertson 218.299.6618

Disabilities

M State complies fully with the provisions for the Americans with Disabilities Act and Section 504 of the Rehabilitation Act, which prohibits discrimination in employment and public educational services on the basis of an individual's disability. An individual with a disability is one who has or is regarded as having a physical or mental impairment which substantially limits one or more of that individual's major life activities.

All M State campuses are accessible by ramps or doorways. Designated handicapped parking spaces are located near main entrances. Vehicles bearing a state handicapped license, permit or College issued handicapped parking pass are the only vehicles allowed to park in these spaces. Temporarily disabled students (e.g. broken leg) may obtain handicapped permits for a limited time from the campus director of student services. Students need a letter of verification from a doctor for all temporarily handicapping conditions (this letter must state the approximate length of the handicapping condition) to obtain a campus issued handicapped parking pass.

Assistive technology devices are available, see Disability Services for specific needs. Tape-recorded books, adapted testing and tutoring are provided. Information on note taking, study skills and time management plus developmental courses in math and composition is available. The College is equipped to serve students with various physical challenges.

In order to ensure equal access to the full range of collegiate experiences in the most integrated setting possible, the College provides a wide range of supplemental services. Students who provide the College with a recent assessment documenting a disability and apply for services, may receive the following special services:

- Support, counseling and information about assessment and referral services;
- Academic assistance for documented disabilities may include: testing assistance, note takers, use of assistive devices, and tutoring.
- Advocacy services that may include assistance from a disability services coordinator for students needing services, assis-

tance in working individually with faculty and administrators, intervention procedures and grievance procedures.

Disability Services Coordinators:

Detroit Lakes Campus: Sara Hofmann 218-847-3734

Fergus Falls Campus: Jon Kragness 218-736-1595

Moorhead Campus: Claudia Simon, 218-299-6882

Wadena Campus: Mike Heino: 218-631-7870

Emergency/Weather Closings and Drills

If a weather emergency situation develops, campus officials will consult with local authorities, including law enforcement officials, to determine whether to cancel classes or to close a campus. Campus closings or class cancellations are announced at www.minnesota.edu and on local and regional television and radio stations. For campus-specific information, contact Student Services.

Emergency drills are held periodically during the school year. Information regarding emergency evacuation of buildings is posted throughout each campus. In the case of a tornado warning, please go immediately to an area that has been designated as a "Safe Area."

The Star Alert wireless emergency notification system alerts students and staff if a campus is closed or if classes are delayed or cancelled. It will be in place at every MnSCU institution, so students who attend more than one campus may choose to receive Star Alerts from each. Sign up for Star Alert at SpartanNet.

Employment Information

Students seeking part-time employment on campus are urged to contact the financial aid office. Off-campus employers provide information to each campus about part-time opportunities available for students. The information is posted on the college website. Each student who is planning to work is cautioned to carefully consider his/her college course load so that the workload does not interfere with academics.

Health Services/Insurance

Students are encouraged to carry some type of health coverage while attending school. Group health insurance is available to all M State students. (NOTE: Students should check coverage within their family insurance programs.) Information and applications for student health and dental insurance may be obtained from Student Services. International students are required to purchase an MnSCU International Student Medical Insurance Policy. Health and accident insurance is the responsibility of the student. Student injuries that occur during class time are the responsibility of the student, not the College.

The College does not assume responsibility for any illness or accident to a student. The student is responsible for making financial arrangements for costs that are incurred at any health care facility.

All accidents are reported. If there is an accident or illness in a classroom or laboratory, an ambulance may be called to transport the student to a local emergency room. All campus laboratories are equipped with first aid kits, eyewash and showers for first aid treatment of minor injuries.

Laptops

Student in some M State majors and programs must possess adequate computing resources. The requirement can be met with a student-owned laptop or a laptop procured through a lease with a vendor; however, the minimum hardware specifications and general software requirements must be met to accommodate communication, research and general and specific program computing activities.

Annually, the College Information Technology Services Department identifies a minimum hardware specification and required general software to meet all programs and majors. These specifications are available from each campus Computer Help Desk. In addition, the specifications are posted to the College website. Due to the changing nature of curriculum, software and course sequencing, the College will not endorse an alternate specification. Students interested in using an alternate specification are strongly advised to consider the numerous changing variables that will affect their computing needs throughout the program of study prior to leasing or purchasing an alternate specification.

All students are required to:

- On request, produce proof of licensure for all software installed on the computer, and
- Register, upon request, with a Computer Help Desk.

All students using their own laptop computers or campus computer labs are subject to the rights and responsibilities of M State Acceptable Use of Computers and Information Technology Resources Policy.

Library Services

The four M State libraries located on the Detroit Lakes, Fergus Falls, Moorhead and Wadena campuses contain thousands of books and hundreds of magazines, journals, videos, DVDs and CD-ROMs.

The library catalog can help students find books and other resources on all four M State campuses and at all state colleges and universities. Several private college library catalogs and the University of Minnesota library catalog can be accessed using the M State library catalog. It also provides access to thousands of full textbooks online. The electronic periodical databases on the library page provide access to thousands of full text periodicals. Both the library catalog and electronic periodical databases can be accessed off campus. The library catalog can also be used to renew library materials and check on accounts.

Lost and Found

The lost and found service is located at the reception desk on each campus. Please turn in any found item to the reception desk.

Representing the College

When a student appears in public, the College is judged by that student's conduct. Care must be taken that a student or student groups not imply or state that the student or group represents the College unless specifically authorized to do so.

Software and Printing

M State participates in the Microsoft Student Selection Option campus agreement. Students may purchase the following Microsoft products (includes DVD media) at a reduced rate through their campus bookstore. Technical assistance and installation support is also available through the Campus Help Desk.

- A. Windows 7 Pro Upgrade 32-bit and 64-bit OS
- B. Microsoft Office 2010 Professional
- C. Microsoft Office 2011 for the Mac

At the start of each semester, each student will receive a printing credit of \$12.50 added to his or her network account. The printing credit provides students with a limited amount of free printing to the campus

networked printers. If a student uses the \$12.50 free printing credit and needs additional printing, additional printing can be purchased at the printing kiosks on each campus. Printing costs are 5 cents for black & white and 25 cents for color. Student printing balances can be viewed on the SpartanNet portal.

SpartanNet

SpartanNet is a one-stop personal portal to College resources, e-services, desire2learn (D2L), student email, Star Alert and more. Students can contact their campus Help Desk if they have any problems logging in to or using SpartanNet.

Student Clubs and Activities

The M State philosophy is that student activities and organizations promote the complete development of the individual. Activities and organizations also help motivate students to enroll in and continue in school. Through the number and variety of activities and organizations, all students have the opportunity to participate in extracurricular programs. The student life budget supports the expenses of approved student body activities.

All student club membership and activities are governed by the Student Code of Conduct. Anyone interested in establishing a student organization should contact the dean of student success.

Student Clubs

ADN (Nursing) Organization – Fergus Falls

The ADN Organization is an extracurricular group that serves as a support group for students in the ADN Program. In addition to socializing and supporting one another, this group serves M State through various fundraisers and service projects.

Athletics – Fergus Falls

The Fergus Falls campus has a strong tradition of exciting, successful athletic teams. The College is a member of the Minnesota Community College Conference (MCCC) and Region XIII of the National Junior College Athletic Association (NJCAA). Men's athletic teams represent the College in football, basketball, golf and baseball. Women's teams compete in softball, volleyball, golf and basketball. Athletic competition includes teams from Minnesota, South Dakota, North Dakota, Michigan and Wisconsin.

Architectural Technology Student

Association – Detroit Lakes

ATSA is comprised of student in the Architectural Technology program. The mission of the organization is to promote a greater understanding of architectural practice through construction and design tours. Students in this organization will have the opportunity to work on actual design projects for individuals and/or organizations.

Auto Tech Club – Detroit Lakes and Moorhead

The Auto Tech Club is composed of students who have an interest in the automotive industry. The purpose of the club is to build camaraderie among the automotive students and to work together to organize fund raising events. With the funds raised, an annual trip is taken to a location of the students' choice. The club strives to improve the program by allocating funds for equipment and scholarships for the improvement of the program.

Automotive Technology Club – Detroit Lakes

The Automotive Technology Club is primarily for students who are interested in the automotive field.

Business Professionals of America – Moorhead

Business Professionals of America is a national career and technical student organization that serves students enrolled in business programs. The mission of BPA is to contribute to the preparation of world-class workforce through the advancement of leadership, citizenship, academic and technological skills. Members are involved in leadership, community service projects at the local level, and competitions at the state and national levels.

Civil Engineering Club – Detroit Lakes

The Civil Engineering Club is primarily for students who are interested in the Civil Engineering field.

College Ambassadors – Fergus Falls

College Ambassadors is a service group that helps facilitate and promote all major events and activities on campus. In addition to serving as ushers for plays and concerts, college ambassadors reach out to the student body and community through planning events and occasional half-time entertainment at athletic events.

Cultural Activities Can Touch US – Fergus Falls

CACTUS is a student organization designed primarily to celebrate diversity on campus. All students are welcome to participate.

Circle K – Fergus Falls

Circle K is an international collegiate service organization that promotes fellowship, leadership and volunteer service. M State's Circle K engages students in volunteer activities throughout the community while providing leadership and management training to members. Sponsored by the two local Kiwanis chapters, Noon Kiwanis and Otter Risers, Circle K members also have the opportunity to work side-by-side with community leaders and mentors in the Kiwanis family.

College Ambassadors – Fergus Falls and Moorhead

Ambassadors is an organization whose purpose is to represent and promote M State. Students have the opportunity to develop and strengthen their leadership, communication public relations and organizational skills

Creative Minds Connection – Student Art Organization – Moorhead

CMC is an Art/Humanities student organization that is open to all students at M State. This organization supports the creation and display of art on campus and in the public.

Criminal Justice Association – Moorhead

The Criminal Justice Association is primarily for those students who are interested in the criminal justice program.

Diesel Club – Moorhead

Diesel Club is composed of students interested in Diesel Technology. This organization promotes camaraderie within the group and works together to raise funds to take a bi-annual Diesel Club trip. The students

work on projects in their field of study after class to gain knowledge and earn the needed money to pay for the trip.

F2CO (Chemistry Organization) – Fergus Falls

The purpose of F2CO is to promote chemistry interest both in the student population of M State Fergus Falls and the general public; to better understand the impact that chemistry has in our lives on a daily basis, and in improving the environment.

Ignite – Fergus Falls

Ignite is the weekly meeting of Campus Crusade for Christ on the M State Fergus Falls Campus. Ignite exists to give students an opportunity to explore issues pertaining to faith, spirituality, and Christianity.

Intramural Athletics

Each semester the College offers sports and activities such as baseball, football, basketball, bowling, softball, table tennis, darts, racquetball, volleyball and tennis, plus others as interest dictates.

Music Organizations – Fergus Falls

The Concert Choir, Voice Ensemble, Area Chorale and the Jazz Ensemble provide excellent opportunities for participation in vocal and instrumental music. One semester credit is given to students enrolled in these group activities and in private vocal or instrumental lessons. Approximately 20 scholarships are awarded to participants in music groups each year.

Mu Alpha Theta – Fergus Falls

Mu Alpha Theta is a math honor society that allows students the opportunity to explore their interest in mathematics. In addition to honing their own skills, Mu Alpha Theta members serve the math community through tutoring and coaching elementary math teams.

Phi Theta Kappa – Detroit Lakes, Fergus Falls and Moorhead

Phi Theta Kappa is the national honor society for two-year colleges. The Fergus Falls chapter, Omicron (Tulice), was chartered in 1966.

Practical Nursing Organization and Associate Degree Nursing Student Organization – Fergus Falls and Wadena

The organization is for students enrolled in the nursing programs. Each organization promotes student activities, both professional and social, for its members.

Pride Alliance – Moorhead

Pride Alliance is a student organization created by lesbian, gay, bisexual, and transgender (LGBT) students and their allies. The group serves as a source of information and a safe zone for all LGBT students and their allies. It promotes positive social and interactive experiences.

Skills USA-VICA – Detroit Lakes, Moorhead and Wadena

Vocational Industrial Clubs of America is the official organization of vocational education. It is open to all students enrolled in education throughout the world and is intended to develop an appreciation for the world of work. Competition in VICA is on both state and national levels.

Student American Dental Hygienists' Association – Moorhead

SADHA is composed of students of the Dental Hygiene program. This organization promotes the art and science of dental hygiene, represents the common interests of the members of the dental hygiene profession and contributes toward the improvement of the oral health of the public.

Student Human Resources Organization – Moorhead

SHRO is a cocurricular organization designed to acquaint students considering a future in business within the field of human resource management and/or labor relations. Students increase their knowledge of new developments in the human resource field and develop leadership and content competencies through interaction with human resource professionals and participation in college and community events. SHRO is a chartered student organization with the Society for Human Resource Management. Students are able to join the society for Human Resource Management as student members, allowing further development of their professional skills.

Students in Free Enterprise – Fergus Falls

Students in Free Enterprise is an organization dedicated to the preservation of America's free enterprise system.

Student Government Association

The Student Government Association is the students' voice with the administration, faculty and the Minnesota State College and Universities system, promoting the needs and concerns of the students and the College.

United for Africa – Moorhead

United for Africa is committed to improving the lives of women and children in refugee camps in Africa, especially Darfur, Sudan, by promoting social, educational, health and basic needs through donations and fundraising and by raising awareness.

Volunteerism Club – Fergus Falls

Circle K is the collegiate chapter of the International Kiwanis Service Organization. Their mission statement is much the same, which is to serve the college and community through volunteering and fundraising.

Student Email

Students are automatically issued an email address once they are registered to admitted. Students are expected to check their email on a daily basis, as the College uses email to send information about financial aid, registration, student services and other important topics. Students can check their M State email from off campus, as well. Student email account addresses will be in the format of `firstname_lastname@my.minnesota.edu`. Contact your campus Computer Help Desk as soon as possible with email questions or activation problems.

Student Housing

Each campus may maintain information about community and on-campus housing options. However, the individual student does the actual inquiry and selection of proper housing. The individual campus communities offer many types of housing which are available to college students. Please contact the appropriate campus for more information.

M State Housing - Fergus

On-campus housing is available on the Fergus Falls campus. Students wishing to live on campus can choose between two different apartment style complexes, College Manor or Williams Hillside Village. Both complexes are furnished and house four students to each apartment. The College recommends on-campus living as a positive college experience. These facilities are "no-alcohol," and the College shares in the management of both facilities.

Student Identification Cards

The student identification card is the required form of identification for M State students. The College issues a photo identification card to students attending on-campus courses. The College issues student identification cards after students complete their initial registration. Students must show their identification cards for admission to various College events, to vote in student elections, to check out library materials, to conduct transactions in the Business Office and for other purposes as required by the College. If an identification card needs to be replaced for any reason, students may obtain a replacement identification card for a fee.

Student Lockers

Lockers are available to students on the Detroit Lakes and Wadena campuses. Locker services are extended as a convenience to students. Students must keep lockers in good condition. Students may place a lock on the locker at their expense. The College reserves the right to inspect lockers at any time. If the College needs to enter a locker when the student is not available or does not wish to be available, the College reserves the right to remove the lock at the lock owner's expense. The College is not responsible for lost or stolen articles/items. Contact Student Services for questions about locker services.

Student Right To Know

It is the policy of the College to annually prepare and make available to all enrolled and prospective students, statistics on completion or graduation rates, transfer-out rates and employment, pursuant to the Student Rights To Know Act of 1990. This information is made available through appropriate publications, mailings and the College website.

Student Services Appeals

Students should contact the Student Services Office to initiate the Student Services appeal process.

Spartan Official Team Colors

The official team colors are blue, gold and white. All intercollegiate teams and organizations carry the name of "Spartans."

Theater

The College Theater Department on the Fergus Falls campus produces two plays a year ranging from period to comedy to contemporary drama. The music and drama departments cooperatively produces a Renaissance madrigal once a season.

Transcript Requests

Official transcript requests are fulfilled at no charge. The Transcript Request to Self/Another Institution form is available at www.minnesota.edu.

edu. For privacy reasons, this form must be completed and electronically signed by the student in order for transcript request to be processed.

Travel Abroad

The College offers students a study/travel abroad program through which students register for selected spring semester courses that are tied to a trip overseas at the end of spring semester. The credits taken for both the spring semester course work and the field experience apply to the transfer portion of the Associate in Arts degree. The courses and the cost of the program are announced during the fall semester.

Visual Arts

The Fergus Falls campus has long been committed to the visual arts through course offerings, exhibits in the Waage Gallery and the Charles Beck Gallery, and a permanent collection of more than 400 works displayed prominently throughout the campus. The collection began when faculty member Charles Beck encouraged students to leave a work of art for the College. Through budgeted funds and gifts to Fergus Area College Foundation, the College also has purchased the work of regional artists for its permanent collection.

The Moorhead campus Art Fund was created in 2006 as part of a State College and University Awards for Excellence faculty award to M State Art Instructor Pamela Sund. The focus of the collection on the Moorhead campus is to acquire art works that represent a variety of art traditions from the Western world, especially American traditions, and world traditions that represent diverse cultures, especially those cultures represented by the M State student population and the multicultural populations in our region.

Transfer Articulation Agreements Table 2012-2013

(for students following specified AS, AAS, diploma or certificate programs)

Minnesota State Community and Technical College has formed articulation agreements with a number of public and private institutions to assist students with their transfer goals. These agreements facilitate credit transfer and provide a smooth transition from one related program to another. Please see a transfer specialist for additional information. Additional general education credits will likely be required to complete a degree. The number of credits that transfer may vary depending on the program. Note: Students are free to explore transfer to any college, including colleges not listed in the following table; however, the number of credits that transfer may be more limited. View articulation agreements online at www.mntransfer.org. Enter the "Student portal," select "Transfer Planning" and then "Articulation Agreements."

Accounting	AS	Accounting	BS	Minnesota State University, Moorhead
	AS	Accounting	BS	University of Minnesota, Crookston
	AAS	Accounting	BS	University of Minnesota, Crookston
Architectural Technology	AAS	Construction Management	BS	Minnesota State University, Moorhead
Biological Sciences	AS	Biology	BS	Bemidji State University
	AS	Biology	BA	Minnesota State University, Moorhead
	AS	Biology: Emphasis in Ecology and Evolutionary Biology	BA	Minnesota State University, Moorhead
Business	AS	Business Administration	BS	Minnesota State University, Moorhead
	AS	Business: Management Concentration	BS	University of Mary
	AS	Business Management	BS	University of Minnesota, Crookston
Business: Management, Marketing and Sales	AAS	Business Management	BS	University of Minnesota, Crookston
Carpentry	AAS	Manufacturing Management	BMM	University of Minnesota, Crookston
Civil Engineering	AAS	Land Surveying and Mapping Science	BS	St. Cloud State University
	AAS	Construction Management	BS	Minnesota State University, Moorhead
Construction Management	AAS	Construction Management	BS	Minnesota State University, Moorhead
Course Articulation for Gen Ed, Business Administration & Information Technology	AS, AAS	Business Administration	BAS	Mayville State University
Criminal Justice	AS	Criminal Justice	BA	Minnesota State University, Moorhead
Diesel Equipment Technology	AAS	Manufacturing Management	BMM	University of Minnesota, Crookston
Early Childhood and Paraprofessional Education	AS	Early Childhood Education	BS	Southwest Minnesota State University
Engineering	AS	Various Engineering degrees	BS	North Dakota State University
	AS	Electrical Engineering	BS	St. Cloud State University
Environmental Science	AS	Environmental Studies	BS	Bemidji State University
Health Information Technology	AS	Health Services Administration	BS	Minnesota State University, Moorhead
Human Resources	AAS	Business Administration Major with Human Resource Management Concentration	BS	Valley City State University

Human Resources	AS	Business Administration Major with Human Resource Management Concentration	BS	Valley City State University
	AS	Business: Human Resources Concentration	BS	University of Mary
	AS	Business Management	BS	University of Minnesota, Crookston
Liberal Arts and Sciences	AA	Social Work	BSW	Minnesota State University, Moorhead
Management Information Systems	AS	Computer Information Systems	BS	Minnesota State University, Moorhead
Medical Laboratory Technician	AS	Medical Laboratory Science	BS	University of North Dakota
Nursing	AS	Nursing	BS	Statewide
Practical Nursing	Diploma/AAS	Nursing	AS	Statewide
Radiologic Technology	AAS	Individualized Degree	BA	Metropolitan State University

PROGRAMS

AA (Associate in Arts)	45
Agriculture, Food, Natural Resources and Science	51
Business, Office and Entrepreneurship	55
Computer	65
Construction and Building	71
Manufacturing and Technology	77
Nursing and Health Service	81
Service	87
Transfer	93
Transportation	97

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Page	Program Title	Degree	Credits	D	E	F	M	W	O
56	Accounting	AAS	72	D	E		M		
56	Accounting	AS	60		E	F			
56	Accounting	Diploma	64	D	E		M		
56	Accounting Clerk	Diploma	33	D			M		
62	Administrative Assistant	AAS	60				M		
62	Administrative Management Technology	AAS	60	D					
62	Administrative Support	Diploma	33				M		
90	American Sign Language Studies	Certificate	15				M		
72	Architectural Technology	AAS	72	D					
94	Art	AFA	60			F			
98	Auto Body Collision Technology	AAS	72	D					
98	Auto Body Collision Technology	Diploma	67	D					
98	Automotive Service Technology	AAS	72	D			M		
98	Automotive Service Technology	Diploma	69	D			M		
53	Biotechnology	AAS	63				M		
94	Biological Sciences	AS	60			F	M		
57	Business	AS	60		E	F	M		
58	Business Entrepreneurship	AAS	60	D	E				
57	Business Management*	AAS	60			F			
57	Business Management	AS	60			F			
57	Business Management	Certificate	30			F			
58	Business Management/Ownership	Diploma	33	D					
61	Business: Management, Marketing and Sales	AAS	70		E		M		
61	Business: Management, Marketing and Sales	Diploma	70				M		
72	Carpentry	AAS	67				M		
72	Carpentry	Diploma	60				M		
72	Carpentry Assisting	Certificate	29				M		
88	Child Care and Education	Certificate	24	D					
66	Cisco Networking	Certificate	12	D	E			W	CT
73	Civil Engineering Technology	AAS	72	D					
66	Computer Network Security	AAS	67	D					
66	Computer Network Security	Certificate	12	D	E				
66	Computer Programming	AAS	70		E		M		
74	Construction Electricity	Diploma	74				M	W	

All campuses listed may not offer all of the degrees listed for a specific program, please check www.minnesota.edu for programs you are interested in attending to find out what degrees are offered.

Degrees:

Associate in Arts (AA) degree is designed for transfer to a four-year institution. The AA degree requires students to complete the Minnesota Transfer Curriculum. Ask a college admissions counselor for details about your choice of major.

Associate in Science (AS) degree is awarded for the successful completion of a program which transfers to a baccalaureate major in a scientific or technical field. Program includes a minimum of 30 general education courses.

Associate in Applied Science (AAS) degree is a combination of technical credits and a minimum of 15 general education credits. M State has articulation agreements with some four-year institutions that allow transfer of a wide range of credits.

Associate in Fine Arts (AFA) degree is designed to provide a means for music and visual art students to pursue a path with seamless transition to a four-year music or visual arts degree and to be best prepared for a degree and/or career in music or the visual arts.

Diploma is the vocational degree awarded upon completion of a technical program. Studies include technical credits with 3-9 general education credits.

Certificate is awarded upon completion of a program requiring 30 or fewer credits.

*Program pending MnSCU approval.

Detroit Lakes (D)

eCampus / Online (E)

Fergus Falls (F)

Moorhead (M)

Wadena (W)

Custom Training (CT)

Other (O)

Page	Program Title	Degree	Credits	D	E	F	M	W	O
74	Construction Electricity	Industrial Maintenance Emphasis - Diploma	72					W	
73	Construction Management	AAS	72				M		
89	Correctional Officer	Certificate	25				M		
88	Cosmetology	Diploma	58					W	
89	Criminal Justice	AS	60				M		
52	Culinary Arts	Diploma	64				M		
82	Dental Assisting	AAS	63				M		
82	Dental Assisting	Diploma	48				M		
82	Dental Hygiene	AAS	88				M		
99	Diesel Equipment Technology	(Case IH and New Holland Sponsored) - AAS	79				M		
99	Diesel Equipment Technology	(John Deere Sponsored) - AAS	79				M		
99	Diesel Equipment Technology	(Truck Option) - AAS	79				M		
100	Diesel Equipment Technology	(General) - AAS	79				M		
100	Diesel Equipment Technology	(General) - Diploma	65				M		
68	Digital Photography and Imaging	Certificate	18				M		
88	Early Childhood and Paraprofessional Education	AS	60	D					CT
73	Electrical Lineworker Technology	AAS	72					W	
73	Electrical Lineworker Technology	Diploma	36					W	Baudette
94	Engineering	AS	60			F	M		
58	Entrepreneur Essentials*	Certificate	9	D	E				
58	Entrepreneur Logistics*	Certificate	9	D	E				
58	Entrepreneurship	Certificate	18	D	E				CT
53	Environmental Science	AS	60			F			
52	Equine Science	AAS	61			F			
52	Equine Science	Diploma	31			F			
89	Esthetist	Certificate	21					W	
89	Fire Department Company Officer	Certificate	22		E				
89	Fire Service Preparation	Certificate	30				M		
58	Golf Management	Diploma	60			F			
68	Graphic Design Technology	AAS	60				M		
69	Graphic Design Technology	Certificate	30				M		
59	Health Information Technology	AAS	64		E				
59	Health Information - Technology Specialist	Certificate	30		E				
59	Human Resources	AAS	60		E		M		
59	Human Resources	AS	60		E		M		
74	HVAC - Heating, Ventilation and Air Conditioning	Diploma	36					W	
78	Industrial Maintenance	Diploma	31				M		CT
67	Information Technology	AAS	60				M		
67	Information Technology	AS	60				M		
67	Information Technology	Diploma	60				M		
66	IT Systems Support	AAS	68	D	E				
67	IT Systems Support	Diploma	34	D					
67	IT Systems Support	Certificate	18	D	E				
46	Liberal Arts and Sciences	AA	60	D	E	F	M	W	
49	Liberal Arts and Sciences - Social Work Emphasis	AA	60	D	E	F	M		
49	Liberal Arts and Sciences - Sociology Emphasis	AA	72	D	E	F	M		
67	Management Information Systems	AS	60			F			
88	Manicurist	Certificate	16					W	

Page	Program Title	Degree	Credits	D	E	F	M	W	O
101	Marine Engine Technology	AAS	69	D					
101	Marine Engine Technology	Diploma	60	D					
101	Marine Engine Technology	Certificate	30	D					
61	Marketing	AAS	68	D					
82	Massage Therapy	Diploma	34					W	
78	Mechanical Drafting and Design	AAS	72				M		
78	Mechanical Drafting and Design	Diploma	60				M		
60	Medical Administrative Assistant	AAS	60		E		M	W	
60	Medical Coding and Insurance	Diploma	50		E		M	W	
83	Medical Laboratory Technology	AS	60			F			
60	Medical Office Assistant	Diploma	44		E		M	W	
60	Medical Receptionist	Diploma	34		E		M	W	
60	Medical Transcription	Diploma	40		E		M	W	
95	Music	AFA	68			F			
68	Network Technology Administration	AAS	66		E			W	
68	Network Technology Administration	Diploma	33		E			W	
83	Nursing	Generic Option - Associate Degree (RN)	64	D		F		W	
83	Nursing	Mobility Option - Associate Degree (RN)	32	D		F	M	W	
90	Paralegal	AAS	66	D	E				
56	Payroll Specialist*	Diploma	33	D	E		M		
84	Pharmacy Technology	AAS	60		E				
84	Pharmacy Technology	Diploma	36		E				
84	Phlebotomy Technician	Certificate	11			F			
75	Plumbing Technology	AAS	60				M		
75	Plumbing Technology	Diploma	36				M		
101	PowerSports Technology	Diploma	60	D					
83	Practical Nursing	AAS	62	D		F	M	W	
84	Practical Nursing	Diploma	50	D		F		W	
61	Professional Sales Skills*	Certificate	9	D	E				CT
85	Radiologic Technology	AAS	89	D	E				
74	Refrigeration and Air Conditioning	Diploma	67				M		
61	Sales and Marketing	Diploma	33	D					
90	Sign Language Interpreter Preparation	AAS	65				M		
62	Virtual Office Professional	Certificate	29	D	E				
68	Voice and Video Over Internet Protocol	Certificate	15					W	
69	Web Development	AAS	63	D	E				
69	Web Development	Diploma	62	D	E				
69	Web Development	Certificate	30	D	E				
52	Wine Studies	Certificate	9				M		

AA (Associate in Arts)

Associate in Arts

Liberal Arts and Sciences AA..... 46-48

Liberal Arts and Sciences -
Social Work Emphasis AA49

Liberal Arts and Sciences -
Sociology Emphasis AA.....49

Associate in Arts (AA) Degree:

REQUIREMENTS

The Associate in Arts degree can be used to fulfill freshman-sophomore general education requirements in all the state universities in Minnesota, and at several colleges within the University of Minnesota. The degree is the basic graduation award toward which most students will work if they intend to transfer. It emphasizes a broad general education. In order to obtain an AA degree, students must complete the following uniform requirements.

- Successful completion of a minimum of 60 semester credits numbered 1000 or above.
- Achieve an overall GPA of 2.00 and a GPA of 2.00 within Minnesota Transfer Curriculum.
- Earn at least 20 of the 60 credits at M State.
- Complete a minimum of 40 credits of Minnesota Transfer Curriculum (MnTC).
- Students may satisfy the MnTC requirement with a variety of courses and credits. Some courses will serve more than one of the ten (10) required areas of emphasis. Fulfilling the minimum required credits of courses in each area of emphasis will not necessarily equal 40 credits. Some additional credits beyond the minimum requirements in Areas 1-10 may be required to achieve the overall 40 credit liberal education component. Students should carefully review and tally their progress.

In order to be certified as having met all the requirements of the College's Minnesota Transfer Curriculum, a student must successfully complete courses as prescribed in the following liberal education distribution areas with a minimum GPA of 2.00.

AREA 1: Communication

9 Credit Minimum

Must take three credits from the following:

ENGL 1101 College Writing 1

Must take three credits from the following:

ENGL 1205 Writing About Literature 1
 ENGL 1210 Writing About Current Issues 1
 ENGL 1215 Professional & Technical Writing 1

Must take three credits from the following:

COMM 1120 Introduction to Public Speaking 1
 COMM 1130 Small Group Communication 1,2
 COMM 1140 Interpersonal Communication 1,2

May take for additional credits:

COMM 1100 Communication and Effective Human Relations 1,2
 PHIL 2200 Philosophy of Communications 1,2

AREA 2: Critical Thinking

Complete a minimum of 6 credits from any two of the following discipline areas:

ART 1107 Foundations of Art, 2-D 2,6
 ART 1117 Printmaking I 2,6
 ART 1123 Global Art History: Asian, Islamic, African, Mesoamerican 2,6
 ART 2111 Drawing II 2
 ART 2112 Painting II 2
 ART 2114 Photographic Art I 2
 BIOL 1104 Biology of Human Concerns 2,3
 BIOL 1107 Environmental Science Issues 2,3,10
 BIOL 1108 Env Science Issues Lab 2,3,10
 BIOL 1122 General Biology I 2,3
 BIOL 2202 Principles of Nutrition 2,3
 CHEM 1100 Fund Concepts Chemistry 2,3
 CHEM 1101 Prin of General Chemistry 2,3
 CHEM 1111 General Inorganic Chemistry I 2,3
 CHEM 1112 General Inorganic Chemistry II 2,3
 CHEM 1115 Introduction to Organic and Biochemistry 2,3
 CHEM 2224 Organic Chemistry I 2,3
 CHEM 2225 Organic Chemistry II 2,3
 COMM 1100 Communication and Effective Human Relations 1,2
 COMM 1130 Small Group Communication 1,2

COMM 1140 Interpersonal Communication 1,2
 COMM 2240 Family Communication 2
 ECON 1150 Essentials of Economics 2,5
 ECON 2210 Macroeconomics 2,5
 ECON 2222 Microeconomics 2,5,9
 ECON 2500 Environmental Economics 2,5,10
 ENGL 2230 Environmental Literature 2,6,10
 ENGL 2234 Intro to Literature: Short Stories 2,6,7
 ENGL 2235 Intro to Literature: Drama 2,6,8
 ENGL 2236 Introduction to Literature: Novel 2,6,7
 ENGL 2237 Intro to Literature: Short Prose 2,6,9
 ENGL 2239 Nature Writers 2,6,10
 ENGL 2304 Introduction to Literature, Native American Focus 2,6
 ENGL 2322 Banned Literature 2,6,7
 ENGL 2323 Horror and Supernatural Fiction 2,6
 ENGL 2324 Travel Literature 2,6,10
 ENGL 2372 Children's Literature 2,6,7
 ENGL 2374 The Poetics of Rock Lyrics 2,6
 HONS 1101 Introduction to Honors 2
 HONS 2900 Honors Capstone Seminar 2
 HUM 1110 Native American Culture 2,6,7
 HUM 2210 Introduction to Film 2,6
 HUM 2236 Technology in the Humanities 2,6,8
 HUM 2301 Heroes, Moral and Cultural Science, Class and Culture - Conceptual Wars 2,6
 HUM 2303 A Conceptual Mingling, Love and Sex 2,6
 HUM 2304 Rhetoric, Sophistry and the Truth 2,6
 ILS 1100 Integrative Learning Seminar I 2
 ILS 2100 Integrative Learning Seminar II 2
 MATH 1100 World of Math 2,4
 MATH 1102 Finite Math 2,4
 MATH 1114 College Algebra 2,4
 MATH 1115 Functions/Trigonometry 2,4
 MATH 1116 College Trigonometry 2,4
 MATH 1118 Precalculus 2,4
 MATH 1122 Applied Calculus and Linear Algebra 2,4
 MATH 1134 Calculus I 2,4
 MATH 1135 Calculus II 2,4
 MATH 1207 Elementary Statistics 2,4
 MATH 1213 Introduction to Statistics 2,4
 MATH 2200 Principles of Arithmetic 2,4
 MATH 2231 Calculus III 2,4
 MATH 2257 Linear Algebra 2,4
 MUSC 1121 Basic Theory and Musicianship I 2,6
 MUSC 1122 Basic Theory and Musicianship II 2,6
 MUSC 2231 Adv Theory and Musicianship III 2,6
 MUSC 2232 Adv Theory and Musicianship IV 2,6
 PHIL 1130 Critical Thinking 2
 PHIL 1200 Applied and Professional Ethics 2,9
 PHIL 1201 Ethics 2,6,9
 PHIL 1211 Intro to Philosophy 2,6
 PHIL 2200 Philosophy of Communications 1,2
 PHIL 2224 Philosophy of Religion 2,6,8
 PHIL 2225 Bioethics 2,9
 PHIL 2230 Existentialism 2,6
 POLS 2220 Intro to Constitutional Theory 2,5,9
 PSYC 1101 Human Interaction 2,5
 PSYC 2226 Behavior and Environmental Management 2,5,10
 SOC 1111 Intro to Sociology 2,5,7
 SOC 2215 Criminology 2,5

AREA 3: Natural Sciences

Complete a minimum of 6 credits from the following list. At least one course must include a lab (* denotes non-lab courses).

ANTH 1400 Physical Anthropology 3,10
 *BIOL 1102 Introduction to Horticulture 3
 *BIOL 1104 Biology of Human Concerns 2,3
 BIOL 1107 Environmental Science Issues 2,3,10
 *BIOL 1108 Env Science Issues Lab 2,3,10
 BIOL 1115 Introduction to Biotechnology 3
 *BIOL 1122 General Biology I 2,3
 *BIOL 1123 General Biology II 3,10
 BIOL 1152 Food Science 3
 *BIOL 1161 Introduction to Freshwater Biology 3,10
 *BIOL 2010 General Ecology 3,10
 BIOL 2202 Principles of Nutrition 2,3
 *BIOL 2220 General Microbiology 3
 *BIOL 2240 Genetics 3
 BIOL 2257 Medical Microbiology 3
 BIOL 2260 Human Anatomy and Physiology I 3
 *BIOL 2261 Human Anatomy and Physiology I Lab 1

BIOL 2262 Human Anatomy and Physiology II 3
 *BIOL 2263 Human Anatomy and Physiology II Lab 1
 *BIOL 2265 Diagnostic Microbiology 4
 *BIOL 2266 Diagnostic Microbiology 5
 *CHEM 1100 Fund Concepts Chemistry 2,3
 *CHEM 1101 Prin of General Chemistry 2,3
 *CHEM 1111 General Inorganic Chemistry I 2,3
 *CHEM 1112 General Inorganic Chemistry II 2,3
 *CHEM 1115 Intro to Organic and Biochemistry 2,3
 *CHEM 2224 Organic Chemistry I 2,3
 *CHEM 2225 Organic Chemistry II 2,3
 GLST 1510 Global Studies: Natural Science 3,8
 PHYS 1105 Fundamental Concepts in Physics 3
 *PHYS 1106 Fund of Physics - Mechanics 3
 PHYS 1107 Physics of Music 3,6
 PHYS 1120 Introduction to Astronomy 3
 *PHYS 1401 College Physics I 3
 *PHYS 1402 College Physics II 3
 *PHYS 1411 University Physics I 3
 *PHYS 1412 University Physics II 3

AREA 4: Mathematics/Logical Reasoning

Complete a minimum of 3 credits

MATH 1100 World of Math 2,4
 MATH 1102 Finite Math 2,4
 MATH 1114 College Algebra 2,4
 MATH 1115 Functions/Trigonometry 2,4
 MATH 1116 College Trigonometry 2,4
 MATH 1118 Precalculus 2,4
 MATH 1122 Applied Calculus and Linear Algebra 2,4
 MATH 1134 Calculus I 2,4
 MATH 1135 Calculus II 2,4
 MATH 1207 Elementary Statistics 2,4
 MATH 1213 Introduction to Statistics 2,4
 MATH 2200 Principles of Arithmetic 2,4
 MATH 2231 Calculus III 2,4
 MATH 2257 Linear Algebra 2,4
 PHIL 2235 Symbolic Logic 4

AREA 5: History and the Social and Behavioral Sciences

Complete a minimum of 9 credits selected from two different discipline areas.

ANTH 1100 Introduction to Anthropology 5,8
 ANTH 1300 Cultural Anthropology 5,8
 ECON 1150 Essentials of Economics 2,5
 ECON 2210 Macroeconomics 2,5
 ECON 2222 Microeconomics 2,5,9
 ECON 2500 Environmental Economics 2,5,10
 GEOG 1110 World Geography 5,8
 HIST 1110 Western Civilization: Ancient-1400 5,8
 HIST 1111 Western Civilization: 1400 -1600 5,8
 HIST 1112 Western Civilization: 1600 -1800 5,8
 HIST 1113 Western Civilization: 20th Century 5,8
 HIST 1500 European Experience 5,8
 HIST 1600 History of Baseball 5
 HIST 2211 American History: the Colonial Period 5,7
 HIST 2212 American History 19th Century 5,7
 HIST 2213 American History: 20th Century 5,7
 MCOM 1122 Intro to Mass Communication 5,9
 PHIL 2300 Political and Social Philosophy 5,7
 POLS 1120 American National Government 5,9
 POLS 1130 State and Local Government 5,9
 POLS 2204 Comparative Government 5,8
 POLS 2206 Global Politics 5,8
 POLS 2220 Intro to Constitutional Theory 2,5,9
 PSYC 1101 Human Interaction 2,5
 PSYC 1200 General Psychology 5,9
 PSYC 1500 Positive Psychology 5,9
 PSYC 2220 Abnormal Psychology 5
 PSYC 2222 Developmental Psychology 5,9
 PSYC 2224 Social Psychology 5,7
 PSYC 2226 Behavior and Environmental Management 2,5,10
 PSYC 2230 Personality Psychology 5
 SOC 1111 Intro to Sociology 2,5,7
 SOC 1113 Social Problems 5,9
 SOC 1114 Sociology Service Learning 5
 SOC 2210 Social Deviance 5,7
 SOC 2213 Sociology of the Family 5,7
 SOC 2215 Criminology 2,5
 SOC 2216 Minority Group Relations 5,7
 SOC 2217 Rural Sociology 5,7
 SOC 2220 Food, Culture and Society 5,7

SOC 2222	Sociology of Agriculture	5	MUSC 1123	Sight Singing & Ear Training I	6	ENGL 2362	British Literature II	6,8
WMST 1130	Introduction to Women's Studies	5,7	MUSC 1124	Sight Singing & Ear Training II	6	GEOG 1110	World Geography	5,8
AREA 6: The Humanities and Fine Arts			MUSC 1131	Civic Orchestra	6	GEOG 1160	Global Physical Geography	8,10
<i>Complete a minimum of 9 credits selected from the 3 different discipline areas. (A maximum of 3 Fine Arts credits may be utilized)</i>			MUSC 1135	Voice Ensemble	6	GLST 1121	Humanities Italy	6,8
ART 1107	Foundations of Art, 2-D	2,6	MUSC 1141	Concert Choir	6	GLST 1126	Cultures of Italy and Greece II	6,8
ART 1108	Foundations of Art, 3-D	6	MUSC 1145	Chamber Chorale	6	GLST 1510	Global Studies: Natural Science	3,8
ART 1110	Intro to Art	6	MUSC 1150	History of Jazz	6	GLST 2291	Humanities British Isles	6,8
ART 1111	Drawing I	6	MUSC 1151	Ind Voice Lessons	6	HIST 1110	Western Civilization: Ancient-1400	5,8
ART 1112	Painting I	6	MUSC 1160	Makings of a Rock Band	6	HIST 1111	Western Civilization: 1400 -1600	5,8
ART 1117	Printmaking I	2,6	MUSC 1162	Jazz Ensemble	6	HIST 1112	Western Civilization: 1600 -1800	5,8
ART 1118	Watercolor I	6	MUSC 1164	Concert Band	6	HIST 1113	Western Civilization: 20th Century	5,8
ART 1121	World of Art I	6,8	MUSC 1168	Pep Band	6	HIST 1500	European Experience	5,8
ART 1122	World of Art II	6,8	MUSC 1181	Private Instrumental Lessons	6	HUM 1105	Religion in the Humanities	6,8
ART 1123	Global Art History: Asian, Islamic, African, Mesoamerican	2,6	MUSC 1185	Private Music Composition Lessons	6	HUM 1120	Culture of Italy	6,8
ART 1124	American Art	6,7	MUSC 1191	Ind Piano Lessons	6	HUM 1134	Global Perspectives for Women	6,8
ART 1140	Handbuilt Ceramics	6	MUSC 1192	Piano Pedagogy	6	HUM 2230	World Cinema	6,8
ART 1141	Ceramics I	6	MUSC 2223	Sight Singing & Ear Training III	6	HUM 2236	Technology in the Humanities	2,6,8
ART 2241	Advanced Ceramics	6	MUSC 2224	Sight Singing & Ear Training IV	6	HUM 2281	Culture of the British Isles	6,8
ART 2260	Art, Portfolio Design and Professional Development	6	MUSC 2231	Adv Theory and Musicianship III	2,6	HUM 2293	Field Experience: Europe	6,8
ART 2261	Art, Portfolio Design and Professional Development	6	MUSC 2232	Adv Theory and Musicianship IV	2,6	HUM 2295	Field Experience: The East	6,8
COMM 2220	Oral Interpretation	6	MUSC 2251	Individual Voice Lessons	6	MUSC 1116	World Music	6,8
ENGL 2200	Introduction to Creative Writing	6	MUSC 2281	Private Instrumental Lessons	6	PHIL 2224	Philosophy of Religion	2,6,8
ENGL 2221	Creative Writing: Poetry	6	MUSC 2285	Advanced Music Composition	6	PHIL 2240	Non-Western Philosophical Perspectives	6,8
ENGL 2222	Creative Writing: Fiction	6	MUSC 2291	Individual Piano Lessons	6	POLS 2204	Comparative Government	5,8
ENGL 2223	Creative Writing: Personal Narrative	6	PHIL 1201	Ethics	2,6,9	POLS 2206	Global Politics	5,8
ENGL 2228	A Well Examined Life: Reading and Writing Memoir	6,7	PHIL 1211	Intro to Philosophy	2,6	SPAN 2211	Intermediate Spanish	8
ENGL 2230	Environmental Literature	2,6,10	PHIL 2224	Philosophy of Religion	2,6,8	SPAN 2212	Intermediate Spanish II	8
ENGL 2234	Introduction to Literature: Short Stories	2,6,7	PHIL 2230	Existentialism	2,6	WMST 1136	Global Perspectives of Women	6,8
ENGL 2235	Intro to Literature: Drama	2,6,8	PHIL 2240	Non-Western Philosophical Perspectives	6,8	AREA 9: Ethical and Civic Responsibility		
ENGL 2236	Introduction to Literature: Novel	2,6,7	PHYS 1107	Physics of Music	3,6	<i>Complete 3 credits</i>		
ENGL 2237	Intro to Literature: Short Prose	2,6,9	THTR 1100	Introduction to Theatre	6	ECON 2222	Microeconomics	2,5,9
ENGL 2239	Nature Writers	2,6,10	THTR 1105	Acting I	6	ENGL 2237	Intro to Literature: Short Prose	2,6,9
ENGL 2302	American Ethnic Literature	6,7	THTR 1120	Theatre Performance Practicum	6	MCOM 1122	Intro to Mass Communication	5,9
ENGL 2304	Introduction to Literature, Native American Focus	2,6	THTR 1125	Theatre Technical Practicum	6	PHIL 1200	Applied and Professional Ethics	2,9
ENGL 2310	Introduction to Mythology	6	WMST 1136	Global Perspectives of Women	6,8	PHIL 1201	Ethics	2,6,9
ENGL 2314	Introduction to Shakespeare	6	AREA 7: Human Diversity			PHIL 2220	Environmental Ethics	9,10
ENGL 2321	Women in Literature	6,7	<i>Complete 3 credits</i>			PHIL 2225	Bioethics	2,9
ENGL 2322	Banned Literature	2,6,7	ART 1124	American Art	6,7	POLS 1120	American National Government	5,9
ENGL 2323	Horror and Supernatural Fiction	2,6	COMM 2230	Intercultural Communication	7	POLS 1130	State and Local Government	5,9
ENGL 2324	Travel Literature	2,6,10	COMM 2250	Gender Communication	7	POLS 2220	Intro to Constitutional Theory	2,5,9
ENGL 2331	American Literature I	6,7	ENGL 2228	A Well Examined Life: Reading and Writing Memoir	6,7	POLS 2310	Ideas and Ideologies	7,9
ENGL 2332	American Literature II	6,7	ENGL 2234	Introduction to Literature: Short Stories	2,6,7	PSYC 1200	General Psychology	5,9
ENGL 2361	British Literature I	6,8	ENGL 2236	Introduction to Literature: Novel	2,6,7	PSYC 1500	Positive Psychology	5,9
ENGL 2362	British Literature II	6,8	ENGL 2302	American Ethnic Literature	6,7	PSYC 2222	Developmental Psychology	5,9
ENGL 2372	Children's Literature	2,6,7	ENGL 2321	Women in Literature	6,7	SOC 1113	Social Problems	5,9
ENGL 2374	The Poetics of Rock Lyrics	2,6	ENGL 2322	Banned Literature	2,6,7	AREA 10: People and the Environment		
GLST 1121	Humanities Italy	6,8	ENGL 2331	American Literature I	6,7	<i>Complete 3 credits</i>		
GLST 1126	Cultures of Italy and Greece II	6,8	ENGL 2332	American Literature II	6,7	ANTH 1400	Physical Anthropology	3,10
GLST 2291	Humanities British Isles	6,8	ENGL 2337	Children's Literature	2,6,7	BIOL 1107	Environmental Science Issues	2,3,10
HUM 1105	Religion in the Humanities	6,8	HIST 2211	American History: the Colonial Period	5,7	BIOL 1108	Env Science Issues Lab	2,3,10
HUM 1110	Native American Culture	2,6,7	HIST 2212	American History 19th Century	5,7	BIOL 1123	General Biology II	3,10
HUM 1120	Culture of Italy	6,8	HIST 2213	American History: 20th Century	5,7	BIOL 1161	Introduction to Freshwater Biology	3,10
HUM 1132	Women in the Humanities	6,7	HUM 1110	Native American Culture	2,6,7	BIOL 2010	General Ecology	3,10
HUM 1134	Global Perspectives for Women	6,8	HUM 1132	Women in the Humanities	6,7	ECON 2500	Environmental Economics	2,5,10
HUM 1201	Religion and the American Experience	6,7	HUM 1201	Religion and the American Experience	6,7	ENGL 2230	Environmental Literature	2,6,10
HUM 2210	Introduction to Film	2,6	MCS 2230	Multicultural America	7	ENGL 2239	Nature Writers	2,6,10
HUM 2230	World Cinema	6,8	MUSC 1115	America's Musical Heritage	6,7	ENGL 2324	Travel Literature	2,6,10
HUM 2236	Technology in the Humanities	2,6,8	PHIL 2300	Political and Social Philosophy	5,7	GEOG 1160	Global Physical Geography	8,10
HUM 2281	Culture of the British Isles	6,8	POLS 2310	Ideas and Ideologies	7,9	PHIL 2220	Environmental Ethics	9,10
HUM 2293	Field Experience: Europe	6,8	PSYC 2224	Social Psychology	5,7	PSYC 2226	Behavior and Environmental Management	2,5,10
HUM 2295	Field Experience: The East	6,8	PSYC 2228	Cross-Cultural Psychology	7	SFP 1100	Principles of Sustainability	10
HUM 2301	Heroes, Moral and Cultural	2,6	SOC 1111	Intro to Sociology	2,5,7			
HUM 2302	Science, Class and Culture - Conceptual Wars	2,6	SOC 2210	Social Deviance	5,7			
HUM 2303	A Conceptual Mingling, Love and Sex	2,6	SOC 2213	Sociology of the Family	5,7			
HUM 2304	Rhetoric, Sophistry and the Truth	2,6	SOC 2216	Minority Group Relations	5,7			
MUSC 1111	Fundamentals of Music	6	SOC 2217	Rural Sociology	5,7			
MUSC 1112	Beginning Class Guitar	6	SOC 2220	Food, Culture and Society	5,7			
MUSC 1113	Beg Class Voice	6	WMST 1130	Introduction to Women's Studies	5,7			
MUSC 1114	Beginning Class Piano	6	AREA 8: Global Perspective					
MUSC 1115	America's Musical Heritage	6,7	<i>Complete 3 credits</i>					
MUSC 1116	World Music	6,8	ANTH 1100	Introduction to Anthropology	5,8			
MUSC 1118	Rock and Pop Music	6	ANTH 1300	Cultural Anthropology	5,8			
MUSC 1120	Introduction to Music Technology	6	ART 1121	World of Art I	6,8			
MUSC 1121	Basic Theory and Musicianship I	2,6	ART 1122	World of Art II	6,8			
MUSC 1122	Basic Theory and Musicianship II	2,6	CHIN 1101	Introduction to Chinese	8			
			ENGL 2235	Intro to Literature: Drama	2,6,8			
			ENGL 2361	British Literature I	6,8			

Liberal Arts & Sciences — Associate in Arts Degree (AA) — 60 credits Minnesota Transfer Curriculum (MnTC) — 40 credits

The AA and/or the MnTC satisfy the general education requirements of Minnesota State Colleges and Universities (MnSCU).
Associate in Arts Degree (AA)

- Requires completion of all 10 goal areas below with a minimum of 40 credits from MnTC and elective credits to bring the total to 60. A degree is awarded after successful completion of the 60 required credits.

For certification of Minnesota Transfer Curriculum (MnTC)

- Requires completion of all 10 goal areas below with the 40 credit minimum from MnTC. Additional electives are not required. While a degree is not awarded at the completion of the 40 credits, a student's transcript will indicate completion of the MnTC.

Area 1: Communication (9 credits)

Prep courses may be needed; see your advisor.

ENGL 1101 (3 cr) _____

ENGL 1205, 1210 or 1215 (3 cr) _____

COMM 1120, 1130 or 1140 (3 cr) _____

Area 7: Human Diversity (3 credits)

Area 8: Global Perspective (3 credits)

Area 2: Critical Thinking (select 6 credits from 2 disciplines)

Area 9: Ethical and Civic Responsibility (3 credits)

Area 10: People and the Environment (3 credits)

Area 3: Natural Sciences (6 credits, at least one course must include a lab)

Elective credits to bring total to 60

Area 4: Mathematics/Logical Reasoning (3 credits)

Prep courses may be needed; see your advisor.

Area 5: History and the Social and Behavioral Sciences

(9 credits from 2 or more disciplines)

Elective Credits _____

General Education Credits _____

Total Credits (60 required) _____

Notes

Area 6: The Humanities and Fine Arts

(9 credits from 3 different disciplines. A maximum of 3 Fine Arts credits may be used. Fine Arts credits are denoted as 6F on the schedule.)

Subtotal _____

A minimum of 40 credits required to this point. *Important: Fulfilling the minimum requirements for each area will total 36 credits only. 4 additional credits in Areas 1-10 are required

PROGRAM PROFILES

Associate in Arts Degree - Social Work emphasis

AA 60 Credits

D E F M

Need Description

Course #	Course Title	Crds
	MN Transfer Electives	9
	Global Perspective Electives.....	3
	Humanities and Fine Arts Electives.....	9
	Natural Science Electives	3
BIOL1104	Biology of Human Concerns.....	3
COMM1120	Introduction to Public Speaking	3
ECON1150	Essentials of Economics.....	3
ENGL1101	College Writing.....	3
* ENGL1205	Writing About Literature.....	3
or		
ENGL1210	Writing About Current Issues	3
or		
ENGL1215	Professional and Technical Writing.....	3
POLS1120	American National Government	3
PSYC1200	General Psychology	3
PSYC2222	Developmental Psychology	3
SOC1111	Introduction to Sociology.....	3
SW2250	Introduction to Social Work/Social Welfare.....	3

* Take three credits from the specified courses.

Associate in Arts Degree - Sociology emphasis

AA 72 Credits

D E F M

Need Description

Course #	Course Title	Crds
	MN Transfer Electives	15
	Global Perspective Electives.....	3
	Humanities and Fine Arts Electives.....	9
	Mathematics/Logical Reasoning Electives.....	3
	Natural Science Electives	3
	People and the Environment Electives.....	3
BIOL1104	Biology of Human Concerns.....	3
COMM1120	Introduction to Public Speaking	3
ECON1150	Essentials of Economics.....	3
ENGL1101	College Writing.....	3
* ENGL1205	Writing About Literature.....	3
or		
ENGL1210	Writing About Current Issues	3
or		
ENGL1215	Professional and Technical Writing.....	3
POLS1120	American National Government	3
PSYC1200	General Psychology	3
PSYC2222	Developmental Psychology	3
SOC1111	Introduction to Sociology.....	3
SW2250	Introduction to Social Work/Social Welfare.....	3

* Take three credits from the specified courses.

Agriculture and Natural Resources

Equine Science

Equine Science AAS.....52

Equine Science Diploma.....52

Golf Management

Golf Management Diploma
See Business, Office and Entrepreneurship Section.....58

Food

Culinary Arts

Culinary Arts Diploma52

Wine Studies

Wine Studies Certificate.....52

Science

Biotechnology

Biotechnology AAS.....53

Environmental Science

Environmental Science AS53

Equine Science

Equine Science

AAS 61 Credits

F

This program will build upon the introductory skills gained from the Equine Science diploma program at M State and Red Horse Ranch. Additional academic theory and general education transfer courses will be taken online while the student works at an approved internship site. This degree and internship experience will give the student the finished skills necessary for careers in stable management, breeding, training, judging, riding instruction and related occupations.

Course #	Course Title	Crds
	Technical Electives.....	1
	MN Transfer Electives.....	15
ACCT1012	Principles of Bookkeeping.....	3
ENGL1101	College Writing.....	3
EQSC1001	Introduction to Equine Science.....	1
EQSC1050	Equine Anatomy.....	3
EQSC1060	Equine Reproduction and Nutrition.....	3
EQSC1130	Stable Operations I.....	1
EQSC1131	Stable Operations II.....	2
EQSC1140	Western Horsemanship.....	3
EQSC1150	Fundamentals of Riding Instruction.....	2
EQSC1160	English Equitation.....	3
EQSC1170	Introduction to Horse Training.....	1
EQSC1180	Equine Evaluation.....	2
EQSC1190	Farrier Science.....	2
EQSC1200	Equine Events Management.....	1
EQSC2200	Recognition and Management of Equine Disorders.....	3
EQSC2300	Applied Stable Operations.....	3
EQSC2501	Equine Internship.....	6
SOC2222	Sociology of Agriculture.....	3

Equine Science

Diploma 31 Credits

F

This program will provide a unique blend of transferable college credit courses along with specific academic and hands-on equine courses. This diploma will give students the introductory skills necessary for careers in stable management, horse training, horse judging, riding instruction or other related occupations. In addition, this program can serve as a starting point for a bachelor's degree program in equine science, a pre-veterinary program or a pre-veterinary technology program. Students in this program may also wish to use it as a foundation for a life-long equine learning experience as a horse owner/rider. Courses are taught at the M State campus and at Red Horse Ranch Arena, a world-class training/boarding/events facility located six miles northeast of Fergus Falls. Students will have the opportunity to learn and practice their skills at a busy, private equine business facility. This gives M State students a unique advantage when entering the job market since they will possess a diploma that reflects a combination of academic learning and real-life application.

Course #	Course Title	Crds
	Technical Electives.....	1
ACCT1012	Principles of Bookkeeping.....	3
EQSC1001	Introduction to Equine Science.....	1
EQSC1050	Equine Anatomy.....	3
EQSC1060	Equine Reproduction and Nutrition.....	3
EQSC1130	Stable Operations I.....	1
EQSC1131	Stable Operations II.....	2
EQSC1140	Western Horsemanship.....	3
EQSC1150	Fundamentals of Riding Instruction.....	2
EQSC1160	English Equitation.....	3
EQSC1170	Introduction to Horse Training.....	1
EQSC1180	Equine Evaluation.....	2
EQSC1190	Farrier Science.....	2
EQSC1200	Equine Events Management.....	1
SOC2222	Sociology of Agriculture.....	3

Culinary Arts

Culinary Arts

Diploma 64 Credits

M

The mission of the Culinary Arts program is to provide quality education to students who wish to pursue a career of excellence in culinary and hospitality occupations. The program is designed to meet the current and future needs of the food service industry. Demand for employment is high in the industry, which accounts for more than 9 million jobs annually in the United States. Students enrolled in the Culinary Arts program receive hands-on practical lab training paired with traditional academic culinary courses that are aligned with industry needs. The program provides a broad base of education in the culinary field.

Course #	Course Title	Crds
	MN Transfer Electives.....	9
	Technical Electives.....	6
CULN1102	Introduction to Foodservice Preparation.....	4
CULN1104	Soups, Stocks and Sauces.....	2
CULN1106	Salad and Baking Lab.....	6
CULN1112	Poultry and Seafood.....	3
CULN1118	Fry and Broiler Lab.....	5
CULN1120	Kitchen Math and Formulas.....	1
CULN1122	Sanitation Certification.....	1
CULN1124	Menu Planning and Merchandising.....	2
CULN2202	Meats.....	2
CULN2204	Breakfast Preparation Lab.....	5
CULN2206	Buffet and Garde Manger Lab.....	3
CULN2214	Quantity Food Preparation and Butcher Lab.....	6
CULN2222	Production and Planning Supervision Lab.....	6
CULN2228	Food Cost Control.....	3

Wine Studies

Wine Studies

Certificate 9 Credits

M

The Wine Studies program provides training for a variety of occupations in the hospital-ity and food service industry, as well as for private social settings. Students enrolling in this program learn to study wine varietals and styles with specific attention to their food compatibilities and will be involved in extensive tasting of wine and food while focusing on the specific elements of interaction between the two. Discover creative ways to improve menu and wine list compatibilities. Explore the best equipment for professional wine service, including glasses, ice buckets, corkscrews and more. Explore the characters of the world's top classic varieties and review their histories and food compatibilities. Acquire a comprehensive wine vocabulary using professional terms and learn to describe your sensory impressions and evaluation of a wine in words. Students will also develop an understanding of the natural elements as well as the human controlled elements of terroir. The program requires the ability to work as part of a team and communicate well with others. Tact, courtesy and a pleasant personality are important, as are a keen sense of taste and smell.

Course #	Course Title	Crds
WINE1100	Introduction to Wine.....	3
WINE1201	Food and Wine Pairing.....	3
WINE1500	Old World Wines and New World Wines.....	3

Biotechnology

Biotechnology

AAS 63 Credits

M

The Biotechnology curriculum is intended to meet the increasing demand for laboratory technicians skilled in a variety of techniques commonly used in biotechnology. The program objectives are designed to prepare graduates to serve as research assistants and technicians in laboratory and industrial settings and as quality control/quality assurance technicians.

Course #	Course Title	Crds
BIOL1115	Introduction to Biotechnology	3
BIOL1122	General Biology I.....	4
BIOL1123	General Biology II.....	4
BIOL2220	General Microbiology	4
BIOL2240	Genetics	4
BIOT2207	Nanobiotechnology and Nanobiomedicine.....	3
BIOT2210	Biotechnology Methods I	3
BIOT2220	Biotechnology Methods II	3
BIOT2230	Fundamentals of Bioprocessing.....	3
BIOT2231	Industry Experience.....	2
CHEM1111	General Inorganic Chemistry I	5
CHEM1112	General Inorganic Chemistry II	5
COMM1120	Introduction to Public Speaking	3
ENGL1101	College Writing.....	3
ENGL1215	Professional and Technical Writing.....	3
MATH1114	College Algebra.....	4
MATH1213	Introduction to Statistics.....	4
PHIL2225	Bioethics.....	3

Environmental Science

Environmental Science

AS 60 Credits

F

The AS in Environmental Science is designed to provide students an avenue to a four-year environmental science degree, preparing them for a career in an environmental field. The program emphasizes a broad background in natural sciences and mathematics, ensuring students are properly prepared for further study at an advanced level.

Course #	Course Title	Crds
	MN Transfer Electives	8
BIOL1107	Environmental Science Issues	3
BIOL1108	Env Science Issues Lab.....	1
BIOL1122	General Biology I.....	4
BIOL1123	General Biology II.....	4
CHEM1111	General Inorganic Chemistry I	5
CHEM1112	General Inorganic Chemistry II	5
ENGL1101	College Writing.....	3
* ENGL1205	Writing About Literature.....	3
or		
ENGL1210	Writing About Current Issues	3
or		
ENGL1215	Professional and Technical Writing.....	3
MATH1114	College Algebra.....	4
MATH1115	Functions/Trigonometry.....	4
MATH1134	Calculus I.....	5
MATH1213	Introduction to Statistics.....	4
PHYS1401	College Physics I.....	4
* SOC1111	Intro to Sociology.....	3
or		
SOC1113	Social Problems.....	3

***Take three credits from the specified courses.**

Business, Office and Entrepreneurship

Accounting

Accounting AAS.....	56
Accounting AS.....	56
Accounting Diploma.....	56
Accounting Clerk Diploma.....	56
Payroll Specialist Diploma.....	56

Business

Business AS.....	57
Business Management AAS*.....	57
Business Management AS.....	57
Business Management Certificate*.....	57

Entrepreneurship

Business Entrepreneurship AAS.....	58
Business Management/Ownership Diploma.....	58
Entrepreneur Essentials Certificate*.....	58
Entrepreneurial Logistics Certificate*.....	58
Entrepreneurship Certificate.....	58

Golf Management

Golf Management Diploma.....	58
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Human Resources

Human Resources AAS.....	59
Human Resources AS.....	59

Health Information Technology and Medical Office Careers

Health Information Technology AAS.....	59
Health Information - Technology Specialist Certificate.....	59
Medical Administrative Assistant AAS.....	60
Medical Coding and Insurance Diploma.....	60
Medical Office Assistant Diploma.....	60
Medical Receptionist Diploma.....	60
Medical Transcription Diploma.....	60

Marketing

Business: Management, Marketing and Sales AAS.....	61
Business: Management, Marketing and Sales Diploma.....	61
Marketing AAS.....	61
Professional Sales Skills Certificate.....	61
Sales and Marketing Diploma.....	61

Office Management

Administrative Assistant AAS.....	62
Administrative Management Technology AAS.....	62
Administrative Support Diploma.....	62
Virtual Office Professional Certificate.....	62

*Pending MnSCU approval

Accounting

Accounting AAS

AAS 72 Credits

D M E

This major provides the knowledge and skills necessary to examine, analyze, interpret and correct accounting data for the purpose of preparing financial statements, budgets, forecast accounting reports, payroll reports and individual state and federal income tax returns. Computerized accounting concepts are included in this area of study.

Course #	Course Title	Crds
	MN Transfer Electives	9
	Technical Electives.....	4
ACCT1101	Payroll	3
ACCT1108	Business Math/Calculators	3
ACCT1120	Business Law	3
ACCT1124	Spreadsheet Applications.....	3
ACCT2201	Financial Accounting I Lab	1
ACCT2202	Financial Accounting II Lab	1
ACCT2203	Managerial Accounting Lab.....	1
ACCT2211	Financial Accounting I.....	3
ACCT2212	Financial Accounting II	3
ACCT2213	Managerial Accounting	3
ACCT2216	QuickBooks	3
ACCT2217	Microsoft Dynamics GP	3
ACCT2255	Income Tax-Individual.....	3
* ACCT2256	Income Tax-Business.....	3
or		
ACCT2630	Fund/Nonprofit Accounting	3
or		
ACCT2643	Accounting Internship.....	3
or		
ACCT2800	Accreditation Council for Accountancy and Taxation Exam Review.....	3
ACCT2620	Intermediate Accounting I	4
ACCT2622	Intermediate Accounting II	4
COMM1120	Introduction to Public Speaking	3
CPTR1104	Intro to Computer Tech	3
ECON2210	Macroeconomics.....	3
ENGL1101	College Writing.....	3

* Take six credits from the specified courses.

Accounting

AS 60 Credits

F E

The AS in Accounting is a two-year degree designed for both the student who wants to enter the workforce upon graduation and the student who plans to transfer to a four-year college or university. The program offers a balance of general education courses and courses specific to preparing the student for a career in accounting.

Course #	Course Title	Crds
	MN Transfer Electives	8
* ACCT1108	Business Math/Calculators	3
or		
BUS1146	Personal Finance	3
ACCT2211	Financial Accounting I.....	3
ACCT2212	Financial Accounting II	3
ACCT2213	Managerial Accounting	3
ACCT2215	Computerized Accounting Applications.....	3
ACCT2255	Income Tax-Individual.....	3
BUS1120	Spreadsheet and Database Concepts	3
BUS2150	Legal Environment of Business.....	3
BUS2204	Principles of Management	3
BUS2206	Principles of Marketing.....	3
COMM1120	Introduction to Public Speaking	3
ECON2210	Macroeconomics.....	3
ECON2222	Microeconomics.....	3
ENGL1101	College Writing.....	3
MATH1114	College Algebra.....	4
PHIL1201	Ethics	3
* PSYC1200	General Psychology	3
or		
SOC1111	Intro to Sociology.....	3

* Take three credits from the specified courses.

Accounting

Diploma 64 Credits

D M E

This major provides the knowledge and skills necessary to examine, analyze, interpret and correct accounting data for the purpose of preparing financial statements, budgets, forecast accounting reports, payroll reports and individual state and federal income tax returns. Computerized accounting concepts are included in this area of study.

Course #	Course Title	Crds
	Communications Electives (MNTC Goal Area I).....	3
	MN Transfer Electives	3
	Technical Electives.....	4
ACCT1101	Payroll	3
ACCT1108	Business Math/Calculators	3
ACCT1120	Business Law	3
ACCT1124	Spreadsheet Applications.....	3
ACCT2201	Financial Accounting I Lab	1
ACCT2202	Financial Accounting II Lab	1
ACCT2203	Managerial Accounting Lab.....	1
ACCT2211	Financial Accounting I.....	3
ACCT2212	Financial Accounting II	3
ACCT2213	Managerial Accounting	3
ACCT2216	QuickBooks	3
ACCT2217	Microsoft Dynamics GP	3
ACCT2255	Income Tax-Individual.....	3
* ACCT2256	Income Tax-Business.....	3
or		
ACCT2630	Fund/Nonprofit Accounting	3
or		
ACCT2643	Accounting Internship.....	3
or		
ACCT2800	Accreditation Council for Accountancy and Taxation Exam Review	3
ACCT2620	Intermediate Accounting I	4
ACCT2622	Intermediate Accounting II	4
COMM1100	Communication and Effective Human Relations.....	3
CPTR1104	Intro to Computer Tech	3
PDEV1102	Contemporary Career Search	1

* Take six credits from the specified courses.

Accounting Clerk

Diploma 33 Credits

D M E

This major provides the knowledge and skills necessary to perform routine calculating, journalizing, posting and verifying duties to maintain accounting records, prepare payroll reports and individual state and federal tax returns. Both manual and computerized accounting concepts and applications are included.

Course #	Course Title	Crds
	Communications Electives (MNTC Goal Area I).....	3
	Technical Electives.....	3
ACCT1101	Payroll	3
ACCT1108	Business Math/Calculators	3
ACCT1124	Spreadsheet Applications.....	3
ACCT2201	Financial Accounting I Lab	1
ACCT2202	Financial Accounting II Lab	1
ACCT2211	Financial Accounting I.....	3
ACCT2212	Financial Accounting II	3
ACCT2216	QuickBooks	3
ACCT2255	Income Tax-Individual.....	3
CPTR1104	Intro to Computer Tech	3
PDEV1102	Contemporary Career Search	1

Payroll Specialist - Pending MnSCU Approval

Diploma 33 Credits

D E M

This major provides the knowledge and skills necessary to perform routine calculating, journalizing, posting, and verifying duties to maintain accounting records, prepare payroll reports and returns, and employee records. Both manual and computerized accounting concepts and applications are included.

Course #	Course Title	Crds
	MN Transfer Electives	3
ACCT1101	Payroll	3
ACCT1108	Business Math/Calculators	3
AACT1124	Spreadsheet Applications.....	3
ACCT2201	Financial Accounting I Lab	1

ACCT2202	Financial Accounting II Lab	1
ACCT2211	Financial Accounting I	3
ACCT2212	Financial Accounting II	3
ACCT2216	QuickBooks	3
CPTR1104	Intro to Computer Tech	3
HRES1122	Human Resource Management.....	3
HRES1130	Benefits Administration.....	3
PDEV1102	Contemporary Career Search.....	1

BUS2202	Mgmt Information Sys	3
BUS2204	Principles of Management	3
BUS2206	Principles of Marketing.....	3
CSCI1155	Computer Utilization in Business and Society	3
ECON2210	Macroeconomics.....	3
ECON2222	Microeconomics.....	3
ENGL1101	College Writing	3

Business

Business AS 60 Credits F M E

This is a flexible degree designed for students who want to continue their education or enter the workforce in a business-related career. The degree is 60 credits in length, including 30 semester credits in general education from six of the 10 goal areas of the Minnesota Transfer Curriculum and 30 technical credits. Students completing this degree may further advance their education by obtaining a degree through articulation agreements with baccalaureate degree-granting institutions. Emphasis is on contemporary business practices through coursework in management, marketing, economics, accounting, technology and communications.

Course #	Course Title	Crds
	MN Transfer Electives	1
	Technical Electives	9
ACCT2211	Financial Accounting I.....	3
ACCT2212	Financial Accounting II	3
ACCT2213	Managerial Accounting.....	3
BUS1120	Spreadsheet and Database Concepts	3
BUS2204	Principles of Management	3
BUS2206	Principles of Marketing.....	3
BUS2220	Global Business	3
COMM1120	Introduction to Public Speaking	3
ECON2210	Macroeconomics.....	3
ECON2222	Microeconomics.....	3
ENGL1101	College Writing.....	3
* ENGL1205	Writing About Literature.....	3
or		
ENGL1210	Writing About Current Issues	3
or		
ENGL1215	Professional and Technical Writing.....	3
MATH1114	College Algebra.....	4
MATH1122	Applied Calculus and Linear Algebra	3
MATH1213	Introduction to Statistics.....	4
* SOC1111	Intro to Sociology.....	3
or		
PSYC1200	General Psychology.....	3

* Take three credits from the specified courses.

Business Management - Pending MnSCU Approval AAS 60 Credits F

The AAS in Business Management is a two-year degree designed to prepare students for a career in business at the junior level of management. The degree is designated for the student who wishes to enter the workforce upon graduation. The program offers some general education courses, but is concentrated on courses specific to preparing the student for a career in business management.

Course #	Course Title	Crds
	MN Transfer Electives	6
ACCT1108	Business Math/Calculators	3
ACCT2211	Financial Accounting I.....	3
ACCT2212	Financial Accounting II	3
ACCT2213	Managerial Accounting.....	3
ACCT2215	Computerized Accounting Applications.....	3
ACCT2255	Income Tax-Individual.....	3
BUS1120	Spreadsheet and Database Concepts	3
BUS1141	Introduction to Business	3
BUS1143	Office Procedures	3
BUS1146	Personal Finance	3
BUS2150	Legal Environment of Business.....	3

Business Management AS 60 Credits

F

The AS in Business Management is a two-year degree designed to prepare students pursuing a career in business at the junior level of management. The degree is designed to suit the student who wishes to enter the workforce upon graduation, as well as the student who plans to transfer to a four-year college or university. The program offers a balance of general education courses and courses specific to preparing the student for a career in business management.

Course #	Course Title	Crds
	MN Transfer Electives	12
ACCT1108	Business Math/Calculators	3
ACCT2211	Financial Accounting I.....	3
ACCT2212	Financial Accounting II	3
ACCT2213	Managerial Accounting.....	3
BUS1120	Spreadsheet and Database Concepts	3
BUS1143	Office Procedures	3
BUS2150	Legal Environment of Business.....	3
BUS2202	Mgmt Information Sys	3
BUS2204	Principles of Management	3
BUS2206	Principles of Marketing.....	3
ECON2210	Macroeconomics.....	3
ECON2222	Microeconomics.....	3
ENGL1101	College Writing.....	3
PHIL1201	Ethics.....	3
PSYC1200	General Psychology	3
SOC1111	Intro to Sociology	3

Business Management Certificate 30 Credits

F

This is a one-year certificate in Business Management designed for the student who wants to prepare for an introductory level position in the business world. This will give students the opportunity to explore the fields of business through select courses.

Course #	Course Title	Crds
ACCT1108	Business Math/Calculators	3
ACCT2211	Financial Accounting.....	3
ACCT2212	Financial Accounting II	3
ACCT 2215	Computerized Accounting Applications.....	3
ACCT2255	Income Tax-Individual.....	3
BUS1120	Spreadsheet & Database Concepts	3
BUS1141	Introduction to Business	3
BUS1143	Office Procedures	3
BUS1146	Personal Finance	3
CSCI1155	Computer Utilization in Business & Society	3

Entrepreneurship

Business Entrepreneurship

AAS 60 Credits

D E

Entrepreneurs create their own path to success and work to make their dreams a reality. This program teaches students the skills and behaviors that contribute to personal and business success. It also prepares students to assess new enterprise opportunities, obtain financial resources, prepare a business plan and market a venture for success. Students will gain the confidence and skills to launch a new venture in an area of expertise, grow an existing business or pursue an advanced degree.

Course #	Course Title	Crds
	MN Transfer Electives	3
	History/Social/Behavioral Sciences Electives (MNTC Goal Area 5)	3
	Technical Electives.....	6
ACCT1108	Business Math/Calculators.....	3
ACCT1124	Spreadsheet Applications.....	3
ACCT2211	Financial Accounting I.....	3
ADMS1116	Business Communications I.....	3
BUS2204	Principles of Management.....	3
BUS2206	Principles of Marketing.....	3
COMM1120	Introduction to Public Speaking	3
CPTR1104	Intro to Computer Tech	3
ECON2210	Macroeconomics.....	3
ENGL1101	College Writing.....	3
ENR1100	Introduction to Entrepreneurship.....	3
ENR1400	Opportunity Analysis	3
ENR2200	Entrepreneurial Field Studies	3
ENR2220	Business Ethics/Professionalism.....	3
ENR2222	Business Plan Development	3
MKTG1110	Customer Service.....	3

Business Management/Ownership

Diploma 33 Credits

D

The primary purpose of this program is to prepare men and women for management or ownership of a small business. The program will not only prepare students for business management, but also enable them to better manage their own personal affairs. It will especially help individuals who may have some of the skills and competencies needed but lack the organization and understanding of business management that is necessary to be successful. Upon completing the classroom work, students will be assisted in finding jobs with business firms offering employment suited to their individual career objectives or in starting their own businesses. This program requires a genuine interest in people, a strong desire to be your own boss and a willingness to expend above-average time and energy toward goal accomplishment.

Course #	Course Title	Crds
	MN Transfer Electives	3
ACCT1108	Business Math/Calculators.....	3
ACCT1124	Spreadsheet Applications.....	3
ACCT2211	Financial Accounting I.....	3
BUS2204	Principles of Management.....	3
BUS2206	Principles of Marketing.....	3
CPTR1104	Intro to Computer Tech	3
ENR1400	Opportunity Analysis	3
ENR2200	Entrepreneurial Field Studies	3
ENR2222	Business Plan Development	3
MKTG1110	Customer Service.....	3

Entrepreneur Essentials - Pending MnSCU Approval

Certificate 9 Credits

D E

Entrepreneurs create their own paths to success and work to make their dreams a reality. This certificate teaches students the necessary skills and behaviors that contribute to launching and managing a new business with a strong focus on business ethics. Students will learn to assess new enterprise opportunities, enhance management skills and prepare a business plan.

Course #	Course Title	Crds
BUS2204	Principles of Management	3
ENR1100	Introduction to Entrepreneurship	3
ENR2220	Business Ethics/Professionalism.....	3

Entrepreneurial Logistics - Pending MnSCU Approval

Certificate 9 Credits

D E

Entrepreneurs create their own paths to success and work to make their dreams a reality. This certificate teaches students the necessary skills and behaviors that contribute to launching a new business. Students will learn to assess new enterprise opportunities, obtain financial resources, understand the importance of customer service, and prepare a business plan.

Course #	Course Title	Crds
ENR1400	Opportunity Analysis	3
MKTG1110	Customer Service.....	3
ENR2222	Business Plan Development	3

Entrepreneurship

Certificate 18 Credits

D E C T S

Entrepreneurs create their own paths to success and work to make their dreams a reality. This certificate teaches students the necessary skills and behaviors that contribute to launching a new business. Students will learn to assess new enterprise opportunities, obtain financial resources, prepare a business plan and market a venture for success.

Course #	Course Title	Crds
ACCT1108	Business Math/Calculators	3
ACCT2211	Financial Accounting I.....	3
BUS2206	Principles of Marketing.....	3
CPTR1104	Intro to Computer Tech	3
ENR1100	Introduction to Entrepreneurship.....	3
ENR2222	Business Plan Development	3

Golf Management

Golf Management

Diploma 60 Credits

F

The diploma in Golf Management provides students with skills necessary for employment or advancement as entry level golf course employees and prepares students for a variety of positions in the golf industry. In this program, students are prepared to manage golf course operations, oversee the maintenance of golf facilities and equipment, as well as promote the play of golf as a lifelong pastime, skill and social outlet. Students earning the certificate may also choose to continue their study toward an associate, baccalaureate or advanced degree.

Course #	Course Title	Crds
* ACCT1012	Principles of Bookkeeping.....	3
or		
ACCT2211	Financial Accounting I.....	3
ACCT1108	Business Math/Calculators	3
BIOL1107	Environmental Science Issues.....	3
BUS1120	Spreadsheet and Database Concepts	3
BUS1141	Introduction to Business.....	3
BUS1146	Personal Finance.....	3
BUS2150	Legal Environment of Business.....	3
BUS2204	Principles of Management	3
BUS2206	Principles of Marketing.....	3
COMM1120	Introduction to Public Speaking	3
ENGL1101	College Writing	3
GOLF1100	Rules of Golf.....	1
GOLF1101	Golf Club Repair	1
GOLF1102	Tournament Operations.....	1
GOLF1200	Introduction to Golf Fundamentals and Methods.....	3
GOLF2100	Pro Shop Operations and Management	3
GOLF2200	Turf Management.....	3
GOLF2402	Golf Internship	1-3
GOLF2500	Fundamentals of Golf Instruction.....	3
** LAND1102	Intro to Landscape/Horticulture	3
or		
ACCT2215	Computerized Accounting Applications.....	3
or		
LAND1105	Soils and Fertilizers.....	3
MKTG1110	Customer Service.....	3

* Take three credits from the specified courses.

** Take six credits from the specified courses.

Human Resources

Human Resources

AAS 60 Credits

M E

Human Resources programs prepare students to provide support to companies and individual employees in the area of human resources. Associate of Applied Science graduates may assume duties in the following areas: communication with employees, employee data record-keeping, policies and administration, employer and labor relations, employee recruitment, selection and employment, training and development, wage and salary and benefit administration.

Course #	Course Title	Crds
	Technical Electives	9
ADMS1110	Word Processing	3
ADMS1116	Business Communications I	3
ADMS1128	Records/Database Management	3
COMM1120	Introduction to Public Speaking	3
CPTR1104	Intro to Computer Tech	3
ENGL1101	College Writing	3
HRES1122	Human Resource Management.....	3
HRES1126	Employee Processes	3
HRES1130	Benefits Administration.....	3
HRES1134	Training and Development	3
HRES2204	Policy Administration	3
HRES2212	Wage/Salary Administration.....	3
HRES2224	Employee/Labor Relations	3
HRES2254	Human Resource Systems and Portfolio Evaluation.....	3
* PHIL1201	Ethics	3
or		
PHIL1200	Applied and Professional Ethics	3
PSYC1200	General Psychology	3
SOC1111	Intro to Sociology	3

* Take three credits from the specified courses.

Human Resources

AS 60 Credits

M E

Human resources programs prepare students to provide support to companies and to individual employees in the area of human resources. Associate of Science graduates may assume duties in the following areas: communication with employees, employee data record keeping, policies and administration, employer and labor relations, employee recruitment, selection and employment, training and development, wage and salary and benefit administration. The AS program is specifically designed for more efficient course transfer to partner universities for students wishing to continue with additional education.

Course #	Course Title	Crds
	MN Transfer Electives	12
ADMS1110	Word Processing	3
COMM1120	Introduction to Public Speaking	3
CPTR1104	Intro to Computer Tech	3
ENGL1101	College Writing	3
ENGL1215	Professional and Technical Writing.....	3
HRES1122	Human Resource Management.....	3
HRES1126	Employee Processes	3
HRES1130	Benefits Administration.....	3
HRES1134	Training and Development	3
HRES2204	Policy Administration	3
HRES2212	Wage/Salary Administration.....	3
HRES2224	Employee/Labor Relations	3
HRES2254	Human Resource Systems and Portfolio Evaluation.....	3
* PHIL1201	Ethics	3
or		
PHIL1200	Applied and Professional Ethics	3
PSYC1200	General Psychology	3
SOC1111	Intro to Sociology	3

* Take three credits from the specified courses.

Health Information Technology and Medical Office Careers

Health Information Technology

AAS 64 Credits

E

The health information technician is an important member of the health care team who secures, analyzes, integrates and manages health information for patient care, reimbursement, planning, marketing, legal aspects and research. This information steers the health care industry. The program is designed to combine general education courses with the technical courses for a well-rounded and functional education. To further the student's classroom coursework with practical hands-on experience, time is spent in health care facilities. Upon successful completion of the Health Information Technology program, students receive the eligibility to write the American Health Information Management Association's Registered Health Information Technician (RHIT) credentialing exam.

Course #	Course Title	Crds
	MN Transfer Electives	3
BIOL2260	Human Anatomy and Physiology I.....	3
BIOL2261	Human Anatomy and Physiology I Lab	1
BIOL2262	Human Anatomy and Physiology II.....	3
BIOL2263	Human Anatomy and Physiology II Lab	1
COMM1120	Introduction to Public Speaking	3
CPTR1104	Intro to Computer Tech	3
ENGL1101	College Writing	3
HITM1150	Introduction to Health Care Delivery	3
HITM1153	Introduction to Electronic Health Records	1
HITM1155	Medicolegal Aspects	3
HITM1159	Professional Practice Experience Functions.....	2
HITM1160	Health Information Systems and Statistics.....	3
HITM2204	Fundamentals of Electronic Health Records.....	3
HITM2211	Basic Pharmacology for Coders	2
HITM2216	Introduction to CPT Coding.....	3
HITM2238	Advanced Coding CPT	2
HITM2250	Supervisory Leadership in Health.....	3
HITM2253	Quality Management Studies	3
HITM2262	Reimbursement Systems	2
HITM2272	Professional Practice Experience Coding	2
HITM2275	Health Record Documentation	1
HITM2282	Intro to the International Classification of Diseases, Tenth Edition	3
HITM2284	Advanced International Classification of Diseases, Tenth Edition	2
HLTH1116	Medical Terminology.....	3
HLTH2208	Pathophysiology.....	3

Health Information - Technology Specialist

Certificate 30 Credits

E

This certificate provides health professionals and information technology professionals an entry into the world of health information informatics. Health information informatics utilizes information technology to improve the practices of the medical profession. Professionals in health information informatics records combine traditional health records management utilization information technology to meet legal, medical, efficiency and ethical requirements.

Course #	Course Title	Crds
CPTR1001	Introduction to Programming and Scripting.....	3
CPTR1006	Microcomputer Database.....	3
CPTR1138	Information Systems.....	3
CPTR1148	Microcomputer Operating System.....	3
CPTR2296	Topics in Computers.....	3
CSCI1110	Informatics	3
HITM1150	Introduction to Health Care Delivery	3
HITM1155	Medicolegal Aspects	3
HITM2204	Fundamentals of Electronic Health Records.....	3
HLTH1116	Medical Terminology.....	3

PROGRAM PROFILES

Medical Administrative Assistant

AAS 60 Credits

M W E

The Medical Administrative Assistant AAS program prepares students to work in a variety of medical settings, handling all types of administrative duties for private practice, hospitals and clinics. This program offers a broad foundation of knowledge and skills, expanding the traditional role of the medical secretary through the addition of liberal arts classes as preparation for leadership roles. Graduates of this program are highly-trained office specialists who are prepared to accept responsibility for the coordination of medical office functions and patient billing processes. Successful medical administrative assistants have excellent communication skills and exhibit a high degree of professionalism. All courses in the program incorporate the skills needed for employment in the medical administrative assistant profession.

Course #	Course Title	Crds
	MN Transfer Electives	9
	Technical Electives.....	4
ADMM1110	Medical Documentation Fundamentals.....	4
ADMM1122	Medical Office Procedures.....	4
ADMM1140	Medical Language Applications.....	3
ADMM1150	Medical Billing/Insurance	4
ADMM1152	Outpatient Coding	4
ADMM1160	Beginning Medical Transcription	3
ADMM2122	Medical Office Management	3
ADMM2234	Professional Development.....	2
ADMM2270	Medical Office Simulation	2
ADMS1116	Business Communications I.....	3
ENGL1101	College Writing.....	3
HLTH1110	Introduction to Anatomy and Physiology	3
HLTH1116	Medical Terminology.....	3
HLTH2208	Pathophysiology	3
PSYC2222	Developmental Psychology.....	3

Medical Coding and Insurance

Diploma 50 Credits

M W E

The Medical Coding and Insurance diploma program prepares students in many of the procedures associated with billing for medical services. Students receive training in medical billing processes including patient account management, diagnosis and procedure coding and medical insurance claim completion and processing. The program focuses on coding and insurance procedures for the medical office. Medical coding involves using nationally recognized coding systems to classify procedures and diagnoses related to medical treatment. The codes provide information that is used in insurance claims processing. Many different types of insurance programs are handled in the medical office. Students are trained in claims processes of many insurance programs/plans such as Medicare, Medicaid, Tricare, profit and nonprofit third-party payers, workers compensation packages and disability coverage. Courses in this program incorporate the skills needed for employment in the coding and insurance departments of medical facilities. Graduates of the program are eligible to take several of the national coding certification exams. The American Academy of Professional Coders (AAPC) offers the Certified Professional Coder (CPC), Certified Professional Coder-Hospital (CPC-H), Certified Professional Coder - Payer (CPC-P), and Certified Professional Biller (CPB).

Course #	Course Title	Crds
	MN Transfer Electives	6
ADMM1110	Medical Documentation Fundamentals.....	4
ADMM1122	Medical Office Procedures.....	4
ADMM1140	Medical Language Applications.....	3
ADMM1150	Medical Billing/Insurance	4
ADMM1152	Outpatient Coding	4
ADMM2150	Medicare Coding and Billing Applications.....	3
ADMM2154	Hospital Billing.....	2
ADMM2234	Professional Development.....	2
ADMM2252	Advanced Coding.....	3
ADMM2258	Certified Professional Coder Examination Review.....	1
ADMM2270	Medical Office Simulation	2
ADMM2276	Evaluation and Management Coding Practices	3
HLTH1110	Introduction to Anatomy and Physiology	3
HLTH1116	Medical Terminology.....	3
HLTH2208	Pathophysiology	3

Medical Office Assistant

Diploma 44 Credits

M W E

Medical office assistants are highly-trained office specialists who participate in the coordination of medical office functions including patient appointment scheduling, telephone communications, medical record maintenance, medical transcription and patient billing processes. Successful medical office assistants have excellent communication skills and exhibit a high degree of professionalism. All courses in the program incorporate the skills needed for employment in the medical office assistant profession.

Course #	Course Title	Crds
	MN Transfer Electives	3
	Technical Electives.....	3
ADMM1110	Medical Documentation Fundamentals.....	4
ADMM1122	Medical Office Procedures.....	4
ADMM1140	Medical Language Applications.....	3
ADMM1150	Medical Billing/Insurance	4
ADMM1152	Outpatient Coding.....	4
ADMM1160	Beginning Medical Transcription	3
ADMM2234	Professional Development	2
ADMM2270	Medical Office Simulation	2
ADMS1116	Business Communications I.....	3
HLTH1110	Introduction to Anatomy and Physiology	3
HLTH1116	Medical Terminology.....	3
HLTH2208	Pathophysiology.....	3

Medical Receptionist

Diploma 34 Credits

M W E

This program prepares individuals to work in a medical office setting. Medical receptionists greet patients, arrange appointments and provide informational services to patients. They possess excellent communication and technology skills. This position requires an excellent command of medical terminology, anatomy and physiology, as well as expertise in medical office procedures.

Course #	Course Title	Crds
	MN Transfer Electives	3
ADMM1110	Medical Documentation Fundamentals.....	4
ADMM1122	Medical Office Procedures.....	4
ADMM1140	Medical Language Applications.....	3
ADMM1150	Medical Billing/Insurance	4
ADMM2234	Professional Development	2
ADMM2270	Medical Office Simulation	2
ADMS1116	Business Communications I.....	3
HLTH1110	Introduction to Anatomy and Physiology	3
HLTH1116	Medical Terminology.....	3
HLTH2208	Pathophysiology.....	3

Medical Transcription

Diploma 40 Credits

M W E

A medical transcriptionist is a medical language specialist who prepares a variety of medical reports and documents for inclusion in patient medical records. Medical transcriptionists must possess a vast knowledge of the medical field and its associated terminology, as well as a high degree of computer and written communication skills. All courses in the program incorporate the skills needed for employment as a medical transcriptionist and are derived from the Association for Healthcare Documentation Integrity Model Curriculum competencies. Graduates of this program will be eligible to write the national exam for registered medical transcriptionists.

Course #	Course Title	Crds
	Technical Electives.....	3
ADMM1110	Medical Documentation Fundamentals.....	4
ADMM1140	Medical Language Applications.....	3
ADMM1160	Beginning Medical Transcription	3
ADMM1162	Intermediate Medical Transcription	3
ADMM2234	Professional Development	2
ADMM2235	RMT Exam Review.....	1
ADMM2268	Advanced Medical Transcription.....	3
ADMM2272	Medical Transcription Practicum.....	3
ADMS1116	Business Communications I.....	3
HLTH1110	Introduction to Anatomy and Physiology	3
HLTH1116	Medical Terminology.....	3
HLTH2208	Pathophysiology	3
PHIL2225	Bioethics.....	3

Marketing

Business: Management, Marketing and Sales

AAS 70 Credits

M E

The Business: Management, Marketing and Sales AAS major includes business courses as well as general education courses. This degree is designed to provide students with the skills necessary for success in a variety of careers in the sales, marketing and management fields. Curriculum includes instruction in areas such as sales, marketing, research, customer service and small business planning. Emphasis is developing skills in management decision-making, communication, problem solving and technology.

Course #	Course Title	Crds
	MN Transfer Electives	9
	BUS or HRES or MKTG Electives	3
ACCT1012	Principles of Bookkeeping.....	3
ACCT1108	Business Math/Calculators	3
ACCT1120	Business Law	3
BUS2204	Principles of Management.....	3
BUS2206	Principles of Marketing.....	3
BUS2220	Global Business	3
COMM1120	Introduction to Public Speaking	3
ECON2222	Microeconomics.....	3
ENGL1101	College Writing.....	3
MKTG1106	Professional Selling.....	3
MKTG1110	Customer Service.....	3
MKTG1116	Advertising and Promotion.....	3
MKTG2204	Advanced Professional Selling.....	3
MKTG2218	Retail Management.....	3
MKTG2222	Human Resource Mgmt	3
MKTG2234	Computer Marketing Applications.....	3
MKTG2236	Small Business Mgmt	3
MKTG2400	Marketing Management.....	4
MKTG2404	Management Strategy.....	3

Business: Management, Marketing and Sales

Diploma 70 Credits

M

This diploma places an emphasis on business courses. The program is designed to prepare students to succeed in their careers and to provide students with the essential skills necessary in the sales, marketing and management fields. Curriculum includes instruction in areas such as sales, marketing research, customer service and small-business planning. Emphasis is on developing skills in management decision-making, communication, technology and problem-solving. Students have the opportunity to apply concepts they have learned.

Course #	Course Title	Crds
	Technical Electives.....	12
ACCT1012	Principles of Bookkeeping.....	3
ACCT1108	Business Math/Calculators	3
ACCT1120	Business Law	3
BUS2204	Principles of Management.....	3
BUS2206	Principles of Marketing.....	3
COMM1120	Introduction to Public Speaking	3
ECON1150	Essentials of Economics.....	3
ENGL1101	College Writing.....	3
MKTG1106	Professional Selling.....	3
MKTG1110	Customer Service.....	3
MKTG1116	Advertising and Promotion.....	3
MKTG1130	Leadership Ethics.....	3
MKTG2204	Advanced Professional Selling.....	3
MKTG2218	Retail Management.....	3
MKTG2222	Human Resource Mgmt	3
MKTG2230	Marketing Research.....	3
MKTG2234	Computer Marketing Applications.....	3
MKTG2236	Small Business Mgmt	3
MKTG2400	Marketing Management.....	4

Marketing

AAS 68 Credits

D

The Marketing AAS provides the practical knowledge and skills related to planning, managing and performing sales and marketing activities to meet organizational objectives. The major includes marketing, social marketing, management, sales, marketing research and other related business courses as well as general education courses. This program is

designed to prepare students for a wide variety of sales and marketing careers. Emphasis is placed on developing the skills to apply marketing knowledge, management and leadership skills, communication and interpersonal skills, problem solving and technology skills.

Course #	Course Title	Crds
	MN Transfer Electives	6
	Technical Electives.....	3
* ACCT1108	Business Math/Calculators	3
or		
ACCT1012	Principles of Bookkeeping.....	3
ADMS1116	Business Communications I.....	3
ADMT2222	Event Planning.....	2
* ADMT2300	Office Graphics and Presentations	3
or		
MKTG1210	InDesign	3
BUS1141	Introduction to Business.....	3
BUS2204	Principles of Management	3
BUS2206	Principles of Marketing.....	3
BUS2220	Global Business	3
COMM1120	Introduction to Public Speaking.....	3
CPTR1104	Intro to Computer Tech	3
ENGL1101	College Writing	3
INTD1117	Photoshop.....	3
MKTG1106	Professional Selling.....	3
MKTG1110	Customer Service.....	3
MKTG1116	Advertising and Promotion.....	3
MKTG1200	Introduction to Social Media.....	3
MKTG1280	Search Engine Optimization.....	3
MKTG2214	E-Marketing.....	3
MKTG2290	Supervised Occup Exp I.....	3
* PSYC1200	General Psychology	3
or		
SOC1111	Intro to Sociology	3

* Take three credits from the specified courses.

Professional Sales Skills - Pending MnSCU Approval

Certificate 9 Credits

D E C T

This certificate prepares students to enhance their selling, customer service and speaking skills. It is also designed to provide new sales professionals with the foundational skills for success. This certificate includes courses in public speaking, selling strategies and customer service.

Course #	Course Title	Crds
COMM1120	Introduction to Public Speaking	3
MKTG1106	Professional Selling.....	3
MKTG1110	Customer Service.....	3

Sales and Marketing

Diploma 33 Credits

D

This program prepares graduates to enter sales and marketing careers. Positions are available in marketing, merchandising, selling, retailing and service businesses. This major includes courses in computer technology, selling strategies, customer service, tele-marketing and retailing and marketing concepts.

Course #	Course Title	Crds
	Technical Electives.....	6
ACCT1108	Business Math/Calculators	3
BUS2206	Principles of Marketing.....	3
CPTR1104	Intro to Computer Tech	3
MKTG1106	Professional Selling.....	3
MKTG1110	Customer Service.....	3
MKTG1200	Introduction to Social Media.....	3
MKTG2204	Advanced Professional Selling.....	3
MKTG2290	Supervised Occup Exp I.....	3
* PSYC1200	General Psychology	3
or		
SOC1111	Intro to Sociology	3

* Take three credits from the specified courses.

PROGRAM PROFILES

Office Management

Administrative Assistant

AAS 60 Credits

M

The AAS in Administrative Assistant prepares the student for employment in a business office setting. Administrative assistant personnel are needed in virtually every type of business and are essential in helping offices run effectively and efficiently. The graduate will have achieved a broad base of both specialized skills and general education knowledge, which will contribute to growth in an office environment. The general education courses will also benefit students who may wish to transfer to another program or institution to advance their education. Throughout this program, students will develop the office skills, knowledge and attitudes required by today's employers. Students will develop strong verbal, listening and writing skills; interpersonal skills and the ability to keep confidences; technology skills using and integrating a variety of software applications; organizational, time management, team building, customer service and soft skills; and critical thinking and problem-solving skills to create a positive office environment.

Course #	Course Title	Crds
	MN Transfer Electives	6
	History/Social/Behavioral Sciences Electives (MNTC Goal Area 5)	3
	Technical Electives	10
ACCT1012	Principles of Bookkeeping	3
ADMS1112	Desktop Publishing	3
ADMS1116	Business Communications I	3
ADMS1120	Office Procedures	3
ADMS1128	Records/Database Management	3
ADMS1130	Office Software Applications	3
ADMS1200	Keyboarding I/Keyboarding II	4
ADMS1300	Word Processing/Advanced Word Processing	4
ADMS2124	Computer Technology Information	3
ADMS2212	Integrated Office Software Applications	3
ADMS2216	Business Communications II	3
COMM1120	Introduction to Public Speaking	3
ENGL1101	College Writing	3

Administrative Management Technology

AAS 60 Credits

D

This program is designed to teach students strong administrative, computer and interpersonal skills, promoting greater efficiency in the office. The administrative professional industry has evolved to require a wide range of technical and interpersonal skills which provide employment opportunities ranging from front-office support and customer service representatives to event planners, project managers and other administrative professional-related employment. In addition, graduates may continue their study in baccalaureate degree programs in careers such as computers, operations management or business administration. This degree is also designed for students who wish to enhance their computer skills in today's business world via international industry certifications to help further their careers. Students should consult an adviser/counselor for transfer opportunities to various Minnesota colleges.

Course #	Course Title	Crds
	MN Transfer Electives (Choose from: ANTH1100, PSYC1101, PSYC1200, PSYC2224, PSYC2226, PSYC2230, SOC1111, SOC1113, SOC2215, SOC2216 or SOC2217)	3
	Technical Electives (Choose from: ACCT1101, ACCT1108, ACCT1120, ACCT2201, ACCT2202, ACCT2212, ACCT2213, ACCT2215, ACCT2216, ACCT2255, ADMS1120, ADMS1128, ADMT1173, ADMT1174, ADMT2110, ADMT2900, BUS1141, BUS2150, BUS2204, BUS2206, BUS2220, ENTR1100, ENTR1800, HRES1122, HRES1126, HRES1130, HRES1134, HRES2204, HRES2212, HRES2224, INTD1113, INTD1117, MKTG1050, MKTG1106, MKTG1116, MKTG1200, MKTG1280 or MKTG2214)	9
ACCT1124	Spreadsheet Applications	3
ACCT2211	Financial Accounting I	3
ADMS1110	Word Processing	3
ADMS1116	Business Communications I	3
ADMT2222	Event Planning	2
ADMT2224	Applied Event Management	1
ADMT2236	Administrative Project Management	3
ADMT2300	Office Graphics and Presentations	3
ADMT2600	Trends in Office Technology	3
* COMM1100	Communication and Effective Human Relations	3
or		
COMM1140	Interpersonal Communication	3
COMM1120	Introduction to Public Speaking	3
CPTR1104	Intro to Computer Tech	3
CPTR1106	Microcomputer Databases	3

ENTR2220	Business Ethics/Professionalism	3
MKTG1110	Customer Service	3

* Take three credits from the specified courses.

Administrative Support

Diploma 33 Credits

M W E

The Administrative Support diploma program prepares students to provide a wide range of office tasks for a variety of entry-level positions in the business office setting. Students will develop skills in communications, software applications, office procedures, bookkeeping, filing and document processing to create a positive office environment.

Course #	Course Title	Crds
	MN Transfer Electives	3
	Technical Electives	4
ACCT1012	Principles of Bookkeeping	3
ADMS1116	Business Communications I	3
ADMS1120	Office Procedures	3
ADMS1128	Records/Database Management	3
ADMS1130	Office Software Applications	3
ADMS1200	Keyboarding I/Keyboarding II	4
ADMS1300	Word Processing/Advanced Word Processing	4
ADMS2216	Business Communications II	3

Virtual Office Professional

Certificate 29 Credits

D E

The Virtual Office Professional (VOP) is much like a project manager, office administrator and personal assistant wrapped into one independent proprietor. The VOP works out of his or her own fully-equipped home office. VOPs offer a variety of services to clients depending on their experience, training and market conditions. These services include word processing, presentation and publication development, Internet research, data collection and input and spreadsheet preparation. This certificate is designed to supplement existing work experience or education to help the student become a home-based independent contractor.

Course #	Course Title	Crds
	MN Transfer Electives	3
	Technical Electives (Choose from: ACCT1101, ACCT2211, ACCT2215, ACCT 2216, ACCT2255, ADMS1120, ADMS1128, ADMT2222, ADMT2224, ADMT2900, BUS2206, CPTR1106, ENTR1400, ENTR1800, ENTR2220, HRES1122, HRES1126, HRES1130, HRES1134, INTD1113, INTD1117, MKTG1116, MKTG1200, MKTG1280, MKTG2214)	3
ACCT1124	Spreadsheet Applications	3
ADMS1110	Word Processing	3
ADMT2236	Administrative Project Management	3
ADMT2300	Office Graphics and Presentations	3
ADMT2600	Trends in Office Technology	3
BMGT1112	Business Plan Development	2
CPTR1104	Intro to Computer Tech	3
ENTR1100	Introduction to Entrepreneurship	3

* Take three credits from the specified courses.

Computer

Computer Science

Cisco Networking Certificate	66
Computer Network Security AAS	66
Computer Network Security Certificate	66
Computer Programming AAS	66
Health Information Technology AAS <i>See Health Information and Medical Office Careers</i>	59
Health Information - Technology Specialist Certificate <i>See Health Information and Medical Office Careers</i>	59
IT Systems Support AAS.....	66
IT Systems Support Diploma.....	67
IT Systems Support Certificate	67
Information Technology AAS	67
Information Technology AS.....	67
Information Technology Diploma	67
Management Information Systems AS.....	67
Network Technology Administration AAS.....	68
Network Technology Administration Diploma.....	68
Voice and Video Over Internet Protocol Certificate	68

Computer Graphics and Visualization Careers

Digital Photography and Imaging Certificate.....	68
Graphic Design Technology AAS	68
Graphic Design Technology Certificate.....	69
Web Development AAS.....	69
Web Development Diploma.....	69
Web Development Certificate	69

Computer Science

Cisco Networking

Certificate 12 Credits

DWE

This 12-credit certificate will prepare students to take the Cisco Certified Network Associate (CCNA) certification and also the CompTIA Network+ certification. The coursework includes Cisco semesters 1-4. Skill development covers LAN/WAN networking technology and concepts, networking math, networking media, router configuration, switching, VLANs, routing protocols and WAN links and services. The instructor will evaluate computer skills necessary to enter this certificate program. Students should have good reading and study skills, basic computer literacy and awareness of the Internet. Prior experience with computer hardware, binary math and basic electronics is desired but not required. Background in cabling is beneficial. Upon completion of this certificate the student will be able to take the Cisco CCNA and CompTIA Network+ certification exams offered through VUE or Prometric testing centers.

Course #	Course Title	Crds
CPTR1108	CISCO 1	3
CPTR1118	CISCO 2	3
CPTR2200	CISCO 3	3
CPTR2208	CISCO 4	3

Computer Network Security

AAS 67 Credits

D

This program will prepare students to enter the high-demand field of information technology networking and security. With the increase of viruses, spyware/adware and hacking incidents, companies need professionals skilled in protecting data and equipment from internal and external security threats. Students gain hands-on experience in Local Area Network and Wide Area Network technologies utilizing current hardware and software. Emphasis is on identifying and implementing appropriate security policies and procedures that meet the unique and dynamic needs of information systems in businesses of various types and sizes. Students will use system virtualization products supporting green technology. Because new information security threats continually stimulate demand for workers in this specialized field, job growth is expected to climb at a faster-than-average rate. The computer networking and security skills students acquire in this program help graduates obtain a rewarding career in this highly challenging field.

Course #	Course Title	Crds
COMM1120	MN Transfer Electives	6
CPTR1100	Introduction to Public Speaking	3
CPTR1108	Fund Computer Concepts	1
CPTR1118	CISCO 1	3
CPTR2200	CISCO 2	3
CPTR2208	CISCO 3	3
CPTR2224	CISCO 4	3
CPTR2234	Linux I	3
CPTR2272	Linux II	3
CPTR2282	Network Operating Systems	3
CSEC1102	E-mail Administration	3
CSEC1110	Careers in Information Systems	1
CSEC2202	Fundamentals of IT Security	3
CSEC2204	Introduction to Wireless Networking	3
CSEC2210	Managing Directory Services	3
CSEC2212	Security Breaches and Countermeasures	3
CSEC2218	Web Security	3
CSEC2222	Disaster Recovery	2
CSEC2228	Network Security Design	3
ENGL1101	Network Defense	3
INTD1111	College Writing	3
PSYC1200	Hands-On Programming	3
	General Psychology	3

Computer Network Security

Certificate 12 Credits

DE

This major provides the skills to support and maintain computer network systems in a business environment. Computer skill development covers the hardware and software systems of current computer technology. Networking skills include switching, routing, server operating systems, directory services and security. Application software skills include software selection, customizing, training and support. Many classes are built around specific industry certifications. Students are encouraged to complete the requirements for vendor certification.

Course #	Course Title	Crds
CPTR2236	Network Security	3
CSEC2210	Security Breaches and Countermeasures	3
CSEC2212	Web Security	3
CSEC2228	Network Defense	3

Computer Programming

AAS 70 Credits

ME

This program provides the programming skills needed in computer application development, database management, computer systems and data communications. Students learn to design, write, code, document and implement computer programs for various computer platforms. They learn at least one operating system, one command-level language, one database management system and other high-level programming languages. The program prepares students to design and develop computer software systems as well as design information management systems. It includes the study of languages, software design, information flow and processing. Students study the design of mathematical and simulation models and large-scale programs used for processing and retrieving information.

Course #	Course Title	Crds
COMM1120	MN Transfer Electives	6
CPTR1001	Math/Logical Reasoning Electives (MNTC Goal Area 4)	3
CPTR1106	Technical Electives	10
CPTR1110	Introduction to Public Speaking	3
CPTR1112	Introduction to Programming and Scripting	3
CPTR1115	Microcomputer Databases	3
CPTR1119	Visual Basic Program I	3
CPTR1129	Visual Basic Program II	3
CPTR1138	COBOL Programming	4
CPTR1170	RPG Programming	4
CPTR2000	Information Systems	3
CPTR2230	Web Engineering I	3
CPTR2238	Mobile Application Development	3
CPTR2242	Structured Query Language	3
CPTR2400	Database Integration	3
CSCI1121	Java Programming	3
ENGL1101	Web Integration	3
	Computer Science I	4
	College Writing	3

IT Systems Support

AAS 66 Credits

DE

IT systems support personnel interact with individuals in business, industry, education and government. They provide technical solutions to customer-critical problems related to software applications and relevant hardware. An information technology systems support person may also provide network software and hardware support. This is accomplished through problem analysis using phone service support, direct client service and a variety of electronic means to achieve high-level customer satisfaction and to accomplish the goals of the organization. An information technology systems support person may develop and create technical and procedural documentation and other training materials. They may also plan and conduct actual end-user training sessions. This program prepares students to accomplish these goals through knowledge of installation and maintenance for computer hardware and software, network hardware and software and various peripherals. Students are also trained in customer service and business skills and provided with many opportunities to strengthen their troubleshooting skills. Students in the program have a wide range of employment opportunities including self-employment and employment in the private, education and government sectors.

Course #	Course Title	Crds
COMM1120	Introduction to Public Speaking	3
COMM1130	Small Group Communication	3
COMM1140	Interpersonal Communication	3
CPTR1104	Intro to Computer Tech	3
CPTR1106	Microcomputer Databases	3
CPTR1125	IT Essentials	3
CPTR1130	IT Essentials 2	3
CPTR1138	Information Systems	3
CPTR1142	Network Essentials	3
CPTR1148	Microcomputer Operating System	3
CPTR2236	Network Security	3
CPTR2272	Network Operating Systems	3
CTEC2204	Advanced Technical Support	3
CTEC2240	Technical Support Internship	3
ENGL1101	College Writing	3
ENGL1215	Professional and Technical Writing	3
HUM2236	Technology in the Humanities	3
INTD1111	Hands-On Programming	3

ITSS1100	Information Technology Help Desk	3
ITSS1120	Information Technology Research and Documentation	3
ITSS2100	Supporting End-User Applications	3
PHIL1201	Ethics	3

IT Systems Support Diploma 34 Credits

D

IT systems support personnel interact with individuals in business, industry, education and government by providing technical solutions to customer-critical problems related to software applications and relevant hardware. This is accomplished through problem analysis using phone service support, direct client service and a variety of electronic means to achieve high-level customer satisfaction and to accomplish the goals of the organization.

Course #	Course Title	Crds
	Technical Electives	3
CPTR1104	Intro to Computer Tech	3
CPTR1106	Microcomputer Databases	3
CPTR1125	IT Essentials	3
CPTR1130	IT Essentials 2	3
CPTR1138	Information Systems	3
CPTR1148	Microcomputer Operating System	3
CSEC1102	Careers in Information Systems	1
CTEC2204	Advanced Technical Support	3
ENGL1101	College Writing	3
ITSS1100	Information Technology Help Desk	3
ITSS1120	Information Technology Research and Documentation	3

IT Systems Support Certificate 18 Credits

D E

IT systems support personnel interact with individuals in business, industry, education and government by providing technical solutions to customer-critical problems related to software applications and relevant hardware. This is accomplished through problem analysis using phone service support, direct client service and a variety of electronic means to achieve high-level customer satisfaction and to accomplish the goals of the organization.

Course #	Course Title	Crds
CPTR1104	Intro to Computer Tech	3
CPTR1125	IT Essentials	3
CPTR1130	IT Essentials 2	3
CPTR1138	Information Systems	3
CPTR1142	Network Essentials	3
ITSS1100	Information Technology Help Desk	3

Information Technology AAS 60 Credits

M

This program prepares students to work in information technology. Students learn to select appropriate systems, create necessary solutions, apply existing systems, integrate a variety of systems and administer systems to help people. This career program prepares students to fulfill a variety of roles within the information technology field.

Course #	Course Title	Crds
	Computer Electives	9
	MN Transfer Electives	6
CPTR1001	Introduction to Programming and Scripting	3
CPTR1106	Microcomputer Databases	3
CPTR1108	CISCO 1	3
CPTR1122	Microcomputer Maintenance	3
CPTR1138	Information Systems	3
CPTR1148	Microcomputer Operating System	3
CPTR1170	Web Engineering I	3
CPTR1178	Robotics	3
CPTR2224	Linux I	3
CPTR2236	Network Security	3
CPTR2262	Internet Protocol version 6	3
CPTR2272	Network Operating Systems	3
ENGL1101	College Writing	3
HUM2236	Technology in the Humanities	3
PSYC1200	General Psychology	3

Information Technology

AS 60 Credits

M

The Information Technology AS degree prepares students to continue to work toward a bachelor's degree or enter the workforce. Students learn to use various hardware and software systems to solve problems for people and organizations. Students work with networking technologies, applications, Web technologies and database technologies. Students focus on the selection, application and administration of information technologies. The degree minimizes the number of credits required at selected institutions to complete a bachelor's degree. The degree is an ideal mix of practical experience and general education for a field that is constantly evolving.

Course #	Course Title	Crds
	MN Transfer Electives	21
CPTR1106	Microcomputer Databases	3
CPTR1108	CISCO 1	3
CPTR1122	Microcomputer Maintenance	3
CPTR1138	Information Systems	3
CPTR1148	Microcomputer Operating System	3
CPTR1170	Web Engineering I	3
CPTR2224	Linux I	3
CPTR2236	Network Security	3
CPTR2242	Java Programming	3
CPTR2272	Network Operating Systems	3
ENGL1101	College Writing	3
HUM2236	Technology in the Humanities	3
PSYC1200	General Psychology	3

Information Technology

Diploma 60 Credits

M

The Information Technology diploma prepares students to enter the workforce. Students learn to use various hardware and software systems to solve problems for people and organizations. Students work with networking technologies, applications, Web technologies and database technologies. The focus of this degree is practical preparation for work.

Course #	Course Title	Crds
	Technical Electives	15
CPTR1104	Intro to Computer Tech	3
CPTR1106	Microcomputer Databases	3
CPTR1108	CISCO 1	3
CPTR1122	Microcomputer Maintenance	3
CPTR1138	Information Systems	3
CPTR1148	Microcomputer Operating System	3
CPTR1170	Web Engineering I	3
CPTR2224	Linux I	3
CPTR2236	Network Security	3
CPTR2242	Java Programming	3
CPTR2252	Microcomputer Systems Project	3
CPTR2272	Network Operating Systems	3
ENGL1101	College Writing	3
HUM2236	Technology in the Humanities	3
PSYC1200	General Psychology	3

Management Information Systems

AS 60 Credits

F

The AS in Management Information Systems is a two-year degree designed to prepare students pursuing a career in business in the specialty of computer information management systems. The degree is designed to suit the student who wishes to enter the workforce upon graduation as well as the student who plans to transfer to a four-year college or university. The program offers a balance of general education courses and courses specific to preparing the student for a career in accounting/business.

Course #	Course Title	Crds
	MN Transfer Electives	5-6
ACCT2211	Financial Accounting I	3
ACCT2212	Financial Accounting II	3
ACCT2213	Managerial Accounting	3
BUS1120	Spreadsheet and Database Concepts	3
BUS2202	Mgmt Information Sys	3
COMM1120	Introduction to Public Speaking	3
* CSCI1120	Computer Programming Basic	3
or		
CSCI1205	Network Fundamentals	4
CSCI1121	Computer Science I	4
CSCI1122	Computer Science II	4

ECON2222	Microeconomics.....	3
ENGL1101	College Writing.....	3
* ENGL1205	Writing About Literature.....	3
or		
ENGL1210	Writing About Current Issues.....	3
or		
ENGL1215	Professional and Technical Writing.....	3
MATH1122	Applied Calculus and Linear Algebra.....	3
MATH1213	Introduction to Statistics.....	4
PHIL1201	Ethics.....	3
PSYC1200	General Psychology.....	3
PSYC2224	Social Psychology.....	3

* Take three credits from the specified courses.

Network Technology Administration Diploma 33 Credits

W E

This major provides entry-level skills to support and maintain computer network systems in a business environment. Computer skill development covers the hardware and software systems of current computer technology. Networking skills include an introduction to network components, server and client operating systems and computer security principles and practice. Students use Microsoft Office products including Microsoft Access Database. This program is an excellent opportunity to gain employment or improve skills in the areas of administrative support, office management, telecommunications technician, technology specialist, help desk support and other careers.

Course #	Course Title	Crds
	Technical Electives.....	6
CPTR1104	Intro to Computer Tech.....	3
CPTR1106	Microcomputer Databases.....	3
CPTR1108	CISCO 1.....	3
CPTR1118	CISCO 2.....	3
CPTR1125	IT Essentials.....	3
CPTR1148	Microcomputer Operating System.....	3
CPTR2236	Network Security.....	3
CPTR2272	Network Operating Systems.....	3
SOC1111	Intro to Sociology.....	3

Network Technology Administration AAS 66 Credits

W E

This major provides the skills to support and maintain computer network systems in a business environment. Computer skill development covers the hardware and software systems of current computer technology. Networking skills include switching, routing, server operating systems, directory services and security. Application software skills include software selection, customizing, training and support. Many classes are built around specific industry certifications. Students are encouraged to complete the requirement for vendor certification.

Course #	Course Title	Crds
	MN Transfer Electives.....	6
	Technical Electives.....	3
COMM1120	Introduction to Public Speaking.....	3
CPTR1104	Intro to Computer Tech.....	3
CPTR1106	Microcomputer Databases.....	3
CPTR1108	CISCO 1.....	3
CPTR1110	Visual Basic Program I.....	3
CPTR1118	CISCO 2.....	3
CPTR1125	IT Essentials.....	3
CPTR1148	Microcomputer Operating System.....	3
CPTR2200	CISCO 3.....	3
CPTR2208	CISCO 4.....	3
* CPTR2236	Network Security.....	3
or		
CSEC1110	Fundamentals of IT Security.....	3
CPTR2245	Enterprise Network Technologies.....	3
CPTR2258	Microcomputer System Projects.....	2
CPTR2272	Network Operating Systems.....	3
CPTR2282	E-mail Administration.....	3
CSEC2204	Managing Directory Services.....	3
CVNP2212	Voice Over IP and IP Telephony.....	4
ENGL1101	College Writing.....	3
PHIL1201	Ethics.....	3

* Take three credits from the specified courses.

Voice and Video Over Internet Protocol

Certificate 15 Credits

W

This certificate includes a series of courses specifically chosen to provide training for Telecommunications or Computer Networking students or industry professionals in Voice over Internet Protocol and Video over Internet Protocol. The student will learn to configure, test, install, analyze traffic, troubleshoot and maintain Voice over Internet Protocol, Video over Internet Protocol and converged networks. After completion of the certificate, students can enter into a variety of cutting-edge fields in network communication.

Course #	Course Title	Crds
CVNP2210	Voice, Video and Data Convergence.....	4
CVNP2212	Voice Over IP and IP Telephony.....	4
CVNP2220	Video Over Internet Protocol.....	4
CVNP2222	Voice Video Over IP Systems Project.....	3

Computer Graphics and Visualization Careers

Digital Photography and Imaging

Certificate 18 Credits

M

This program is intended for students with a strong interest in photography and image manipulation. Successful students will have a basic knowledge of photography and must demonstrate an understanding of imaging fundamentals. They will build a strong portfolio of photographic and illustrated images for a wide range of practical business applications and artistic and technical skills. Students will work primarily in the digital realm of photography and imaging.

Course #	Course Title	Crds
CPTR1102	Introduction to Macintosh.....	3
GDTC1126	Digital Photography.....	3
GDTC2203	Electronic Image Manipulation.....	3
GDTC2240	Lighting Techniques.....	2
GDTC2244	Advanced Electronic Imaging.....	3
GDTC2246	Advanced Photography and Imaging.....	4

Graphic Design Technology

AAS 60 Credits

M

Graphic design technology is a highly competitive and rewarding career field for those with a talent and/or interest in the graphic arts. Graphic design technology does not focus on the fine arts of painting and art history, but on the integration of technology with graphic design to create communication materials (stationery, brochures, annual reports, newspaper layout, etc.) for print production. Within two years of training, individuals develop creatively and technically as they learn skills in photography, illustration, design and pre-press production. Students become task-oriented by learning to meet deadlines, problem-solve and work efficiently. Our graduates are expected to be self-motivated and apply the skills they learn in the classroom outside of instruction time to strengthen their abilities. The Graphic Design Technology program prepares students for entry-level positions in the graphic design technology industry.

Course #	Course Title	Crds
	MN Transfer Electives.....	9
COMM1120	Introduction to Public Speaking.....	3
ENGL1101	College Writing.....	3
GDTC1100	Macintosh Production Processes.....	3
GDTC1113	Design and Layout I.....	3
GDTC1115	Design and Layout II.....	3
GDTC1126	Digital Photography.....	3
GDTC1134	Electronic Drawing I.....	3
GDTC1144	Electronic Drawing II.....	3
GDTC1150	Process Printing Theory.....	3
GDTC2203	Electronic Image Manipulation.....	3
GDTC2212	Design and Layout III.....	3
GDTC2214	Integrated Graphic Design.....	3
* GDTC2238	Design Studio.....	3
or		

GDTC2276	Graphic Design Internship.....	3
GDTC2242	Electronic Publishing.....	3
GDTC2244	Advanced Electronic Imaging.....	3
GDTC2258	Graphic Design Professional Practices.....	3
GDTC2278	Digital Preflight.....	3

* Take three credits from the specified courses.

Graphic Design Technology Certificate 30 Credits

M

Graphic design technology is a highly competitive and rewarding career for those with a talent and/or interest in the graphic arts. Graphic design technology does not focus on the fine arts of painting and art history, but on the integration of technology with graphic design to train students to create communication materials (stationery, brochures, annual reports, newspaper layout, etc.) for print production. Within two years of training, individuals develop creatively and technically as they learn skills in photography, illustration, design and pre-press production. Students become task-oriented by learning to meet deadlines, problem-solve and work efficiently. Our graduates are expected to be self-motivated and apply the skills they learn in the classroom outside of instruction time to strengthen their abilities. The Graphic Design Technology program prepares students for entry-level positions in the graphic design technology industry. Students work on their own Macintosh laptops to complete coursework, so there is never a need to wait for an available computer. Owning individual laptops also allows each student to be mobile and work from anywhere at any time. Students begin with foundation-level work that includes learning about Macintosh technology, basic drawing, print process theories, technical computer illustration and basic design theories. They progress to higher levels of design theory and application, advanced illustration, photo manipulation using image editing software and page layout skills in a page layout computer application. Class curriculum consists of lectures, demonstrations, hands-on application, industry tours and lab work. Students are guided in how to behave and work as a professional in our industry. Instructors teach from real-world experience and as a result students are prepared to produce industry-level design work that meets technical criteria for print production, as well as integrate professional expectations of meeting deadlines and being organized. The final result of a student's study is a comprehensive portfolio that showcases the student's technical and design skills. With the student's skills and portfolio, the job market is open to receiving him or her as an efficient graphic design technology employee. The Graphic Design certificate is designed as a "fast track" for students with past work experience in the creative industry and for students who have an advanced degree in a similar area of study, both of whom wish to polish existing skills or add to their skill set in the graphics industry.

Course #	Course Title	Crds
GDTC1113	Design and Layout I.....	3
GDTC1115	Design and Layout II.....	3
GDTC1126	Digital Photography.....	3
GDTC1134	Electronic Drawing I.....	3
GDTC1144	Electronic Drawing II.....	3
GDTC2203	Electronic Image Manipulation.....	3
GDTC2214	Integrated Graphic Design.....	3
GDTC2238	Design Studio.....	3
GDTC2242	Electronic Publishing.....	3
GDTC2258	Graphic Design Professional Practices.....	3

Web Development AAS 63 Credits

D E

The Web Development AAS provides students with the opportunity to use both creative and technical skills. Using current best practices, students will be prepared to create and manage customer-friendly interactive websites for individuals, small businesses and large corporations.

Course #	Course Title	Crds
	MN Transfer Electives.....	9
	Technical Electives.....	6
* COMM1120	Introduction to Public Speaking.....	3
or		
COMM1130	Small Group Communication.....	3
or		
COMM1140	Interpersonal Communication.....	3
ENGL1101	College Writing.....	3
INTD1000	Foundations of Web Development.....	3
INTD1108	HTML.....	3
INTD1111	Hands-On Programming.....	3
INTD1113	Dreamweaver.....	3
INTD1117	Photoshop.....	3
INTD1124	Cascading Style Sheets.....	3
INTD1140	JavaScript.....	3
INTD2210	Interface Design.....	3

INTD2213	Flash.....	3
INTD2226	Web Programming.....	3
INTD2228	Web Projects.....	3
INTD2236	Advanced Web Programming.....	3
INTD2238	Web Portfolio.....	3
INTD2246	PHP.....	3

* Take three credits from the specified courses.

Web Development Diploma 62 Credits

D E

A Web developer facilitates information exchange by coordinating, compiling and converting various media into an Internet standard format to provide accessible information and effective communication for an organization. Graduates of the Web Development program will develop and manage websites on the Internet and corporate Intranets. They will be prepared to create and manage customer-friendly interactive websites for individuals, small businesses and large corporations.

Course #	Course Title	Crds
	MN Transfer Electives.....	9
	Technical Electives.....	9
CSEC1102	Careers in Information Systems.....	1
INTD1108	HTML.....	3
INTD1113	Dreamweaver.....	3
INTD1117	Photoshop.....	3
INTD1124	Cascading Style Sheets.....	3
INTD1130	Electronic Commerce.....	3
INTD1140	JavaScript.....	3
INTD1150	Databases on the Server.....	3
INTD2210	Interface Design.....	3
INTD2213	Flash.....	3
INTD2226	Web Programming.....	3
INTD2228	Web Projects.....	3
INTD2231	Emerging Technologies.....	1
INTD2236	Advanced Web Programming.....	3
INTD2238	Web Portfolio.....	3
INTD2246	PHP.....	3

Web Development Certificate 30 Credits

D E

Web Development provides students with the opportunity to use both creative and technical skills. Using current best practices, students will be prepared to create and manage customer-friendly interactive websites for individuals, small businesses and large corporations.

Course #	Course Title	Crds
	Technical Electives.....	3
INTD1000	Foundations of Web Development.....	3
INTD1108	HTML.....	3
INTD1113	Dreamweaver.....	3
INTD1117	Photoshop.....	3
INTD1124	Cascading Style Sheets.....	3
INTD1130	Electronic Commerce.....	3
* INTD1140	JavaScript.....	3
or		
INTD1111	Hands-On Programming.....	3
INTD2210	Interface Design.....	3
INTD2213	Flash.....	3

* Take three credits from the specified courses.

Construction and Building

Architecture

Architectural Technology AAS.....72

Carpentry

Carpentry AAS.....72

Carpentry Diploma.....72

Carpentry Assisting Certificate.....72

Civil Engineering

Civil Engineering Technology AAS.....73

Construction Supervisor

Construction Management AAS.....73

Electrical Lineworker

Electrical Lineworker Technology AAS.....73

Electrical Lineworker Technology Diploma.....73

Electrical Technology

Construction Electricity Diploma.....74

Construction Electricity -
Industrial Maintenance Diploma.....74

HVAC

HVAC - Heating, Ventilation and
Air Conditioning Diploma.....74

Refrigeration and Air Conditioning Diploma.....74

Plumbing

Plumbing Technology AAS.....75

Plumbing Technology Diploma.....75

Architecture

Architectural Technology

AAS 72 Credits

D

Students completing this program will be prepared to obtain employment with architectural and engineering firms, contractors and a variety of manufacturing and distributing companies related to the construction industry. Computer-aided drafting is an important tool for the construction industry and the design professions and is an important part of the Architectural Technology program. This program teaches students the principles of residential and commercial building technology, as well as the drafting skills to apply them. Students will also be enrolled in general education courses selected to complement their technical education.

Course #	Course Title	Crds
	MN Transfer Electives	9
ARCH1122	Computer Aided Drafting for Architecture	4
ARCH1126	Residential Project I	3
ARCH2220	Specification Writing for Construction.....	3
ARCH2226	Residential Project II	4
ARCH2230	Mechanical and Electrical Integration.....	2
ARCH2232	Civil and Structural Integration	3
ARCH2236	Architectural Presentation	2
ARCH2244	Commercial Projects.....	4
ARCH2248	CADD Alternatives.....	3
ARCH2250	Project Administration.....	2
BLDG1114	Blueprint Reading I	2
CADD1102	Fundamentals of CADD.....	4
CIVL1000	Introduction to Civil Engineering Technology.....	2
COMM1120	Introduction to Public Speaking	3
CONM1108	Principles of Estimating.....	4
CONM1124	Building Systems.....	3
CONM2206	Building Codes.....	2
ENGL1101	College Writing	3
ENGR1100	Project Management.....	1
ENGR1118	Engineering Applications	3
ENGR1126	Engineering Graphics.....	3
ENGR1134	Office Systems and Equipment	3

Carpentry

Carpentry

AAS 67 Credits

M

The Carpentry program prepares the student with skills and knowledge for a career in residential carpentry. The program coursework includes a mix of technical education, general studies, theory and hands-on learning experiences. The student in this program progresses from basic skills to those required of a carpenter. General areas of study include building codes, blueprint reading and sketching, estimating, site layout, concrete, framing, interior and exterior finish, cabinet making and installation and decks. The Carpentry AAS program provides graduates with skills required of a carpenter in a variety of building construction settings common in both rural and metropolitan areas.

Course #	Course Title	Crds
	MN Transfer Electives	3
BLDG1102	Construction Safety.....	1
BLDG1114	Blueprint Reading I	2
BLDG1120	Construction Estimating I.....	2
CARP1102	Prin of Framing	3
CARP1104	Framing I.....	6
CARP1108	Interior Finish I.....	4
CARP1110	Introduction to Cabinet Building.....	3
CARP1112	Exterior Finish I	3
CARP2106	Footings and Foundations	2
CARP2202	Prin of Framing II.....	3
CARP2206	Adv Framing Applications.....	6
CARP2208	Exterior Finish II.....	3
CARP2210	Interior/Exterior Finish Prin.....	3
CARP2212	Interior Finish II.....	4
CARP2220	Carpentry Internship	3
CARP2224	Advanced Cabinets.....	4
COMM1120	Introduction to Public Speaking	3

ENGL1101	College Writing.....	3
PHIL1201	Ethics.....	3
PSYC1200	General Psychology	3

Carpentry

Diploma 60 Credits

M

The Carpentry program prepares the student with skills and knowledge for a career in residential carpentry. The program coursework includes a mix of technical and general education, theory and hands-on learning experiences. The student in this program progresses from basic skills to those required of a carpenter. General areas of study include building codes, blueprint reading and sketching, estimating, site layout, concrete, framing, interior and exterior finish, cabinet making and installation and decks. The Carpentry diploma program provides graduates with skills required of a carpenter in a variety of building construction settings common in both rural and metropolitan areas.

Course #	Course Title	Crds
	MN Transfer Electives	3
BLDG1102	Construction Safety	1
BLDG1114	Blueprint Reading I	2
BLDG1120	Construction Estimating I.....	2
CARP1102	Prin of Framing	3
CARP1104	Framing I.....	6
CARP1108	Interior Finish I.....	4
CARP1110	Introduction to Cabinet Building.....	3
CARP1112	Exterior Finish I	3
CARP2106	Footings and Foundations	2
CARP2202	Prin of Framing II.....	3
CARP2204	Concrete Technology	2
CARP2206	Adv Framing Applications.....	6
CARP2208	Exterior Finish II	3
CARP2210	Interior/Exterior Finish Prin.....	3
CARP2212	Interior Finish II.....	4
CARP2220	Carpentry Internship.....	3
CARP2224	Advanced Cabinets.....	4
MATH1000	Technical Mathematics.....	3

Carpentry Assisting

Certificate 29 Credits

M

The Carpentry Assisting program prepares students with the skills and knowledge for a career in residential carpentry. The program coursework provides a mix of technical education, general studies, theory and hands-on learning experiences. The student in this program progresses from basic skills to those required of a carpenter. General areas of study include building codes, blueprint reading and sketching, estimating, site layout, concrete, framing, interior and exterior finish, cabinet making and installation and decks. The Carpentry certificate program provides graduates with the skills required of a carpenter in a variety of building construction settings common in both rural and metropolitan areas.

Course #	Course Title	Crds
BLDG1114	Blueprint Reading I	2
BLDG1120	Construction Estimating I.....	2
CARP1102	Prin of Framing	3
CARP1104	Framing I.....	6
CARP1108	Interior Finish I.....	4
CARP1110	Introduction to Cabinet Building.....	3
CARP1112	Exterior Finish I	3
CARP2106	Footings and Foundations	2
CARP2220	Carpentry Internship.....	3
HLTH1122	CPR-First Aid.....	1

Civil Engineering

Civil Engineering Technology

AAS 72 Credits

D

Students completing the Civil Engineering Technology program are prepared for employment in the civil engineering field. Civil engineering technicians plan, design, monitor construction and maintain public or private works systems with the collaboration and direction of engineers. They gather preliminary data, plan, budget, survey, design, prepare construction documents and administer contracts to provide safe and convenient facilities including highways, bridges, airports, structures, water treatment and distribution systems and waste water collection and treatment systems. Opportunities are available with state, county and government public works departments, as well as consulting engineering firms. Students will learn graphic communication skills, advanced surveying techniques and a variety of skills related to engineering technologies. Students will also be enrolled in general education classes selected to build a foundation for their technical courses. This AAS degree can prepare students to continue their education in a number of baccalaureate programs at four-year institutions.

Course #	Course Title	Crds
	MN Transfer Electives	12
BLDG1114	Blueprint Reading I	2
CADD1102	Fundamentals of CADD	4
CIVL1000	Introduction to Civil Engineering Technology	3
CIVL1102	Survey I: Fundamentals	2
CIVL1119	Survey II: Land Surveys	3
CIVL1138	CADD II: Plan Layout	3
CIVL2209	Construction Inspection	3
CIVL2210	Road Design	3
CIVL2230	Civil Engineering Technology Internship	3
CIVL2234	Utility Design	3
CIVL2238	CADD III: Project Design	3
CIVL2240	Introduction to Geographic Information Systems	3
CIVL 2242	Survey III: Global Positioning System Technology and Equipment	3
CIVL2246	Introduction to Hydrology	3
COMM1120	Introduction to Public Speaking	3
CONM2204	Materials Testing	3
ENGL1101	College Writing	3
ENGR1100	Project Management	1
ENGR1118	Engineering Applications	3
ENGR1126	Engineering Graphics	3
ENGL1134	Office Systems and Equipment	3
POLS1130	State and Local Government	3

Construction Supervisor

Construction Management

AAS 72 Credits

M

Construction and construction-related activities comprise the largest segment of our nation's Gross National Product. The construction industry makes an important contribution to society and represents progress and the future. This AAS program represents a combination of skills in construction, architecture, business and management areas. The skills learned in these areas can enable a graduate to pursue a variety of careers in construction: safety, supervision, management, estimating, inspection or testing.

Course #	Course Title	Crds
	MN Transfer Electives	12
* ACCT1012	Principles of Bookkeeping	3
or		
ACCT1101	Payroll	3
or		
ACCT1120	Business Law	3
BIOL1107	Environmental Science Issues	3
BLDG1114	Blueprint Reading I	2
* BUS2204	Principles of Management	3
or		
HRES2224	Employee/Labor Relations	3
CADD1102	Fundamentals of CADD	4
CONM1102	Site/Building Layout	2

CONM1108	Principles of Estimating	4
CONM1124	Building Systems	3
CONM2204	Materials Testing	3
CONM2206	Building Codes	2
CONM2208	Construction Bidding	2
CONM2210	Construction Scheduling	3
CONM2212	Site Management	3
CONM2214	Safety Management	3
CONM2216	Computer Estimating	2
CONM2222	Construction Mgmt Internship	2
CPTR1104	Intro to Computer Tech	3
ENGL1101	College Writing	3
ENGR1100	Project Management	1
ENGR1118	Engineering Applications	3
ENGR1126	Engineering Graphics	3
PSCI1130	State and Local Government	3

* Take three credits from the specified courses.

Electrical Lineworker

Electrical Lineworker Technology

AAS 72 Credits

W

The Electrical Line Worker program provides trained personnel for the power industry. Coursework provides both theory and practical hands-on experience in all phases of power line construction and maintenance. Coursework includes electrical math, national electrical safety codes, construction of overhead and underground distribution systems, conductor applications, over-voltage and over-current protection, guying and pole grounding. The 90-acre training field located near the campus provides a site for hands-on experience in pole setting. The successful graduate is eligible for employment in rural electric and municipal utilities or with private contractors.

Course #	Course Title	Crds
	MN Transfer Electives	6
BIOL1107	Environmental Science Issues	3
CONE1102	Introduction to Electric Circuit Theory	4
ELWT1102	Electrical Line Worker Theory I	4
ELWT1104	Electrical Structure Installation	5
ELWT1106	Climbing Electrical Structure	4
ELWT1108	Construction of Overhead Structures	3
ELWT1110	Line Worker Theory II	4
ELWT1112	Transformers	2
ELWT1114	Line Construction Reports	2
ELWT1116	Pole Top and Bucket Rescue	1
ELWT1118	Field Construction I	3
ELWT1120	Field Construction II	3
* ELWT1122	Field Construction III	3
or		
ELWT1132	Electrical Line Worker Internship	3
ENGL1101	College Writing	3
ENST2001	Fundamentals of Utilities	4
ENST2002	Energy Safety Principles	1
ENST2222	Blueprint Reading for Energy Industry	2
ENST2223	GPS Mapping	2
MATH1114	College Algebra	4
PHYS1105	Fundamental Concepts in Physics	3
PSYC1101	Human Interaction	3
SUPL1118	Lead and Facilitate Teams	3

* Take three credits from the specified courses.

Electrical Lineworker Technology

Diploma 36 Credits

W B

The Electrical Lineworker program provides trained personnel for the power industry. Coursework provides both theory and practical hands-on experience in all phases of power line construction and maintenance. Coursework includes electrical math, national electrical safety codes, construction of overhead and underground distribution systems, conductor applications, over-voltage and over-current protection, guying and pole grounding. The 90-acre training field located near the campus provides a site for hands-

on experience in pole setting. The successful graduate is eligible for employment in rural electric and municipal utilities or with private contractors.

Course #	Course Title	Crds
	MN Transfer Electives	3
ELWT1102	Electrical Line Worker Theory I.....	4
ELWT1104	Electrical Structure Installation.....	5
ELWT1106	Climbing Electrical Structure.....	4
ELWT1108	Construction of Overhead Structures	3
ELWT1110	Line Worker Theory II.....	4
ELWT1112	Transformers.....	2
ELWT1114	Line Construction Reports.....	2
ELWT1116	Pole Top and Bucket Rescue.....	1
ELWT1118	Field Construction I.....	3
ELWT1120	Field Construction II.....	3
* ELWT1122	Field Construction III.....	3
or		
ELWT1130	Electrical Line Worker Internship	2

* Take three credits from the specified courses.

Electrical Technology

Construction Electricity

Diploma 74 Credits
M W

This diploma program is designed to prepare the student to build, install, maintain and repair electrical systems that provide heat, light or power for residential, commercial and industrial structures. Courses provide students with a mix of theory and hands-on application in classroom and lab settings and at job sites. This comprehensive program includes maintenance of electrical equipment, wiring methods, blueprint reading, material selection, programmable controllers and National Electric Code.

Course #	Course Title	Crds
	Construction Electricity Electives	5
	MN Transfer Electives	6
CONE1100	Electrical Safety	1
CONE1102	Introduction to Electric Circuit Theory.....	4
CONE1104	Introduction to National Electrical Code.....	2
CONE1107	Introduction to Residential Wiring	3
CONE1108	Electrical Circuit Theory.....	4
CONE1110	Electric Motors and Generators.....	4
CONE1112	Residential Wiring.....	3
CONE1114	National Electrical Code.....	2
CONE1116	Conduit/Tool Applications	2
CONE1118	Electrical Services.....	3
CONE1122	Introduction to Electrical Materials.....	1
CONE1124	Introduction to Electrical Blueprint Reading.....	2
CONE1130	Electrical Blueprints	3
CONE2202	Heating/Cooling Controls.....	3
CONE2205	Introduction to Commercial Wiring.....	3
CONE2206	Introduction to Motor Control Applications.....	3
CONE2208	Programmable Logic Controllers.....	2
CONE2211	Electronic Motor Control.....	3
CONE2212	Commercial Wiring.....	3
CONE2214	Industrial Wiring.....	2
CONE2216	Motor Control Application	3
CONE2225	Transformers.....	2
CONE2248	Code Applications	2
MATH1000	Technical Mathematics	3

Construction Electricity - Industrial Maintenance Emphasis

Diploma 72 Credits
W

The Construction Electricity diploma is a dual-track program which provides students with 2,000 hours toward their Minnesota Class A Journeyman while providing students the training necessary to be successful as an industrial electrician. Along with the construction electrician courses, students study hydraulics and pneumatics, industrial motor maintenance, advanced programmable logic controllers and advanced electronics. These courses provide students with a mix of theory and hands-on lab. This comprehen-

sive program includes reading schematics and installing hydraulic/pneumatic systems, PLCs and industrial AC/DC drives. Students will get hands-on experience tearing down large industrial AC and DC motors, testing motor windings, proper bearing installation and maintenance, motor alignment and predictive maintenance techniques such as vibration analysis, infrared thermography and failure analysis.

Course #	Course Title	Crds
	Construction Electricity Electives	4
	MN Transfer Electives	6
CONE1100	Electrical Safety	1
CONE1102	Introduction to Electric Circuit Theory.....	4
CONE1104	Introduction to National Electrical Code.....	2
CONE1108	Electrical Circuit Theory.....	4
CONE1110	Electric Motors and Generators	4
CONE1114	National Electrical Code	2
CONE1116	Conduit/Tool Applications	2
CONE1122	Introduction to Electrical Materials.....	1
CONE1124	Introduction to Electrical Blueprint Reading	2
CONE1130	Electrical Blueprints	3
CONE2202	Heating/Cooling Controls.....	3
CONE2205	Introduction to Commercial Wiring	3
CONE2206	Introduction to Motor Control Applications.....	3
CONE2208	Programmable Logic Controllers.....	2
CONE2211	Electronic Motor Control.....	3
CONE2212	Commercial Wiring.....	3
CONE2214	Industrial Wiring.....	2
CONE2216	Motor Control Application	3
CONE2222	Advanced Programmable Logic Controllers.....	3
CONE2225	Transformers.....	2
CONE2228	Electrical Troubleshooting.....	1
CONE2234	Hydraulics/Pneumatics.....	2
CONE2236	Industrial Motor Maintenance	2
CONE2246	Advanced Electronics.....	2
MATH1000	Technical Mathematics.....	3

HVAC

HVAC - Heating, Ventilation and Air Conditioning

Diploma 36 Credits
W

The Heating, Ventilation and Air Conditioning graduate will be able to design residential and light commercial central heating and air conditioning systems according to load requirements. Graduates will be able to install, troubleshoot and repair residential and light commercial heating and air conditioning equipment; design, fabricate and install forced air and hot water distribution systems using sheet metal, duct board, copper tubing, Wirsbo tubing, Pex tubing, PVC and other accepted materials; install a wide range of oil and gas boilers and forced-air furnaces; and design, fabricate and install home and light commercial ventilation systems, including both exhaust and fresh air make-up exchangers.

Course #	Course Title	Crds
HVAC1102	Duct Fitting Construction.....	3
HVAC1103	Electricity for HVAC	4
HVAC1104	Heating, Ventilating and Air Conditioning Electrical Controls.....	3
HVAC1128	Heating, Ventilating and Air Conditioning Design and Installation	5
HVAC1224	Gas and Oil Heating	3
HVAC2202	Air Handling.....	3
HVAC2205	Advanced Duct Fitting Construction.....	2
HVAC2212	Hot Water Heating.....	3
HVAC2220	Heat Pump Theory.....	1
HVAC2290	Heating, Ventilating and Air Conditioning Internship.....	1
MATH1000	Technical Mathematics	3
REFR1110	Refrig, A/C and Htg Prin	3
REFR1112	Refrig, A/C and Heating Lab	3

Refrigeration and Air Conditioning

Diploma 67 Credits
M

Students in this program work with both commercial and residential heating, ventilating, air conditioning and refrigeration equipment. This comprehensive background, together with shop skills in layout, estimating, installation and repair, qualifies graduates to enter one of the world's fastest-growing industries. Employment exists with manufactur-

ers, engineers, contractors and specialized service firms. Students learn to research and develop applications of more efficient, cost-effective equipment and procedures. Many new, exciting and energy-saving innovations are being developed. Technicians train in this industry to provide the technology to control the environment in any enclosed area, from a home to a space capsule. This includes controlling indoor air quality by utilizing mechanical means to remove pollutants and maintain desired humidity and temperature settings. The knowledge to design, install and maintain these special environments for people, products and perishables is essential today.

Course #	Course Title	Crds
COMM1120	Introduction to Public Speaking	3
MATH1000	Technical Mathematics	3
REFR1102	Refrigeration Principles	3
REFR1104	Refrigeration Lab	4
REFR1106	Electrical Fundamentals	3
REFR1108	Electrical Lab	3
REFR1110	Refrig, A/C and Htg Prin	3
REFR1112	Refrig, A/C and Heating Lab	3
REFR1113	Refrigeration Electrical Circuits Fundamentals	3
REFR1115	Refrigeration Electrical Circuits Lab	3
REFR1140	Gas Heating	2
REFR2202	Commercial Refrigeration and Air Conditioning Principles	4
REFR2204	Commercial Refrigeration and Air Conditioning Lab	3
REFR2206	Commercial Electrical Principles	3
REFR2208	Commercial Electrical Lab	3
REFR2211	Advanced Refrigeration Principles	4
REFR2212	Advanced Refrigeration Lab	3
REFR2213	Advanced Electrical Theory	3
REFR2215	Advanced Electrical Applications	3
* REFR2216	Refrigeration Internship	3
or		
REFR1130	Refrigeration Management	2
REFR2220	HVAC Troubleshooting	3
SOC1111	Intro to Sociology	3

* Take three credits from the specified courses.

Plumbing

Plumbing Technology

AAS 60 Credits

M

The Plumbing Technology program prepares the student to begin a career in plumbing and pipe fitting. Coursework provides the student with technical understanding and skills development and integrates theory with practical experience. Through the program, the student develops skills in piping techniques and procedures, plumbing and piping systems, residential and commercial system installations, blueprint reading and isometric interpretation. The successful graduate is eligible for 800 hours on his or her apprenticeship card and employment at an advanced apprenticeship level in a variety of businesses found in rural and metropolitan areas.

Course #	Course Title	Crds
	MN Transfer Electives	15
	Plumbing Course Electives	9
	Technical Electives	14
PLBG1102	Piping Trades and Job Safety	2
PLBG1104	Building Sewers and Drainage Systems	3
PLBG1108	Plumbing/Piping Drawings	2
PLBG1110	Copper Pipe Procedures	2
PLBG1112	Plastic Pipe Procedures	2
PLBG1114	Steel Pipe Procedures	2
PLBG1116	Plumbing Systems	3
PLBG1120	Plumbing Installation	3
* PLBG1140	Plumbing Service Learning Project	3
or		
PLBG1124	Plumbing Field Internship	3

Plumbing Technology

Diploma 36 Credits

M

This program prepares students to begin a career in plumbing and pipe fitting. Coursework provides the student with technical understanding and skills development and

integrates theory with practical experience. Through the program, the student develops skills in piping techniques and procedures, plumbing and piping systems, residential and commercial system installations, blueprint reading and isometric interpretation. The successful graduate is eligible for 800 hours on his or her apprenticeship card and employment at an advanced apprenticeship level in a variety of businesses found in rural and metropolitan areas.

Course #	Course Title	Crds
	MN Transfer Electives	3
	Plumbing Electives	9
	Technical Electives	2
PLBG1102	Piping Trades and Job Safety	2
PLBG1104	Building Sewers and Drainage Systems	3
PLBG1108	Plumbing/Piping Drawings	2
PLBG1110	Copper Pipe Procedures	2
PLBG1112	Plastic Pipe Procedures	2
PLBG1114	Steel Pipe Procedures	2
PLBG1116	Plumbing Systems	3
PLBG1120	Plumbing Installation	3
* PLBG1124	Plumbing Field Internship	3
or		
PLBG1140	Plumbing Service Learning Project	3

* Take three credits from the specified courses.

Manufacturing and Technology

Drafting

Mechanical Drafting and Design AAS.....78

Mechanical Drafting and Design Diploma.....78

Manufacturing

Industrial Maintenance Diploma.....78

*Pending MnSCU approval

Drafting

Mechanical Drafting and Design

Diploma 60 Credits

M

Design technicians use a graphic language to communicate ideas or products that must be processed, manufactured or constructed. Students draw layouts of assembly processes and make freehand sketches and rough layouts of machine equipment and parts. They may study costs as they relate to the usefulness of designs and translate the ideas of the engineer into the working plans used in making or installing a product. They convey the engineer's ideas and design to the craftworker who will make the products. Technicians work under the immediate supervision of a mechanical engineer. They perform operational tasks of a technical nature following well-defined standards using a CAD system and electronic mail.

Course #	Course Title	Crds
	MN Transfer Electives	9
CADD1102	Fundamentals of CADD	4
CADD1114	Intro to Solids and Parametric Modeling	4
CADD2214	Advanced Solids and Parametric Modeling	4
CPTR1104	Intro to Computer Tech	3
ENGR1118	Engineering Applications	3
MCDD1102	Mech Engineering Drawing I	3
MCDD1106	Mech Engineering Drawing II	4
MCDD1114	Manufacturing Process	2
MCDD1120	Drafting Practices	2
MCDD1124	Mechanical Drafting Applications I	3
MCDD2122	Geometric Dimensioning and Tolerancing	3
MCDD2204	Mech Engineering Drawing III	4
MCDD2230	Rapid Prototyping	2
MCDD2246	Tool Design	3
MCDD2248	CNC Application	3
MCDD2252	Mechanical Drafting Applications II	4

Mechanical Drafting and Design

AAS 72 Credits

M

Design technicians use a graphic language to communicate ideas or products that must be processed, manufactured or constructed. Students draw layouts of assembly processes and make freehand sketches and rough layouts of machine equipment and parts. They may study costs as they relate to the usefulness of designs and translate the ideas of the engineer into the working plans used in making or installing a product. They convey the engineer's ideas and design to the craftworker who will make the products. Technicians work under the immediate supervision of a mechanical engineer. They perform operational tasks of a technical nature following well-defined standards using a CAD system and electronic mail.

Course #	Course Title	Crds
	MN Transfer Electives	12
CADD1102	Fundamentals of CADD	4
CADD1114	Intro to Solids and Parametric Modeling	4
CADD2214	Advanced Solids and Parametric Modeling	4
CPTR1104	Intro to Computer Tech	3
ECON2210	Macroeconomics	3
ENGL1101	College Writing	3
ENGR1118	Engineering Applications	3
MCDD1102	Mech Engineering Drawing I	3
MCDD1106	Mech Engineering Drawing II	4
MCDD1114	Manufacturing Process	2
MCDD1120	Drafting Practices	2
MCDD1124	Mechanical Drafting Applications I	3
MCDD2122	Geometric Dimensioning and Tolerancing	3
MCDD2204	Mech Engineering Drawing III	4
MCDD2230	Rapid Prototyping	2
MCDD2246	Tool Design	3
MCDD2248	CNC Application	3
MCDD2252	Mechanical Drafting Applications II	4
SOC1111	Intro to Sociology	3

Manufacturing

Industrial Maintenance - Pending MnSCU Approval

Diploma 31 Credits

M CTS

Modern American manufacturing and industry have become highly complicated, high-speed, high-pressure environments requiring skilled workers who have knowledge beyond the rigid confines of individual trade-based maintenance workers of the past. This program prepares students with a foundation in the theory, application and principles of today's manufacturing and industrial environment. This includes the proper installation, maintenance and troubleshooting of mechanical, electrical, electronic, electromechanical and fluid power equipment. In addition, the Industrial Maintenance program introduces students to computerized maintenance management systems, current and emerging predictive/preventive maintenance technologies, and root cause failure analysis. This program emphasizes hands-on learning with realistic labs and equipment.

Course #	Course Title	Crds
	Technical Electives.....	3
COMM1130	Small Group Communication.....	3
CONE1100	Electrical Safety	1
CONE1110	Electric Motors and Generators	4
CONE1170	Predictive Maintenance Technology	2
CONE2208	Programmable Logic Controllers	2
CONE2236	Industrial Motor Maintenance	2
CPTR1100	Fund Computer Concepts	1
IMMA1110	Intro Power and Mechanical Systems	3
IMMA1112	Mechanical Blueprint Reading	2
METC2208	Basic Electricity and Electronics	3
METC2222	Fluid Power Systems.....	3
TRNS1118	Welding I	2

Nursing and Health Service

Dental

Dental Assisting AAS.....	82
Dental Assisting Diploma.....	82
Dental Hygiene AAS.....	82

Health Information Technology

Health Information Technology AAS <i>See Health Information and Medical Office Careers</i>	59
Health Information - Technology Specialist Certificate <i>See Health Information and Medical Office Careers</i>	59

Massage Therapy

Massage Therapy Diploma.....	82
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Medical Laboratory Technician

Medical Laboratory Technology AS.....	83
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Nursing

Nursing - Generic Option AS.....	83
Nursing - Mobility Option AS.....	83
Practical Nursing AAS.....	83
Practical Nursing Diploma.....	84

Pharmacy

Pharmacy Technology AAS.....	84
Pharmacy Technology Diploma.....	84

Phlebotomy

Phlebotomy Technician Certificate.....	84
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Radiography

Radiologic Technology AAS.....	85
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Dental

Dental Assisting

AAS 63 Credits

M

The Dental Assisting program provides the knowledge necessary for the dental assistant to assist in performing general clinical assisting and support functions, intraoral clinical procedures, business office procedures and laboratory tasks. The curriculum includes content in general studies; biomedical, dental and clinical sciences; clinical practice; and additional intraoral clinical functions. Certain biomedical and dental science courses offered in the curriculum are common to both Dental Assisting and Dental Hygiene majors. Graduates are eligible to write the Dental Assisting National Board Certification Exam and the Minnesota State Board of Dentistry Registration Exam.

Course #	Course Title	Crds
BIOL2202	Principles of Nutrition.....	3
BIOL2260	Human Anatomy and Physiology I.....	3
BIOL2262	Human Anatomy and Physiology II.....	3
BIOL2267	Medical Microbiology.....	3
CHEM1100	Fund Concepts Chemistry.....	3
DENT1100	Biomaterials.....	3
DENT1102	Dental Anatomy.....	2
DENT1103	Introduction for Dental Health Care Providers.....	2
DENT1104	Dental Health Care Providers II.....	1
DENT1106	Dental Radiology Lecture.....	3
DENT1122	Dental Ethics and Jurisprudence.....	1
DNAS1103	Clinical Assisting I.....	6
DNAS1105	Clinical Assisting II.....	5
DNAS1106	Biodental Science.....	3
DNAS1114	Dental Prac Management.....	2
DNAS1119	Advanced Functions.....	5
DNAS1144	Clinical Affiliations.....	6
DNAS1210	Radiology Lab.....	1
DNAS1212	Radiology Lab II.....	1
DNAS1215	Dental Specialties.....	1
ENGL1101	College Writing.....	3
PSYC1200	General Psychology.....	3

Dental Assisting

Diploma 48 Credits

M

The Dental Assisting program provides the knowledge necessary for the dental assistant to assist in performing general clinical assisting and support functions, intraoral clinical procedures, business office procedures and laboratory tasks. The curriculum includes content in general studies; biomedical, dental and clinical sciences; clinical practice; and additional intraoral clinical functions. Certain biomedical and dental science courses offered in the curriculum are common to both Dental Assisting and Dental Hygiene majors. Graduates are eligible to write the Dental Assisting National Board Certification Exam and the Minnesota State Board of Dentistry Registration Exam.

Course #	Course Title	Crds
BIOL2260	Human Anatomy and Physiology I.....	3
DENT1100	Biomaterials.....	3
DENT1102	Dental Anatomy.....	2
DENT1103	Introduction for Dental Health Care Providers.....	2
DENT1104	Dental Health Care Providers II.....	1
DENT1106	Dental Radiology Lecture.....	3
DENT1122	Dental Ethics and Jurisprudence.....	1
DNAS1103	Clinical Assisting I.....	6
DNAS1105	Clinical Assisting II.....	5
DNAS1106	Biodental Science.....	3
DNAS1114	Dental Prac Management.....	2
DNAS1119	Advanced Functions.....	5
DNAS1144	Clinical Affiliations.....	6
DNAS1210	Radiology Lab.....	1
DNAS1212	Radiology Lab II.....	1
DNAS1215	Dental Specialties.....	1
ENGL1101	College Writing.....	3

Dental Hygiene

AAS 88 Credits

M

M State's Dental Hygiene program provides knowledge and skills to perform critical dental services that detect, prevent and treat diseases of the mouth while working as part of a dental team. Students who complete the program will leave with the skills to provide current, comprehensive dental hygiene services and may find employment in a variety of settings, such as in private dental offices, schools, hospitals, clinics, public health agencies and more. Students interested in an advanced degree in dental hygiene or a related field have a number of transfer options to four-year colleges and universities.

Course #	Course Title	Crds
BIOL2202	Principles of Nutrition.....	3
BIOL2260	Human Anatomy and Physiology I.....	3
BIOL2262	Human Anatomy and Physiology II.....	3
BIOL2267	Medical Microbiology.....	3
CHEM1100	Fund Concepts Chemistry.....	3
DENT1100	Biomaterials.....	3
DENT1102	Dental Anatomy.....	2
DENT1103	Introduction for Dental Health Care Providers.....	2
DENT1104	Dental Health Care Providers II.....	1
DENT1106	Dental Radiology Lecture.....	3
DENT1122	Dental Ethics and Jurisprudence.....	1
DNHY1104	Dental Anatomy Lab.....	1
DNHY1106	Head and Neck Anatomy.....	2
DNHY1108	Oral Histology and Embryology.....	2
DNHY1109	Radiology Lab.....	2
DNHY1110	Principles I.....	2
DNHY1112	Dental Hygiene Practice I.....	3
DNHY1118	Oral Pathology.....	2
DNHY1119	Dental Hygiene Principles II.....	4
DNHY1123	Dental Hygiene Practice II.....	5
DNHY1124	Pain Control Lab.....	2
DNHY1130	Dent Hygiene Prin III.....	1
DNHY1132	Dent Hygiene Prac III.....	1
DNHY1136	Dental Pharmacology.....	2
DNHY2210	Dent Hygiene Prin IV.....	2
DNHY2213	Dent Hygiene Prac IV.....	6
DNHY2219	Periodontology.....	2
DNHY2220	Dent Hygiene Prin V.....	1
DNHY2223	Dent Hygiene Prac V.....	6
DNHY2226	Community Dental Hygiene.....	4
DNHY2240	Clinical Affiliation I.....	1
DNHY2246	Clinical Affiliation II.....	1
ENGL1101	College Writing.....	3
PSYC1200	General Psychology.....	3
SOC1111	Intro to Sociology.....	3

Massage Therapy

Massage Therapy

Diploma 34 Credits

W

Massage therapists specialize in professional massage treatments designed to support the health and well-being of clients. Skillful massage also assists clients in recovery from physical ailments and reduces the negative effects of stress. Massage therapy students learn the fundamental techniques needed to perform effective massage treatments, as well as the theory behind delivering professional massage.

Course #	Course Title	Crds
BIOL2260	Human Anatomy and Physiology I.....	3
BIOL2261	Human Anatomy and Physiology I Lab.....	1
BIOL2262	Human Anatomy and Physiology II.....	3
BIOL2263	Human Anatomy and Physiology II Lab.....	1
HLTH1100	Intro to Nutrition.....	2
THPY1110	Massage Techniques and Ethics.....	3
THPY1118	Kinesiology.....	3
THPY1123	Integrative Massage.....	2
THPY1130	Advanced Massage.....	2
THPY1135	Deep Tissue Massage.....	2
THPY1142	Practical Skills Clinic.....	3
THPY1146	Certification Preparation.....	2
THPY1148	Sports Massage and Hydrotherapy.....	2
THPY1150	Business Development.....	2
THPY1156	Massage Pathophysiology.....	3

Medical Laboratory Technician

Medical Laboratory Technology

AS 60 Credits

F

In cooperation with affiliate hospitals, the college offers a two-year program for training medical laboratory technicians. The curriculum includes three semesters of general education, science and medical laboratory technician courses and 20 weeks in a clinical experience at an affiliate hospital laboratory. Upon completion of the program, students are prepared for the MLT National Board of Registry certification exam and employment in hospitals, clinics, commercial labs, blood donor facilities, instrument sales and education and research facilities. Graduates may articulate to a four-year institution to receive a Bachelor of Science degree in medical laboratory science.

Course #	Course Title	Crds
	Ethical & Civic Responsibility Electives (MNTC Goal Area 9)	3
	MN Transfer Electives	6
BIOL1125	Basic Immunology	2
BIOL2260	Human Anatomy and Physiology I	3
BIOL2261	Human Anatomy and Physiology I Lab	1
BIOL2262	Human Anatomy and Physiology II	3
BIOL2263	Human Anatomy and Physiology II Lab	1
BIOL2265	Diagnostic Microbiology	4
CHEM1100	Fund Concepts Chemistry	3
CHEM1105	Medical Chemistry	3
ENGL1101	College Writing	3
ENGL1215	Professional and Technical Writing	3
MLT1110	Prin/Proc Phlebotomy	2
MLT1113	Basic Laboratory Techniques I	1
MLT1114	Basic Laboratory Techniques II	1
MLT2217	Clinical Hematology	3
MLT2218	Clinical Urinalysis and Phlebotomy	1
MLT2220	Clinical Blood Bank	2
MLT2221	Clinical Microbiology	3
MLT2222	Clinical Chemistry and Special Chemistry	2
MLT2230	Clinical Applications	1
ZOO1122	Hematology and Coagulation	4
ZOO1123	Immunohematology	3
ZOO1126	Urinalysis and Body Fluids	2

Nursing

Nursing - Generic Option

AS 64 Credits

D F W

The Associate Degree Nursing program is designed to prepare registered nurses to deliver nursing care in a variety of settings. The graduating nurse will be able to provide nursing care in hospitals, long-term care centers, clinics and community health and other health-related facilities. Upon completion of the nursing program, an Associate of Science degree is awarded by the college. Nursing graduates may apply to take the National Council Licensing Exam-RN (NCLEX-RN) following graduation. The Fergus Falls, Detroit Lakes and Wadena campuses are offering the two-year generic program. This program is designed for students with no previous nursing experience. Individuals entering the program must annually complete a background check required by the Minnesota Human Services licensing division.

Course #	Course Title	Crds
	MN Transfer Electives	3
BIOL2202	Principles of Nutrition	3
BIOL2260	Human Anatomy and Physiology I	3
BIOL2261	Human Anatomy and Physiology I Lab	1
BIOL2262	Human Anatomy and Physiology II	3
BIOL2263	Human Anatomy and Physiology II Lab	1
BIOL2267	Medical Microbiology	3
BIOL2268	Medical Microbiology Lab	1
CHEM1100	Fund Concepts Chemistry	3
ENGL1101	College Writing	3
NURS1400	Introduction to Professional Nursing	2
NURS1406	Nursing Fundamentals I	3
NURS1415	Nursing Clinical I	2
NURS1416	Nursing Fundamentals II	4
NURS1426	Reproductive Health	2
NURS2426	Reproductive Disorders	2

NURS2437	Nursing Clinical II	4
NURS2438	Restorative Nursing I	4
NURS2447	Nursing Clinical III	4
NURS2448	Restorative Nursing II	3
NURS2455	Advanced Intravenous Therapy	1
NURS2464	Nursing Leadership	1
NURS2466	Mental Health Nursing	2
PSYC2222	Developmental Psychology	3
SOC1111	Intro to Sociology	3

Nursing - Mobility Option

AS 32 Credits

D F M W

The LPN to Associate Degree RN advanced standing option is designed for licensed practical nurses seeking to become registered nurses. This option is offered on all four M State campuses. Accepted students take a two-credit Role Transition course in the semester prior to the start of their program and then join the Generic Associate Degree nursing students in the second year of the nursing program. The Associate Degree Nursing Program is designed to prepare registered nurses to deliver nursing care in hospitals, long-term care facilities. The graduating nurse will be able to provide nursing care in the hospital, long-term care facilities, clinics, community health and other health-related facilities. Upon completion of the nursing program, an Associate of Science degree is awarded by the college. Nursing graduates may apply to take the National Council Licensing Exam-RN (NCLEX-RN) following graduation. Individuals entering the program must complete an annual background check required by the Minnesota Human Services licensing division.

Course #	Course Title	Crds
	MN Transfer Electives	3
BIOL2202	Principles of Nutrition	3
NURS2410	Role Transition	2
NURS2426	Reproductive Disorders	2
NURS2437	Nursing Clinical II	4
NURS2438	Restorative Nursing I	4
NURS2447	Nursing Clinical III	4
NURS2448	Restorative Nursing II	3
NURS2455	Advanced Intravenous Therapy	1
NURS2464	Nursing Leadership	1
NURS2466	Mental Health Nursing	2
SOC1111	Intro to Sociology	3

Practical Nursing

AAS 62 Credits

D F M W

The Practical Nursing program prepares the student to practice within the scope of practical nursing under the supervision of a registered nurse. The student is taught to use the nursing process at the practical nurse level in the maintenance of health and prevention of illness, the observation and nursing care of persons experiencing changes in health status, and administration of prescribed medication and treatments. The student will receive supervised learning experience in caring for individuals in a variety of health care settings such as hospitals, long-term care facilities and physician clinic settings. M State offers an Associate in Applied Science degree in practical nursing on all four campuses. Students may choose to complete the diploma in practical nursing track on the Detroit Lakes, Fergus Falls and Wadena campuses. After successful completion of either track, graduates are eligible to apply to take the National Council Licensure Examination for the Practical Nurse. The Minnesota Board of Nursing has officially approved the Practical Nursing program on all four campuses of M State.

Course #	Course Title	Crds
	MN Transfer Electives	12
BIOL2260	Human Anatomy and Physiology I	3
BIOL2261	Human Anatomy and Physiology I Lab	1
BIOL2262	Human Anatomy and Physiology II	3
BIOL2263	Human Anatomy and Physiology II Lab	1
ENGL1101	College Writing	3
PNSG1200	Concepts of Nursing	2
PNSG1205	Nursing Pharmacology	3
PNSG1207	Health Promotion I	5
PNSG1209	Maternal Child Health	3
PNSG1216	Practical Nursing Clinical I	5
PNSG1217	Health Promotion II	4
PNSG1221	Psychosocial Nursing	2
PNSG1223	Health Promotion III	4
PNSG1226	Practical Nursing Clinical II	4
PNSG1232	Principles of Intravenous Therapy	1
PNSG1234	Nursing Roles	1
PNSG1236	Practical Nursing Practicum	2
PSYC2222	Developmental Psychology	3

Practical Nursing

Diploma 50 Credits

D F W

The Practical Nursing program prepares the student to practice within the scope of practical nursing under the supervision of a registered nurse. The student is taught to use the nursing process at the practical nurse level in the maintenance of health and prevention of illness, the observation and nursing care of persons experiencing changes in health status and the administration of prescribed medication and treatments. The student will receive supervised learning experience in caring for individuals in a variety of health care settings such as hospitals, long-term care facilities and physician clinic settings. M State offers an Associate in Applied Science degree in practical nursing on all four campuses. Students may choose to complete the diploma in practical nursing track on the Detroit Lakes, Fergus Falls and Wadena campuses. After successful completion of either track, graduates are eligible to apply to take the National Council Licensure Examination for the Practical Nurse. The Minnesota Board of Nursing has officially approved the Practical Nursing program on all four campuses of M State.

Course #	Course Title	Crds
BIOL2260	Human Anatomy and Physiology I.....	3
BIOL2261	Human Anatomy and Physiology I Lab	1
BIOL2262	Human Anatomy and Physiology II.....	3
BIOL2263	Human Anatomy and Physiology II Lab	1
ENGL1101	College Writing.....	3
PNSG1200	Concepts of Nursing.....	2
PNSG1205	Nursing Pharmacology.....	3
PNSG1207	Health Promotion I.....	5
PNSG1209	Maternal Child Health.....	3
PNSG1216	Practical Nursing Clinical I.....	5
PNSG1217	Health Promotion II.....	4
PNSG1221	Psychosocial Nursing.....	2
PNSG1223	Health Promotion III.....	4
PNSG1226	Practical Nursing Clinical II.....	4
PNSG1232	Principles of Intravenous Therapy	1
PNSG1234	Nursing Roles	1
PNSG1236	Practical Nursing Practicum.....	2
PSYC2222	Developmental Psychology.....	3

Pharmacy

Pharmacy Technology

AAS 60 Credits

E

The pharmacy technician works as an assistant to a registered pharmacist, assisting or relieving the pharmacist in routine technical and clerical duties and functioning in strict accordance with standard written procedures and guidelines under the supervision of the professional pharmacist. AAS graduates have enhanced potential for upward progression in the career of pharmacy, as the general education component gives the student a well-rounded foundation of knowledge. Students, using their own laptop computers, learn how to access patient profiles, input drug orders and print prescription labels. They learn how to fill prescriptions and aseptic technique for intravenous drug admixture in the college's state-of-the-art teaching lab. The work done by pharmacy technicians allows pharmacists to spend more time with patients on medication management. Individuals entering the program must complete a background check required by the Minnesota Human Services licensing division. Individuals who do not receive a clear background check may participate in the program but may not be allowed to participate in clinical and/or field experience courses.

Course #	Course Title	Crds
	MN Transfer Electives	3
BIOL2260	Human Anatomy and Physiology I.....	3
BIOL2261	Human Anatomy and Physiology I Lab	1
BIOL2262	Human Anatomy and Physiology II.....	3
BIOL2263	Human Anatomy and Physiology II Lab	1
BIOL2267	Medical Microbiology.....	3
BIOL2268	Medical Microbiology Lab.....	1
CHEM1100	Fund Concepts Chemistry.....	3
* COMM1120	Introduction to Public Speaking.....	3
or		
COMM1130	Small Group Communication.....	3
or		
COMM1140	Interpersonal Communication	3
CPTR1104	Intro to Computer Tech	3
ENGL1101	College Writing.....	3
HLTH1116	Medical Terminology.....	3
* MATH1102	Finite Math.....	3
or		
MATH1100	World of Math	3

or		
MATH1114	College Algebra.....	4
PHRM1001	Fundamental Concepts of Pharmacy.....	3
PHRM2001	Pharmacy Prin / Prac I	4
PHRM2002	Pharmacy Prin / Prac II	5
PHRM2004	Drug Properties/Distribution	3
PHRM2010	Experiential / Hospital.....	3
PHRM2012	Experiential / Retail	3
PSYC1200	General Psychology	3
SOC1111	Intro to Sociology.....	3

* Take three credits from the specified courses.

Pharmacy Technology

Diploma 36 Credits

E

The pharmacy technician works as an assistant to a registered pharmacist, assisting or relieving the pharmacist in routine technical and clerical duties and functioning in strict accordance with standard written procedures and guidelines under the supervision of the professional pharmacist. Students, using their own laptop computers, learn how to access patient profiles, input drug orders and print prescription labels. They learn how to fill prescriptions and aseptic technique for intravenous drug admixture in the college's state-of-the-art teaching lab. The work done by pharmacy technicians allows pharmacists to spend more time with patients on medication management. Individuals entering the program must complete a background check required by the Minnesota Human Services licensing division. Individuals who do not receive a clear background check may participate in the program but may not be allowed to participate in clinical and/or field experience courses.

Course #	Course Title	Crds
CHEM1100	Fund Concepts Chemistry.....	3
CPTR1104	Intro to Computer Tech	3
HLTH1110	Introduction to Anatomy and Physiology.....	3
HLTH1116	Medical Terminology.....	3
PHRM1001	Fundamental Concepts of Pharmacy.....	3
PHRM2001	Pharmacy Prin / Prac I	4
PHRM2002	Pharmacy Prin / Prac II	5
PHRM2004	Drug Properties/Distribution	3
PHRM2010	Experiential / Hospital.....	3
PHRM2012	Experiential / Retail	3
SOC1111	Intro to Sociology.....	3

Phlebotomy

Phlebotomy Technician

Certificate 11 Credits

F

The Phlebotomy Technician program prepares students to properly perform phlebotomy (venipuncture and capillary blood) collection and processing in a professional manner. This program also trains students to become proficient and multi-skilled in point-of-care (bedside) testing, computer skills and communication skills. Nurse assistant home health aide training enhances the student's knowledge of patient care and increases his/her marketability in the health care field. Phlebotomy technicians are employed by hospital and clinic laboratories, insurance companies, donor blood facilities and home health care.

Course #	Course Title	Crds
	Communications Electives (MNTC Goal Area 1).....	3
HLTH1116	Medical Terminology.....	3
MLT1110	Prin/Proc Phlebotomy.....	2
MLT1112	Clinical Phlebotomy.....	3

Radiography

Radiologic Technology

AAS 89 Credits

D E

The Radiologic Technology program prepares individuals to perform various radiologic procedures. The radiologic technologist instructs and positions patients, manipulates radiographic equipment, adjusts exposure factors, provides radiation protection for patient and self, develops radiographic images, evaluates the quality of finished radiographs and carries out activities associated with quality control. The student radiologic technologist carries out these functions under the supervision or upon the direction of a registered radiologic technologist.

Graduates of the Radiologic Technology program are eligible for the national certification exam administered by the American Registry of Radiologic Technologists. Successful completion of this exam qualifies the graduate as a Registered Radiologic Technologist.

The selection of students into the Radiologic Technology program is done on a point system using the Application Assessment Sheet to rank applicants comparatively based on course grades and GPA. Individuals entering the program must complete a background check required by the Minnesota Human Services licensing division. Individuals who do not receive a clear background check may participate in the program but may not be allowed to participate in clinical and/or field experience courses.

Course #	Course Title	Crds
BIOL2260	Human Anatomy and Physiology I.....	3
BIOL2261	Human Anatomy and Physiology I Lab	1
BIOL2262	Human Anatomy and Physiology II.....	3
BIOL2263	Human Anatomy and Physiology II Lab	1
COMM1140	Interpersonal Communication	3
CPTR1100	Fund Computer Concepts	1
HLTH1116	Medical Terminology.....	3
MATH1114	College Algebra	4
PHYS1105	Fundamental Concepts in Physics.....	3
PSYC1200	General Psychology	3
RADT1108	Introduction to Radiologic Technology and Patient Care.....	3
RADT1114	Radiographic Procedures I	4
RADT1124	Radiographic Procedures II	4
RADT1132	Principles of Radiobiology.....	4
RADT1140	Radiographic Imaging	4
RADT1144	Radiographic Procedures III	3
RADT1148	Radiographic Clinical I	6
RADT1158	Radiographic Clinical II	6
RADT1168	Radiographic Clinical III	6
RADT2222	Imaging Equipment.....	3
RADT2244	Legal and Ethical Issues in Radiologic Technology.....	3
RADT2248	Radiographic Clinical IV.....	6
RADT2250	Radiographic Pathology.....	3
RADT2258	Radiographic Clinical V.....	7
RADT2280	Board Review.....	2

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

Service

Child Care

Child Care and Education Certificate	88
Early Childhood and Paraprofessional Education AS.....	88

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Cosmetology Diploma.....	88
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Fire Service Preparation Certificate.....	89

Sign Language

American Sign Language Studies Certificate.....	90
Sign Language Interpreter Preparation AAS.....	90

Paralegal

Paralegal AAS.....	90
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Child Care

Child Care and Education

Certificate 24 Credits

DWE

This program includes coursework in child development (birth through age 8), behavior guidance, development of environments and curriculum for young children and relationships with families, as well as on-site experiences in a variety of programs.

Course #	Course Title	Crds
CDEV1105	Development/Guidance	3
CDEV1107	Introduction to Early Education	3
CDEV2200	Integrating Play	3
CDEV2229	Imaginative Learning	3
CDEV2236	Occupational Experience	1
CDEV2244	Parent Professional Relations	3
CDEV2246	Foundations in Literacy	3
CPTR1104	Intro to Computer Tech	3
HLTH1122	CPR-First Aid	1
PDEV1102	Contemporary Career Search	1

Early Childhood and Paraprofessional Education

AS 60 Credits

DW

This program includes coursework in child development for ages birth through 8, behavior guidance, children with special needs, development of environments and curriculum for infant/toddler, preschool- and primary school-age children and the role of the paraprofessional, as well as on-site experiences in a variety of programs. Graduates will independently provide a healthy, safe and developmentally appropriate learning environment in support of families. Child development courses in combination with general education courses comprise the 60-credit degree program for students. The program meets the educational requirements for assistant teacher and paraprofessional in an educational setting as well as assistant teacher and teacher in a child care setting and/or family child care provider and group family child care provider (based on program) as listed in Minnesota Department of Human Services Rules Number 9502 and 9503. Work experience, in addition to educational coursework, is required by Rule 3 for teacher positions in licensed child care facilities. Individuals entering the program must complete a background check required by the Minnesota Department of Human Services licensing division. Individuals with any prior record of child maltreatment or crime of violence may participate in the program, but the student will not be allowed to participate in lab or field experience coursework.

Course #	Course Title	Crds
	MN Transfer Electives	12
ART1110	Intro to Art	3
CDEV1105	Development/Guidance	3
CDEV1107	Introduction to Early Education	3
CDEV2200	Integrating Play	3
CDEV2229	Imaginative Learning	3
CDEV2236	Occupational Experience	1
CDEV2238	Integrating Children with Special Needs	3
CDEV2241	Observing and Assessing	2
CDEV2242	Infant/Toddler Program	3
CDEV2244	Parent Professional Relations	3
CDEV2246	Foundations in Literacy	3
CDEV2290	Internship	3
COMM1120	Introduction to Public Speaking	3
ENGL1101	College Writing	3
ENGL1215	Professional and Technical Writing	3
PSYC1200	General Psychology	3
SOC1111	Intro to Sociology	3

Cosmetology

Cosmetology

Diploma 58 Credits

W

Cosmetology is the art, science and business of beauty care and thus offers students a variety of career opportunities. Students completing the program can choose to be general cosmetologists or to excel in an area of expertise such as perming and cutting, hair care and coloring, or skin and nail care. This program welcomes both men and women. Students of the Cosmetology program will receive a combination of classroom and laboratory work with the opportunity to practice their skills on mannequins and actual customers in the campus clinic/salon. Acquired cosmetology hours or credits earned and documented from other licensed colleges, whether in- or out-of-state, may be accepted upon approval of the Minnesota Board of Cosmetologists. Graduates holding a valid cosmetology license are also eligible for employment on tourist ships and in other unique employment settings. Academically, courses in chemistry, English, math and business are necessary in preparing for a career in cosmetology. The Board of Cosmetologists, which is the cosmetology licensing body, requires 1,550 hours of clinical time in order to become licensed in the State of Minnesota. Upon completion of 1,550 hours and passing of the state exam, a license will be issued.

Course #	Course Title	Crds
	Cosmetology Electives (Choose from: COSM1000, COSM1185, COSM1200, COSM700, COSM2800 or ESTH1801)	33
	MN Transfer Electives	6
COSM1117	Shampooing and Rinsing	1
COSM1119	Haircutting	1
COSM1129	Hairstyling	1
COSM1130	Properties of the Hair and Scalp	1
COSM1157	Histology of the Skin	1
COSM1159	Facials, Make-Up and Hair Removal	1
COSM1161	Nail Structure and Growth	1
COSM1163	Hair Color	1
COSM1171	Principles of Hair Design	1
COSM1173	Chemistry and Electricity	1
COSM1177	Infection Control	1
COSM1179	Minnesota Cosmetology Laws and Rules	1
COSM2000	Artistry in Hairstyling	1
COSM2100	Chemical Texture Services	1
COSM2200	Manicuring/Pedicuring	1
COSM2300	Anatomy of the Head, Face and Neck	1
COSM2400	Advanced Nail Techniques	1
COSM2500	Salon Business	1
COSM2600	Professional Image	1

Manicurist

Certificate 16 Credits

W

The Manicurist program is designed to give students a thorough knowledge of dermatology, the structure, growth and health of the nail and chemistry as it relates to manicuring, as well as sanitation and safety procedures related to the practice of manicuring. Instruction will cover applied studies and skills in cleaning, conditioning, shaping, reinforcing, coloring and enhancing nails, as well as the application and repair of artificial nails. The Board of Cosmetologists, which is the cosmetology licensing body, requires 350 hours of clinical time in order to become licensed in the State of Minnesota. Upon completion of 350 hours and passing of the state exam, a license will be issued.

Course #	Course Title	Crds
	Cosmetology Electives	8
COSM1000	Principles and Practices	3
COSM1161	Nail Structure and Growth	1
COSM1179	Minnesota Cosmetology Laws and Rules	1
COSM1200	Salon Practicum	1-18
COSM2200	Manicuring/Pedicuring	1
COSM2400	Advanced Nail Techniques	1

Criminal Justice

Correctional Officer

Certificate 25 Credits

M

Students interested in a criminal justice career other than law enforcement may enroll in the Correctional Officer certificate program. The certificate program is designed to provide pre-employment education for the student who desires a position as a correctional officer. The program also provides continuing education for employed correctional officers. Students who complete the certificate program articulate into the two-year Criminal Justice AS degree for peace officer licensing.

Course #	Course Title	Crds
ACCT1012	Principles of Bookkeeping.....	3
CPTR1100	Fund Computer Concepts.....	1
CRJU1101	Introduction to Criminal Justice.....	3
CRJU1108	Physical Control Tactics for Corrections.....	3
CRJU1109	Law Enforcement Behavioral Science.....	3
CRJU2201	Criminal Law.....	3
CRJU2206	Police Report Writing.....	3
ENGL1101	College Writing.....	3
SOC2216	Minority Group Relations.....	3

Criminal Justice

AS 60 Credits

M

The AS degree in Criminal Justice prepares students for careers in law enforcement. M State's Criminal Justice program has been designated a Professional Peace Officer Education Program by the Minnesota Board of Peace Officer Standards and Training. Students seeking a career in law enforcement will be prepared for and offered the opportunity to complete all educational and practical requirements necessary to apply for peace officer licensing. The internship program provides students with comprehensive training to develop additional skills in critical thinking, communications and practical application. Criminal Justice faculty have extensive academic and practical experience within the field. Students seeking an AS in Criminal Justice are required to declare that intention prior to the second semester of coursework.

Acceptance into the program is contingent on the student's:

- Completion of at least 12 credits of required general education courses.
- Achievement of a cumulative grade point average of 2.5 or higher.
- Successful completion of a personality assessment provided and evaluated through M State. [^Approximate cost = \$140]
- Completion of a criminal background check through the State of Minnesota or applicable state. [^Approximate cost = \$15]
- Achievement of at least a C in all Criminal Justice classes.
- Completion of a required initial advising session with the program coordinator.

Note that expenses listed in brackets above and marked by ^ are not eligible for financial aid.

If there are more applicants who meet the above criteria than the program can accommodate, applicants will be selected based on program application date. Registration to some Criminal Justice courses is restricted to AS degree students unless approved by the program coordinator.

Course #	Course Title	Crds
	Criminal Justice Electives.....	6
	MN Transfer Electives.....	21
COMM1140	Interpersonal Communication.....	3
CRJU1101	Introduction to Criminal Justice.....	3
CRJU1102	Policing and Practices.....	3
CRJU1104	Juvenile Justice and Delinquency.....	3
CRJU1109	Law Enforcement Behavioral Science.....	3
CRJU2201	Criminal Law.....	3
CRJU2202	Criminal Procedures.....	3
CRJU2206	Police Report Writing.....	3
CRJU2209	Criminal Investigations.....	3
ENGL1101	College Writing.....	3
ENGL1215	Professional and Technical Writing.....	3

Esthetics

Esthetist

Certificate 21 Credits

W

Esthetics is the non-medical treatment of the skin, its disorders and function. Instruction includes the sciences of anatomy, dermatology and chemistry as related to skin care; electricity light therapy; sanitation and safety procedures; Minnesota statutes and laws which pertain to the regulation of the practice of skin care; and elementary service skills. The Board of Cosmetologists, which is the cosmetology licensing body, requires 600 hours of clinical time in order to become licensed in the State of Minnesota. Upon completion of 600 hours and passing of the state exam, a license will be issued.

Course #	Course Title	Crds
	Technical Electives (Choose from: COSM1200, ESTH1808, COSM2800).....	15
COSM1000	Principles and Practices.....	3
COSM1157	Histology of the Skin.....	1
COSM1159	Facials, Make-Up and Hair Removal.....	1
COSM1179	Minnesota Cosmetology Laws and Rules.....	1

Fire Service

Fire Department Company Officer

Certificate 22 Credits

E

The Fire Department Company Officer program is designed for individuals who have a minimum of two years experience as fire service personnel. The program prepares individuals for the role of company officer, the individual who organizes, coordinates and controls a fire response team. The Fire Company Officer program presents critical subject matter to students who, upon completion of the certificate, would be prepared to serve as a fire department supervisor. Program graduates receive a fire company officer certificate of credit. The program meets qualification standards for state certification in the state in which the student resides.

Course #	Course Title	Crds
ENGL1101	College Writing.....	3
FIRE1180	Building Construction for Fire Protection.....	3
FIRE2020	Fire and Emergency Services Administration.....	3
FIRE2030	Fire Instructor I.....	2
FIRE2040	Fire Protection Systems.....	3
FIRE2050	Fire Prevention.....	3
FIRE2060	Strategy and Tactics.....	2
FIRE2080	Fire Service Leadership and Management.....	3

Fire Service Preparation

Certificate 30 Credits

M

This certificate program provides an opportunity for individuals interested in a career in the fire service with the minimum requirements necessary to meet national and Minnesota state qualifications. This program is designed to meet all National Fire Protection Association standards in the following functions: Standard for Firefighter Professional Qualifications, Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents, Standard for Professional Qualifications for Fire Inspector and Plan Reviewer, Standard for Professional Qualifications for Public Fire and Life Safety Educator, Standard on Operations and Training for Technical Search and Rescue Incidents and the Standard for Technical Rescue Professional Qualifications. Participants in the Fire Service Preparation program will be actively involved with technical hands-on training to ensure that they are familiar with all entry-level aspects of fire service. Upon completion of the certificate, students will be able to meet the national testing requirements for emergency medical technician, International Fire Service Accreditation Congress and Proboard. Students will also be eligible for the State of Minnesota firefighter license after employment with a career fire department.

Course #	Course Title	Crds
* COMM1120	Introduction to Public Speaking.....	3
or		
COMM1140	Interpersonal Communication.....	3

FIRE1100	Introduction to Fire Service	2
FIRE1106	Firefighter I and II.....	3
FIRE1108	Firefighter I and II Skills.....	4
FIRE1130	Technical Rescue.....	3
FIRE1140	Fire Inspection and Code Enforcement.....	3
FIRE1150	HazMat Operational.....	3
FIRE1152	Building Construction.....	3
HLTH2215	EMT Basic.....	6

* Take three credits from the specified courses.

Sign Language

American Sign Language Studies

Certificate 15 Credits

M

The American Sign Language Studies certificate provides students with a basic knowledge of American Sign Language and Deaf culture. The curriculum provides a foundation for entry into a career in a deafness-related field and prepares students for continued educational studies in more advanced preparation for ASL Interpreter Certification. This program does not prepare students to become interpreters.

Course #	Course Title	Crds
ASL1111	American Sign Language and Deaf Culture I.....	3
ASL1112	American Sign Language and Deaf Culture II.....	3
ASL1113	American Sign Language and Deaf Culture III.....	4
ASL1114	American Sign Language and Deaf Culture IV.....	4
CPTR1100	Fund Computer Concepts.....	1

Sign Language Interpreter Preparation

AAS 65 Credits

M

The Sign Language Interpreter Preparation program prepares individuals to work as interpreters facilitating and mediating communication between deaf/hard of hearing and hearing people. Students will gain sign language skills, an understanding of Deaf culture, knowledge of the interpreter's role and skill development for the profession of sign language interpreting. Students will experience a variety of learning environments, including classroom work, laboratory practice and field placement.

Course #	Course Title	Crds
	MN Transfer Electives	3
ASL1111	American Sign Language and Deaf Culture I.....	3
ASL1112	American Sign Language and Deaf Culture II.....	3
ASL1113	American Sign Language and Deaf Culture III.....	4
ASL1114	American Sign Language and Deaf Culture IV.....	4
ASL1115	American Sign Language and Deaf Culture V.....	3
ASL2000	Advanced Fingerspelling, Numbers and Classifiers.....	2
ASL2100	Linguistics of American Sign Language.....	3
COMM1120	Introduction to Public Speaking.....	3
COMM2230	Intercultural Communication.....	3
CPTR1100	Fund Computer Concepts.....	1
ENGL1101	College Writing.....	3
IPP1111	Introduction to Interpreting.....	3
IPP1112	Beginning ASL to English.....	3
IPP1113	Beginning English to American Sign Language.....	3
IPP2112	Advanced ASL to English.....	3
IPP2113	Advanced English to American Sign Language.....	3
IPP2114	Educational Interpreting.....	2
IPP2215	Topics in Interpreting.....	2
IPP2216	Practicum.....	1
IPP2217	Interpreting Internship.....	6
IPP2218	Internship Seminar.....	1
PSYC1200	General Psychology.....	3

Paralegal

Paralegal

AAS 66 Credits

D E

This program prepares graduates for work under the supervision of an attorney. Students will study theory as it applies to the law; research statutes, case law and court rules; and prepare legal documents. The student will also learn to analyze procedural and substantive legal problems, manage caseloads and interview clients.

Course #	Course Title	Crds
	MN Transfer Electives	6
	Sociology Electives.....	3
* ACCT1012	Principles of Bookkeeping.....	3
or		
ACCT2211	Financial Accounting I.....	3
ACCT1120	Business Law.....	3
COMM1120	Introduction to Public Speaking.....	3
CPTR1104	Intro to Computer Tech.....	3
ENGL1101	College Writing.....	3
HRES1122	Human Resource Management.....	3
PARA1101	Introduction to Paralegal.....	3
PARA1102	Research and Writing I.....	3
PARA1104	Civil Law for Paralegals.....	3
PARA1105	Criminal Law for Paralegals.....	3
PARA1106	Wills, Trusts and Probate.....	3
PARA1112	Legal Ethics for the Paralegal.....	3
PARA2202	Research and Writing II.....	3
PARA2204	Real Property.....	3
PARA2210	Advanced Paralegal Practices.....	3
PARA2212	Family Law.....	3
** PSCI1120	American National Government.....	3
or		
PSCI1130	State and Local Government.....	3
or		
PSCI2220	Introduction to Constitutional Theory.....	3
PSYC1200	General Psychology.....	3

* Take three credits from the specified courses.

* Take six credits from the specified courses.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

Transfer

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Human Resources AS
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Music

Music AFA.....95

Art

Art

AFA 60 Credits

F

The 60-credit AFA in Art at M State provides students with the skills to help them develop into professional artists and ensures that students will have the necessary coursework to prepare for transfer and advanced studies in art. Courses must be completed from at least six of the 10 MNNTC goal areas. The degree specifies 27 credits of required art courses in Goal Areas 6 or 6F.

Course #	Course Title	Crds
	MN Transfer Electives	19
ART1107	Foundations of Art, 2-D	3
ART1108	Foundations of Art, 3-D	3
ART1111	Drawing I	3
* ART1112	Painting I	3
or		
ART1117	Printmaking I	3
or		
ART1124	American Art	3
or		
ART2112	Painting II	3
or		
ART2114	Photographic Art I	3
or		
ART2241	Advanced Ceramics	3
or		
GLST1121	Humanities Italy	3
or		
HUM1120	Culture of Italy	3
ART1121	World of Art I	3
ART1122	World of Art II	3
** ART1140	Handbuilt Ceramics	3
or		
ART1141	Ceramics I	3
ART2111	Drawing II	3
ART2261	Art Portfolio Design and Professional Development	2
CHEM1100	Fund Concepts Chemistry	3
** COMM1120	Introduction to Public Speaking	3
or		
COMM1130	Small Group Communication	3
or		
COMM1140	Interpersonal Communication	3
ENGL1101	College Writing	3
** PSYC1200	General Psychology	3
or		
SOC1111	Intro to Sociology	3

* Take six credits from the specified courses.

** Take three credits from the specified courses.

Biology

Biological Sciences

AS 60 Credits

M

This degree is designed for students interested in the various fields of biological sciences such as cell biology, bioengineering, environmental science, fish and wildlife management, forestry, genetics and microbiology. Students majoring in biological sciences may also be interested in the following program areas: biochemistry, chemistry, pre-chiropractic, pre-dentistry, pre-medicine, pre-medical technology, pre-optometry, pre-pharmacy and pre-veterinary medicine. The curriculum should be used as a guide since required courses vary considerably among four-year institutions and professional schools. Students planning a degree in biological sciences or one of the above fields should contact the biology department and work with an adviser. A visit to the intended transfer institution by the spring of the first year is highly recommended.

Course #	Course Title	Crds
	MN Transfer Electives	3
BIOL1122	General Biology I	4
BIOL1123	General Biology II	4

BIOL2010	General Ecology	4
BIOL2220	General Microbiology	4
BIOL2240	Genetics	4
CHEM1111	General Inorganic Chemistry I	5
CHEM1112	General Inorganic Chemistry II	5
COMM1120	Introduction to Public Speaking	3
ENGL1101	College Writing	3
ENGL1215	Professional and Technical Writing	3
MATH1114	College Algebra	4
MATH1116	College Trigonometry	3
PHYS1401	College Physics I	4
PHYS1402	College Physics II	4
PSYC1200	General Psychology	3

Biological Sciences

AS 60 Credits

F

This degree is designed for students interested in the various fields of biological sciences such as cell biology, bioengineering, environmental science, fish and wildlife management, forestry, genetics and microbiology. Students majoring in biological sciences may also be interested in the following program areas: biochemistry, chemistry, pre-chiropractic, pre-dentistry, pre-medicine, pre-medical technology, pre-optometry, pre-pharmacy and pre-veterinary medicine. The curriculum listed below should be used as a guide since required courses vary considerably among the four-year institutions and professional schools. Students planning a degree in biological sciences or one of the above fields should contact the biology department and work with a counselor or advisor to identify transfer options. A visit to the intended transfer institution by the spring of the first year is highly recommended.

Course #	Course Title	Crds
	MN Transfer Electives	16
BIOL1122	General Biology I	4
BIOL1123	General Biology II	4
BIOL2240	Genetics	4
CHEM1111	General Inorganic Chemistry I	5
CHEM1112	General Inorganic Chemistry II	5
ENGL1101	College Writing	3
* ENGL1205	Writing About Literature	3
or		
ENGL1210	Writing About Current Issues	3
or		
ENGL1215	Professional and Technical Writing	3
MATH1114	College Algebra	4
MATH1115	Functions/Trigonometry	4
PHYS1401	College Physics I	4
PHYS1402	College Physics II	4

* Take three credits from the specified courses.

Engineering

Engineering

AS 60 Credits

M

The AS in Engineering consists of the sequential math, physics and other science courses which will transfer to either a BS in physics or to diverse engineering programs at many four-year colleges and universities. An AS in Engineering will also open an option for technical jobs in the upcoming new energy sector. In general, a degree in engineering has been and will continue to be an excellent platform for success across a wide range of careers in the private sector, government, schools, colleges and universities.

Course #	Course Title	Crds
	MN Transfer Electives	9
CHEM1111	General Inorganic Chemistry I	5
CHEM1112	General Inorganic Chemistry II	5
COMM1120	Introduction to Public Speaking	3
ENGL1101	College Writing	3
* ENGL1205	Writing About Literature	3
or		
ENGL1210	Writing About Current Issues	3
or		

ENGL1215	Professional and Technical Writing.....	3
ENGR2210	Engineering Mechanics I.....	3
ENGR2220	Engineering Mechanics II.....	3
ENGR2230	Mechanics of Materials.....	3
MATH1134	Calculus I.....	5
MATH1135	Calculus II.....	5
MATH2231	Calculus III.....	4
MATH2259	Differential Equations.....	4
PHYS1412	University Physics II.....	5

*Take three credits from the specified courses.

Engineering - Fergus Falls

AS 60 Credits

F

The AS in Engineering consists of the sequential math, physics and other science courses which will transfer to either a BS in Physics or to diverse Engineering programs at many four-year colleges and universities. An AS in Engineering will also open an option for technical jobs in the upcoming new energy sector. In general, a degree in engineering has proven to be and will continue to be, an excellent platform for success across a wide range of careers in the private sector, government, schools, colleges and universities.

Course #	Course Title	Crds
	MN Transfer Electives.....	8
CHEM1111	General Inorganic Chemistry I.....	5
COMM1120	Introduction to Public Speaking.....	3
CSCI1121	Computer Science I.....	4
ECE1201	Circuit Analysis I.....	3
ECE1202	Circuit Analysis II.....	3
ECE1203	Circuit Analysis Lab.....	1
ECE1220	Digital Logic Design.....	3
ENG1101	Ethics and the Engineering Profession.....	3
ENGL1101	College Writing.....	3
MATH1134	Calculus I.....	5
MATH1135	Calculus II.....	5
MATH2259	Differential Equations.....	4
PHYS1411	University Physics I.....	5
PHYS1412	University Physics II.....	5

MUSC 2232	Advanced Music Theory IV.....	3
MUSC 2243	Sight Singing / Ear Training IV.....	1

* Take two credits from the specified courses.

Music

Music

AFA 68 Credits

F

The AFA in Music is designed to provide a means for music students to pursue a path with seamless transition to a four-year music degree and to be best prepared for a degree and/or career in music. The AFA emphasizes a fine arts focus within a discipline area of study and offers students preparation for fine arts study at the university level. The AFA in Music at M State allows for a choral or instrumental emphasis and ensures that students will have the necessary coursework to prepare for advanced studies in music.

Course #	Course Title	Crds
	MN Transfer Electives.....	17
	Ensembles (Choose from: MUSC 1135, 1141, 1162, 1164, 1168).....	8
	Private lessons Choose from: MUSC 1151, 1181, 1185, 1191, 2251, 2281, 2285, 2291.....	7
	Recital Review.....	0
ENGL 1101	College Writing I.....	3
ENGL 1205	Writing in Lit.....	3
* MUSC1114	Beginning Class Piano.....	2
or		
MUSC2291	Individual Piano Lessons.....	2
MUSC 1115	America's Musical Heritage.....	3
MUSC 1120	Intro to Music Technology.....	3
MUSC 1121	Basic Music Theory I.....	3
MUSC 1122	Basic Music Theory II.....	3
MUSC 1123	Sight Singing / Ear Training I.....	1
MUSC 1124	Sight Singing / Ear Training II.....	1
MUSC 2223	Sight Singing / Ear Training III.....	1
MUSC 2231	Advanced Music Theory III.....	3
PHYS 1107	Physics of Music.....	3
MUSC 1116	World Music.....	3

Transportation Programs

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Marine Engine Technology Certificate..... 101

PowerSports

PowerSports Technology Diploma 101

Auto Body Repair

Auto Body Collision Technology

AAS 72 Credits

D

Auto body technicians repair and replace damaged portions of automobile bodies and frames. They straighten bent frames and/or unibody cars, remove and repair dents in body panels and fenders and weld breaks in body metals. They install window glass and windshields. Technicians also sand and mask repair areas and perform drive train component replacements, wheel alignments and some mechanical and electrical repairs.

Students entering this program should have good mechanical aptitude, good communication skills and the ability to comprehend service literature. Graduates of this program will find opportunities for employment as body repair technicians and may become estimators, service sales persons, service managers or parts managers. Some may move into supervisory positions, start their own repair shops or become insurance company damage appraisers.

Course #	Course Title	Crds
	MN Transfer Electives	6
ABCT1100	Introduction to Auto Body	2
ABCT1102	Auto Body Off Car Repair	4
ABCT1104	Auto Body Lab I	3
ABCT1106	Introduction to Refinishing	2
ABCT1110	Panel Replacement	2
ABCT1112	Auto Body Refinishing	4
ABCT1114	Auto Body Lab II	4
ABCT1116	Glass and Trim	2
ABCT1118	Basic Electrical	2
ABCT2202	Unibody/Frame Alignment	5
ABCT2204	Body Shop Operations	3
ABCT2206	Mechanical Components I	2
ABCT2208	Major Collision Lab I	3
ABCT2210	Collision Damage Repair	5
ABCT2212	Mechanical Components II	2
ABCT2214	Major Collision Lab II	5
ABCT2216	Spot Repair and Paint Blending	2
ABCT2222	Auto Body Internship	1
CPTR1100	Fund Computer Concepts	1
ENGL1101	College Writing	3
PHIL1201	Ethics	3
PSYC1200	General Psychology	3
TRNS1118	Welding I	2
TRNS1120	Welding II	1

Auto Body Collision Technology

Diploma 66 Credits

D

Auto body technicians repair and replace damaged portions of automobile bodies and frames. They straighten bent frames and/or unibody cars, remove and repair dents in body panels and fenders and weld breaks in body metals. They install window glass and windshields. Technicians also sand and mask repair areas and perform drive train component replacements, wheel alignments and some mechanical and electrical repairs.

Students entering this program should have good mechanical aptitude, good communication skills and the ability to comprehend service literature. Graduates of this program will find opportunities for employment as body repair technicians and may become estimators, service sales persons, service managers or parts managers. Some may move into supervisory positions, start their own repair shops or become insurance company damage appraisers.

Course #	Course Title	Crds
	MN Transfer Electives	6
ABCT1100	Introduction to Auto Body	2
ABCT1102	Auto Body Off Car Repair	4
ABCT1104	Auto Body Lab I	3
ABCT1106	Introduction to Refinishing	2
ABCT1110	Panel Replacement	2
ABCT1112	Auto Body Refinishing	4
ABCT1114	Auto Body Lab II	4
ABCT1116	Glass and Trim	2
ABCT1118	Basic Electrical	2
ABCT2202	Unibody/Frame Alignment	5
ABCT2204	Body Shop Operations	3
ABCT2206	Mechanical Components I	2
ABCT2208	Major Collision Lab I	3
ABCT2210	Collision Damage Repair	5
ABCT2212	Mechanical Components II	2
ABCT2214	Major Collision Lab II	5
ABCT2216	Spot Repair and Paint Blending	2

ABCT2222	Auto Body Internship	1
COMM1100	Communication and Effective Human Relations	3
CPTR1100	Fund Computer Concepts	1
TRNS1118	Welding I	2
TRNS1120	Welding II	1

Automotive Service

Automotive Service Technology

AAS 72 Credits

D M

The automotive service technician works in an exciting and rapidly changing industry. Students in this program will receive training in the many service and diagnostic procedures necessary to maintain our nation on wheels. Students are trained in modern laboratories equipped with current service and testing equipment. Students entering this program should have good mechanical aptitude, good communication skills and the ability to read and comprehend service literature. Graduates of this program will have a variety of opportunities including drive line technician, driveability technician, alignment and suspension specialist, transmission specialist, service adviser and manager. Opportunities for advancement may include factory and dealer representatives, management and self-employment.

Course #	Course Title	Crds
	MN Transfer Electives	18
AMST1102	Alignment and Suspension I	3
AMST1105	Brakes I	3
AMST1109	Starting and Charging	3
AMST1111	Automotive Electronics	3
AMST1122	Engines I	3
AMST1126	Engines II	3
AMST1132	Drive Trains I	3
AMST2206	Body Electrical/Mechanical I	3
AMST2209	Body Elec/Mechanical II	3
AMST2211	Exhaust Analysis Fuel Sys	3
AMST2214	Electronic Powertrain Control I	3
AMST2218	Electronic Powertrain Control II	3
AMST2220	Ignition Systems	3
AMST2225	Brakes II	3
AMST2233	Automatic Transmission I	3
AMST2237	Automatic Transmissions II	3
AMST2240	Heating Ventilation and Air Conditioning	3
AMST2292	Internship	1
TRNS1102	Introduction to Transportation	2

Automotive Service Technology

Diploma 69 Credits

D M

Automotive service technicians work in an exciting and rapidly changing industry. Students in this program will receive training in the many service and diagnostic procedures necessary to maintain our nation on wheels. Students are trained in modern laboratories equipped with current service and testing equipment. Students entering this program should have good mechanical aptitude, good communication skills and the ability to read and comprehend service literature. Graduates of this program will have a variety of opportunities including drive line technician, driveability technician, alignment and suspension specialist, transmission specialist, service adviser and manager. Opportunities for advancement may include factory and dealer representatives, management and self-employment.

Course #	Course Title	Crds
	MN Transfer Electives	9
AMST1102	Alignment and Suspension I	3
AMST1105	Brakes I	3
AMST1109	Starting and Charging	3
AMST1111	Automotive Electronics	3
AMST1122	Engines I	3
AMST1126	Engines II	3
AMST1132	Drive Trains I	3
AMST1136	Drive Trains II	3
AMST2201	Alignment and Suspension II	3
AMST2206	Body Electrical/Mechanical I	3
AMST2209	Body Elec/Mechanical II	3
AMST2211	Exhaust Analysis Fuel Sys	3
AMST2214	Electronic Powertrain Control I	3
AMST2218	Electronic Powertrain Control II	3
AMST2220	Ignition Systems	3

AMST2225	Brakes II	3
AMST2233	Automatic Transmission I	3
AMST2237	Automatic Transmissions II	3
AMST2240	Heating Ventilation and Air Conditioning	3
AMST2292	Internship	1
TRNS1102	Introduction to Transportation	2

Diesel

Diesel Equipment Technology (Case IH & New Holland Sponsored) - AAS 79 Credits

M

The Case IH or New Holland diesel equipment technician works in an exciting and rapidly changing industry. Students in this partnership program receive an education in diesel and heavy equipment technology.

Sponsorship: Case IH & New Holland Forging the Future Partnership

Sponsorship is granted on interviews, standardized tests and admission to M State. Students who are accepted into the sponsored program may qualify to receive the following:

*Partial reimbursement for tuition and tools.

*Employment with Case IH or New Holland during the academic year.

*Employment during the summer after the first year.

*Uniforms for work and school.

To learn more about the Case IH & New Holland Forging the Future Partnership program, contact your local Case IH or New Holland dealership. For additional information about Case IH & New Holland go to <http://www.cnh.com>. This Forging the Future Partnership program, located in Moorhead, Minnesota, is the first Case IH & New Holland corporate-supported college program in the nation.

Students entering the Forging the Future Partnership should have good mechanical aptitude, good communications skills and the ability to comprehend service literature. The program prepares individuals to diagnose and repair components. This includes such items as diesel engines, transmissions, drive lines, differentials, hydraulic systems, electrical systems and electronically-controlled fuel systems and transmissions and involves instruction in the use of a wide variety of tools and diagnostic testing equipment. Students are prepared for careers that require them to inspect, diagnose, repair and maintain Case IH or New Holland agricultural and construction equipment. Instruction includes diagnosing, disassembling, repairing and adjusting systems and parts, including brakes, starting and charging system components, suspension, fuel systems, differential, electronic fuel control, clutch and transmissions, air conditioning and refrigeration. The Case IH & New Holland partnership also requires students to perform supervised occupational work experiences at sponsoring Case IH or New Holland dealerships, which provides on-the-job work experience. Each supervised occupational work experience is 7-8 weeks in length.

Course #	Course Title	Crds
* BIOL1107	Environmental Science Issues	3
or		
HUM2236	Technology in the Humanities	3
COMM1120	Introduction to Public Speaking	3
CPTR1104	Intro to Computer Tech	3
DCNH1116	CNH (Case New Holland) Supervised Occupational Experience (SOE) I	3
DCNH1118	CNH (Case New Holland) Supervised Occupational Experience (SOE) II	7
DCNH2210	Mobile Hydraulics	4
DCNH2218	CNH (Case New Holland) Supervised Occupational Experience (SOE) III	3
DCNH2238	Transmissions and Drive Systems	4
DCNH2242	Advanced Engines and Fuel Systems	6
DSET1100	Diesel Equipment Fundamentals	2
DSET1106	Fuel Systems	2
DSET1110	Power Train I	3
DSET1112	Hydraulics I	4
DSET1124	Diesel Shop Management	1
DSET1130	Trans Elec/Start/Charge	4
DSET1132	Introduction to Engine Theory	2
DSET1134	Introduction to Engines	3
DSET1144	Electrical Troubleshooting	3
DSET2204	Advanced Electrical and Equipment Systems	3
DSET2206	Electronic Controls	3
ECON1150	Essentials of Economics	3
ENGL1101	College Writing	3
** HLTH1122	CPR-First Aid	1
or		
PDEV1102	Contemporary Career Search	1
SOC1111	Intro to Sociology	3
TRNS1112	Heating Ventilation A/C	3

* Take three credits from the specified courses.

** Take one credit from the specified courses.

Diesel Equipment Technology (John Deere Sponsored) - AAS 79 Credits

M

John Deere Construction & Forestry Specialization

We can jump-start your career! The John Deere Construction & Forestry Technician (C & F Tech) program is a collaboration between John Deere, RDO Equipment Co., Nortrax and Minnesota State Community and Technical College to train future John Deere qualified service technicians.

The first year of this dynamic two-year program will be spent in classes designed to teach the operational concepts of diesel engines, power trains, brakes, electrical and hydraulic systems and shop procedures and safety. The second-year training coursework was designed by John Deere and concentrates on the specific John Deere product line, as well as engine tune-up and troubleshooting, crawler undercarriages, hydrostatic transmissions and failure analysis.

Along with technical expertise, students entering the John Deere partnership program should be eager to partner with John Deere customers to provide long-term service and support. Therefore another component of the John Deere C & F Tech program is the supervised occupational work experiences students perform at sponsoring John Deere dealerships. This 7-8 week opportunity provides invaluable on-the-job work experience.

Sponsorship: RDO Equipment Co. and Nortrax are the John Deere construction & forestry equipment dealers in ND, SD, MT, WI & MN. Dealer sponsorship is based on an application process which includes interviews, a standardized test and admission to M State. Students accepted into the program qualify to receive:

*\$8000 in tuition reimbursement.

*Paid part-time employment opportunities during the school year and full-time the summer after the first year.

* Uniforms for work and school.

To learn more about the John Deere C & F Tech sponsorship program, contact Summer Froemke at RDO Equipment Co. at sfroemke@rdoequipment.com or Stacey Johnson at Nortrax at Stacey.Johnson@Nortrax.com. For additional information about the program, go to www.johndeere.com/tech.

Course #	Course Title	Crds
* BIOL1107	Environmental Science Issues	3
or		
HUM2236	Technology in the Humanities	3
COMM1120	Introduction to Public Speaking	3
CPTR1104	Intro to Computer Tech	3
DEER1116	John Deere Supervised Occupational Experience (SOE) I	3
DEER1118	John Deere Supervised Occupational Experience (SOE) II	7
DEER2210	Mobile Hydraulics	4
DEER2218	John Deere Supervised Occupational Experience (SOE) III	3
DEER2238	Transmissions and Drive Systems	4
DEER2242	Advanced Engines and Fuel Systems	6
DSET1100	Diesel Equipment Fundamentals	2
DSET1106	Fuel Systems	2
DSET1110	Power Train I	3
DSET1112	Hydraulics I	4
DSET1124	Diesel Shop Management	1
DSET1130	Trans Elec/Start/Charge	4
DSET1132	Introduction to Engine Theory	2
DSET1134	Introduction to Engines	3
DSET1144	Electrical Troubleshooting	3
DSET2204	Advanced Electrical and Equipment Systems	3
DSET2206	Electronic Controls	3
ECON1150	Essentials of Economics	3
ENGL1101	College Writing	3
** HLTH1122	CPR-First Aid	1
or		
PDEV1102	Contemporary Career Search	1
SOC1111	Intro to Sociology	3
TRNS1112	Heating Ventilation A/C	3

* Take three credits from the specified courses.

** Take one credit from the specified courses.

Diesel Equipment Technology (Truck Option) - AAS 79 Credits

M

The diesel equipment technician works in an exciting and rapidly changing industry. Students in this program receive the diagnostic and service training needed to be successful in their chosen field.

Students entering should have good mechanical aptitude, good communication skills and the ability to comprehend service literature. The program prepares individuals to diagnose and repair all components. This includes such items as diesel engines, transmissions, drive

lines, differentials, hydraulic and air brake systems, electrical systems, electronically controlled fuel systems and transmissions and involves instruction in the use of a wide variety of tools and diagnostic testing equipment. Students are prepared for careers requiring them to inspect, diagnose, repair and maintain trucks, trailers, farming equipment, diesel and construction equipment, stationary diesel engines in electrical generators and related equipment. Instruction includes diagnosing, disassembling, repairing and adjusting systems and parts, vehicle service, air brake systems, brakes, starting and suspension systems, wheel alignment, fuel systems, differential, electronic fuel control, clutch and transmissions, air conditioning and refrigeration. About two-thirds of the instruction time is spent in the diesel lab working on live work and training models. Students learn to diagnose problems and disassemble, recondition and replace faulty parts and get hands-on training on such components as electrical, transmissions, air conditioning, brakes, fuel systems hydraulics and engines. This program is an Association of Diesel Specialists TechSmart program participant.

Course #	Course Title	Crds
* BIOL1107	Environmental Science Issues	3
or		
HUM2236	Technology in the Humanities	3
COMM1120	Introduction to Public Speaking	3
CPTR1104	Intro to Computer Tech	3
DSET1100	Diesel Equipment Fundamentals	2
DSET1106	Fuel Systems	2
DSET1110	Power Train I	3
DSET1112	Hydraulics I	4
DSET1114	Vehicle Brakes	3
DSET1124	Diesel Shop Management	1
DSET1130	Trans Elec/Start/Charge	4
DSET1132	Introduction to Engine Theory	2
DSET1134	Introduction to Engines	3
DSET1144	Electrical Troubleshooting	3
DSET2204	Advanced Electrical and Equipment Systems	3
DSET2206	Electronic Controls	3
DTRK1140	Supervised Occupational Experience 1	7
DTRK2214	Suspension and Alignment	3
DTRK2238	Transmissions and Drive Systems	4
DTRK2240	Supervised Occupational Experience II	4
DTRK2242	Advanced Engines and Fuel Systems	6
ECON1150	Essentials of Economics	3
ENGL1101	College Writing	3
** HLTH1122	CPR-First Aid	1
or		
PDEV1102	Contemporary Career Search	1
SOC1111	Intro to Sociology	3
TRNS1112	Heating Ventilation A/C	3

* Take three credits from the specified courses.
 ** Take one credit from the specified courses.

Diesel Equipment Technology

AAS 79 Credits

M

The diesel equipment technician works in an exciting and rapidly changing industry. This program prepares individuals to diagnose and repair diesel engines, clutches and transmissions, starting and suspension systems, wheel alignment, air-conditioning and refrigeration systems, drive lines, differentials, hydraulic and air brake systems, electrical systems, electronically controlled fuel systems and transmissions and involves instruction in the use of a wide variety of tools and diagnostic testing equipment. Students are prepared for careers in maintenance of truck and trailers, farm equipment, construction equipment, stationary diesel engines in electrical generators and other related equipment. About two-thirds of the instruction time is spent in the diesel lab working on live work and training models. Students learn to diagnose problems and disassemble, recondition and replace faulty parts and they get hands-on training in all program areas. This program is an Association of Diesel Specialists TechSmart program participant.

Course #	Course Title	Crds
* BIOL1107	Environmental Science Issues	3
or		
HUM2236	Technology in the Humanities	3
COMM1120	Introduction to Public Speaking	3
CPTR1104	Intro to Computer Tech	3
DSET1100	Diesel Equipment Fundamentals	2
DSET1106	Fuel Systems	2
DSET1110	Power Train I	3
DSET1112	Hydraulics I	4
* DSET1114	Vehicle Brakes	3
or		
DSET1116	Fall Supervised Occupational Experience	3
DSET1124	Diesel Shop Management	1
DSET1130	Trans Elec/Start/Charge	4
DSET1132	Introduction to Engine Theory	2
DSET1134	Introduction to Engines	3
DSET1140	Supervised Occupational Experience 1	7
DSET1144	Electrical Troubleshooting	3
DSET2204	Advanced Electrical and Equipment Systems	3

DSET2206	Electronic Controls	3
DSET2210	Mobile Hydraulics	4
DSET2238	Transmissions and Drive Systems	4
DSET2240	Supervised Occupational Experience II	3
DSET2242	Advanced Engines and Fuel Systems	6
ECON1150	Essentials of Economics	3
ENGL1101	College Writing	3
** HLTH1122	CPR-First Aid	1
or		
PDEV1102	Contemporary Career Search	1
SOC1111	Intro to Sociology	3
TRNS1112	Heating Ventilation A/C	3

* Take three credits from the specified courses.
 ** Take one credit from the specified courses.

Diesel Equipment Technology

Diploma 65 Credits

M

The diesel equipment technician works in an exciting and rapidly changing industry. Students in this program receive the diagnostic and service training needed to be successful in their chosen field. Entering students should have good mechanical aptitude, good communication skills and the ability to comprehend service literature. The program prepares individuals to diagnose and repair all components, including diesel engines, transmissions, drive lines, differentials, hydraulic and air brake systems, electrical systems, electronically controlled fuel systems and transmissions. Students receive instruction in the use of a wide variety of tools and diagnostic testing equipment. Students are prepared for careers requiring them to inspect, diagnose, repair and maintain trucks, trailers, farming equipment, diesel and construction equipment, stationary diesel engines in electrical generators and related equipment. Instruction includes diagnosing, disassembling, repairing and adjusting systems and parts, vehicle service, air brake systems, brakes, starting and suspension systems, wheel alignment, fuel systems, differential, electronic fuel control, clutch and transmissions, air conditioning and refrigeration. About two-thirds of the instruction time is spent in the diesel lab working on live work and training models. Students learn to diagnose problems and disassemble, recondition and replace faulty parts and they get hands-on training on such components as electrical, transmissions, air conditioning, brakes, fuel system hydraulics and engines. This program is an Association of Diesel Specialists TechSmart program participant.

Course #	Course Title	Crds
COMM1100	Communication and Effective Human Relations	3
COMM1120	Introduction to Public Speaking	3
CPTR1100	Fund Computer Concepts	1
DSET1100	Diesel Equipment Fundamentals	2
DSET1106	Fuel Systems	2
DSET1110	Power Train I	3
DSET1112	Hydraulics I	4
DSET1114	Vehicle Brakes	3
DSET1130	Trans Elec/Start/Charge	4
DSET1132	Introduction to Engine Theory	2
DSET1134	Introduction to Engines	3
DSET1144	Electrical Troubleshooting	3
DSET2204	Advanced Electrical and Equipment Systems	3
DSET2206	Electronic Controls	3
DSET2210	Mobile Hydraulics	4
* DSET2214	Suspension and Alignment	3
or		
DSET2218	Advanced Fuels	3
DSET2220	Internship	3
DSET2238	Transmissions and Drive Systems	4
DSET2242	Advanced Engines and Fuel Systems	6
ENGL1101	College Writing	3
TRNS1112	Heating Ventilation A/C	3

* Take three credits from the specified courses.

Marine Engine

Marine Engine Technology

AAS 69 Credits

D

Curriculum in the Marine Engine Technology AAS is designed to educate individuals to become competent marine technicians along with learning the needed soft skills expected for management and manufacturer positions. The primary focus of the program is the diagnosis, service and the repair of outboard and stern drive engines and drive all with the understanding that the graduate of this program may need to deal with customers in explaining these various systems. Our students perform these services on modern marine product using special test equipment and tools. Students in this program will learn how to plan and perform repairs according to the various manufacturers' recommended procedures. This course is designed for the individual who is looking towards a long-term goal of management, technical manufacturer service and business ownership to name just a few options.

Course #	Course Title	Crds
	MN Transfer Electives	6
	Political Science Electives	3
	Psychology Electives	3
ENGL1101	College Writing.....	3
MRNT1104	Drive System Theory.....	3
MRNT1105	Introduction to Marine.....	2
MRNT1106	Drive System Service.....	3
MRNT2203	Marine Advanced Fuel Systems.....	4
MRNT2207	EFI and Advanced Electrical Systems	4
MRNT2210	Engine Service.....	3
MRNT2218	Adv Electrical Diagnosis.....	3
MRNT2221	Advanced Drive Systems and Testing	4
MRNT2222	Transom and Mid-Section Service.....	4
MRNT2231	Engine Performance Rebuild and Diagnostics.....	5
MRNT2238	Marine four-stroke outboard engine service.....	2
TRNS1100	Introduction to Shop Technology.....	4
TRNS1104	Transportation Electronics	3
TRNS1125	Starting and Charging Theory.....	2
TRNS1126	Starting and Charging Lab.....	1
TRNS1193	Fuel Systems Lab I.....	1
TRNS1194	Fuel Systems I Theory.....	2
TRNS1197	Electrical Systems I Lab.....	2
TRNS1198	Electrical Systems I Theory.....	2

Marine Engine Technology

Diploma 60 Credits

D

Marine engine technicians work in an exciting, rapidly changing and growing industry. The Marine Engine Technology curriculum is designed to educate individuals to become competent marine technicians. The primary focus of this diploma program is the diagnosis, service and repair of outboard and stern drive/inboard engines, drive systems and related systems and components. Students service modern marine equipment using special test equipment and tools. Students in this program will learn how to plan and perform repairs according to the various manufacturers' recommended procedures. Students entering this program should have good mechanical aptitude, communication skills and the ability to comprehend service literature. Graduates of this program are in high demand to fill positions in dealerships as technicians, with many having opportunities to move into management, self-employment and factory representative positions.

Course #	Course Title	Crds
	MN Transfer Electives	6
MRNT1104	Drive System Theory.....	3
MRNT1105	Introduction to Marine.....	2
MRNT1106	Drive System Service.....	3
MRNT2203	Marine Advanced Fuel Systems.....	4
MRNT2207	EFI and Advanced Electrical Systems	4
MRNT2210	Engine Service.....	3
MRNT2218	Adv Electrical Diagnosis.....	3
MRNT2221	Advanced Drive Systems and Testing	4
MRNT2222	Transom and Mid-Section Service.....	4
MRNT2231	Engine Performance Rebuild and Diagnostics.....	5
MRNT2238	Marine four-stroke outboard engine service.....	2
TRNS1100	Introduction to Shop Technology.....	4
TRNS1104	Transportation Electronics	3
TRNS1125	Starting and Charging Theory.....	2
TRNS1126	Starting and Charging Lab.....	1
TRNS1193	Fuel Systems I Lab.....	1
TRNS1194	Fuel Systems I Theory.....	2
TRNS1197	Electrical Systems I Lab.....	2
TRNS1198	Electrical Systems I Theory.....	2

Marine Engine Technology

Certificate 30 Credits

D

Marine engine technicians work in an exciting, rapidly changing and growing industry. The Marine Engine Technology certificate program is designed to educate individuals to become competent marine technicians. The primary focus of the certificate program is training the student to be well-rounded in marine systems, both outboard and stern-drive. Students will perform service on modern marine equipment using special test equipment and tools. Students in this program will learn how to plan and perform repairs according to the various manufacturers' recommended procedures.

Course #	Course Title	Crds
	MN Transfer Electives	3
MRNT1104	Drive System Theory.....	3
MRNT1105	Introduction to Marine.....	2
MRNT1106	Drive System Service.....	3
MRNT2238	Marine four-stroke outboard engine service.....	2
TRNS1100	Introduction to Shop Technology.....	4
TRNS1104	Transportation Electronics	3
TRNS1125	Starting and Charging Theory.....	2
TRNS1126	Starting and Charging Lab.....	1
TRNS1193	Fuel Systems Lab I.....	1
TRNS1194	Fuel Systems I Theory.....	2
TRNS1197	Electrical Systems I Lab.....	2
TRNS1198	Electrical Systems I Theory.....	2

PowerSports

PowerSports Technology

Diploma 60 Credits

D

Students who wish to become skilled PowerSports mechanics must be capable of diagnosing mechanical failures quickly and accurately if they are to be in a position to repair the job at a fair salary return. Most types of two- and four-cycle small engines that are currently used to power lawn mowers, snowblowers, generators, garden tractors, rototillers, snowmobiles, ATVs and personal watercraft will be covered. Students who perform satisfactorily may find employment as service technicians, sales personnel and factory representatives, or they may wish to enter business for themselves. This program requires a mechanical aptitude and the ability to read and comprehend technical service manuals, understand and perform a variety of diagnostic procedures and work well with fellow employees and customers.

Course #	Course Title	Crds
	MN Transfer Electives	6
MRNT1120	Marine Starting and Charging Systems.....	3
MRNT2231	Engine Performance Rebuild and Diagnostics	5
PWST1302	Snowmobile I.....	5
PWST1304	Snowmobile Clutching.....	2
PWST1402	Chainsaws.....	2
PWST1404	Generators.....	2
PWST2302	Advanced Power Equipment.....	4
PWST2304	Motorcycles I.....	3
PWST2306	Snowmobile Drives and Suspensions.....	3
PWST2308	Advanced Snowmobiles	3
PWST2310	Motorcycles II.....	4
PWST2312	Advanced Motorcycle Systems.....	3
TRNS1100	Introduction to Shop Technology.....	4
TRNS1104	Transportation Electronics	3
TRNS1193	Fuel Systems I Lab.....	1
TRNS1194	Fuel Systems I Theory.....	2
TRNS1197	Electrical Systems I Lab.....	2
TRNS1198	Electrical Systems I Theory.....	2
TRNS2108	Power Hydraulics	2

COURSE DESCRIPTIONS

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M|State

Auto Body Collision Technology

ABCT 1100 Introduction to Auto Body 2 1/1/0
 This course is the study of auto body safety, shop operation procedures, power and hand tool use, shop equipment applications, frame measuring instruments, service literature, introduction to estimating guides, general service knowledge, professional work habits, industry standards and expectations.
Prerequisite: None
Corequisite: None

ABCT 1102 Auto Body Off Car Repair 4 2/2/0
 This course focuses on sheet metal repair processes used for minor auto body repairs. Instruction includes the use of tools and auto body industry equipment. Students learn skills of body filler and fiberglass repair along with corrosion protection. Environmental standards will be introduced.
Prerequisite: None
Corequisite: None

ABCT 1104 Auto Body Lab I 3 0/3/0
 This is a lab course in which students will build proficiency in the basic auto body skills of welding, sheet metal repair, corrosion protection, rust repair, body filler and fiberglass repair.
Prerequisite: None
Corequisite: None

ABCT 1106 Introduction to Refinishing 2 1/1/0
 This course teaches students refinishing safety, use of tools and equipment surface preparation and refinishing material application procedures.
Prerequisite: None
Corequisite: None

ABCT 1110 Panel Replacement 2 1/1/0
 This course covers the replacement of damaged panels using current industry procedures.
Prerequisite: TRNS1102
Corequisite: None

ABCT 1112 Auto Body Refinishing 4 1/3/0
 This course teaches the preparation for overall refinishing procedures, paint mixing and color matching. It also teaches skills in spot repair, blending and application of pinstriping and chip guard.
Prerequisite: TRNS1102
Corequisite: None

ABCT 1114 Auto Body Lab II 4 0/4/0
 In this lab course, students will build proficiency in the auto body skills of refinishing, corrosion protection, rust repair, glass repair and welding.
Prerequisite: ABCT1106 AND TRNS1118
Corequisite: None

ABCT 1116 Glass and Trim 2 1/1/0
 This course teaches students safe procedures for the removal, replacement and repair of movable glass. It also covers the application of various methods of attachments on auto body trim and hardware.
Prerequisite: TRNS1102
Corequisite: None

ABCT 1118 Basic Electrical 2 1/1/0
 This course involves the understanding of Ohm's law, operation of electrical circuits, multimeter usage, schematic interpretation and wiring repair.
Prerequisite: None
Corequisite: None

ABCT 2202 Unibody/Frame Alignment 5 2/3/0
 This course focuses on safe repair of unitized and conventional frame vehicles. Students study suspension systems and learn procedures for wheel alignment.
Prerequisite: ABCT1104
Corequisite: None

ABCT 2204 Body Shop Operations 3 2/1/0
 Emphasis in this course is on proper shop management procedures including inventory management, parts and repair ordering, payroll procedures, employee/employer relations, hiring/dismissal procedures, customer relations, estimating procedures, insurance procedures and insurance coverages.
Prerequisite: None
Corequisite: None

ABCT 2206 Mechanical Components I 2 1/1/0
 Students will learn principles of removing and installing mechanical parts in front-wheel and rear-wheel drive vehicles. Students also study principles of air conditioning, evacuate and replace components and change air conditioning systems.
Prerequisite: None
Corequisite: None

ABCT 2208 Major Collision Lab I 3 0/3/0
 Students build proficiency in their auto body repair skills in this lab course. Emphasis is on major collision repair. Students will also be expected to exhibit the dependability, attitudes and work habits that employers expect of their employees.
Prerequisite: ABCT2202
Corequisite: None

ABCT 2210 Collision Damage Repair 5 2/3/0
 Students learn tie-down and clamping techniques and measuring and pulling procedures to repair direct and indirect damage on open and closed panels. Replacement of damaged panels is also covered.
Prerequisite: ABCT1104
Corequisite: None

ABCT 2212 Mechanical Components II 2 1/1/0
 Students will continue to develop skills working on replacement of mechanical components damaged in collisions. Students will learn to identify potential damage areas resulting from varied types of collisions, to be included in estimates of damage repairs.
Prerequisite: ABCT2206
Corequisite: None

ABCT 2214 Major Collision Lab II 5 0/5/0
 This is a lab course in which students will build proficiency in major collision repair and in complete refinishing and spot refinishing.
Prerequisite: ABCT2208
Corequisite: None

ABCT 2216 Spot Repair and Paint Blending 2 0/2/0
 This course provides a workplace-like setting in which students perform spot repairs and spot repair refinishing. Emphasis is on proper spot repair procedures and paint blending skills.
Prerequisite: ABCT1106
Corequisite: None

ABCT 2222 Auto Body Internship 1 0/0/1
 This course is designed by the student and advisor in cooperation with industry to provide an on-the-job training experience for the student. The student will prepare an internship plan consistent with 48 hours of internship time. The plan should reflect the internship site, student knowledge, prior course work and skills. This course will provide the student with an opportunity to integrate the skills, knowledge and concepts gained in previous course work into an occupational experience.
Prerequisite: ABCT1104
Corequisite: None

Accounting

ACCT 1000 Business Math 2 2/0/0
 This course covers commonly occurring business-related calculations and their application to accounting and other business functions.
Prerequisite: None
Corequisite: None

ACCT 1012 Principles of Bookkeeping 3 2/1/0
 This course covers the basic accounting cycle for service and merchandising businesses. Topics include the analyses of business transactions, recording transactions in a variety of journals, payroll procedures and preparation of financial reports.
Prerequisite: None
Corequisite: None

ACCT 1101 Payroll 3 2/1/0
 This course covers the various tax laws pertaining to the computation and payment of salaries and wages. Topics include preparation of employment records, payroll registers, time cards, employee earnings records and government payroll reports.
Prerequisite: None
Corequisite: None

ACCT 1108 Business Math/Calculators 3 2/1/0
 This course covers commonly occurring business-related calculations, application of these calculations to accounting and other business functions and use of the touch system on the computer number pad keyboard.
Prerequisite: None
Corequisite: None

ACCT 1120 Business Law 3 3/0/0
 This course is an introduction to the principles of law as they apply to citizens and businesses. Topics include the court system, legal system, contracts, negotiable instruments, and agency and employer/employee relationships.
Prerequisite: None
Corequisite: None

ACCT 1124 Spreadsheet Applications 3 2/1/0
 This course covers the use of a computerized spreadsheet system for accounting applications. Topics include document creation, storage and retrieval, editing, printing, creating charts, database applications and file distribution.
Prerequisite: CPTR1104
Corequisite: None

ACCT 2201 Financial Accounting I Lab 1 0/1/0
 Major content will be the practical application of concepts introduced in the lecture course.
Prerequisite: None
Corequisite: ACCT2211

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
ACCT 2202	Financial Accounting II Lab	1	0/1/0	ACCT 2620	Intermediate Accounting I	4	3/1/0
This course is the lab course associated with Financial Accounting II (ACCT2212). Students must be enrolled in ACCT2212 to enroll in this course. Major content will be the practical application of concepts introduced in the lecture course. Prerequisite: None Corequisite: ACCT2212				This course is a comprehensive study of accounting theory and concepts with an analysis of the influence on financial accounting by various boards, associations and governmental agencies. Topics may include the income statement, balance sheet, statement of cash flows, and various asset, liability and equity sections. Prerequisite: ACCT2212 Corequisite: None			
ACCT 2203	Managerial Accounting Lab	1	0/1/0	ACCT 2622	Intermediate Accounting II	4	3/1/0
This course is the lab course associated with Managerial Accounting (ACCT2213). Students must be enrolled in ACCT2213 to enroll in this course. Major content will be the practical application of concepts introduced in the lecture course. Prerequisite: ACCT2212 Corequisite: None				This course is the continuation of a comprehensive study of accounting theory and concepts with an analysis of the influence on financial accounting by various boards, associations and governmental agencies. Topics include the income statement, balance sheet, statement of cash flows, and various asset, liability and equity sections. Prerequisite: ACCT2620 Corequisite: None			
ACCT 2211	Financial Accounting I	3	3/0/0	ACCT 2630	Fund/Nonprofit Accounting	3	2/1/0
This course introduces students to the content and concepts underlying financial statements. Course content includes study of the accounting model, financial statements, merchandise accounting, internal controls and accounting for assets. The course will focus on using accounting information for decision making. Prerequisite: None Corequisite: None				This course focuses on the fundamentals of fund/nonprofit accounting. It prepares students to apply basic governmental accounting principles and prepare financial statements for fund/nonprofit organizations. Prerequisite: ACCT2212 Corequisite: None			
ACCT 2212	Financial Accounting II	3	3/0/0	ACCT 2640	Accounting Internship	1 - 4	None
This course continues the introduction to the content and concepts underlying basic financial statements. Major content includes income measurement, accrual accounting, accounting theory, time-value of money, accounting for current and long-term liabilities, owner's equity for sole proprietorships, partnerships and corporations, statement of cash flows and financial statement analysis. Prerequisite: None Corequisite: ACCT2211				This course provides students with actual work experience in accounting careers. Student is responsible for obtaining accounting internship. Prerequisite: This internship is for currently enrolled Accounting Majors only and must be approved by instructor. Corequisite: None			
ACCT 2213	Managerial Accounting	3	3/0/0	ACCT 2642	Accounting Internship	2	0/0/2
This course focuses on strategic decision-making related to cost analysis and cost management. Prerequisite: ACCT2212 OR ACCT2211 Corequisite: None				This course provides students with actual work experience in accounting careers. A competency-based internship plan is developed for each student. Prerequisite: None Corequisite: None			
ACCT 2215	Computerized Accounting Applications	3	2/1/0	ACCT 2643	Accounting Internship	3	0/0/3
This course is an introduction to computerized accounting applications and software used in the business environment. Topics include general ledger accounting, payroll procedures, accounts receivable, accounts payable, inventory and depreciation. Prerequisite: ACCT1012 AND CPTR1104 OR ACCT1012 AND BUS1120 OR ACCT1012 AND CSCI1155 OR ACCT2211 AND CPTR1104 OR ACCT2211 AND BUS1120 OR ACCT2211 AND CSCI1155 Corequisite: None				This course provides students with actual work experiences in accounting careers. A competency-based internship plan is developed for each student. Prerequisite: None Corequisite: None			
ACCT 2216	QuickBooks	3	2/1/0	ACCT 2644	Special Problems I	1	0/1/0
This course is an introduction to computerized accounting applications and software used in the business environment. Topics may include general ledger accounting, payroll procedures, accounts receivable, accounts payable, inventory and depreciation. Prerequisite: BUS1120 AND ACCT2211 OR CPTR1104 AND ACCT2211 Corequisite: None				The intent of this course is to allow flexibility in providing learning experiences to meet the special needs of both the student and the college. Prerequisite: None Corequisite: None			
ACCT 2217	Microsoft Dynamics GP	3	2/1/0	ACCT 2645	Special Problems II	2	0/2/0
This course covers the use of computerized accounting applications and software used in a mid-sized business environment. Prerequisite: ACCT2211 AND CPTR1104 Corequisite: None				The intent of this course is to allow flexibility in providing learning experiences to meet the special needs of both the student and the college. Prerequisite: None Corequisite: None			
ACCT 2255	Income Tax-Individual	3	2/1/0	ACCT 2800	Accreditation Council for Accountancy and Taxation Exam Review	3	2/1/0
This course provides an explanation and interpretation of the Internal Revenue Code as applied to individual income tax returns. Topics covered include filing requirements, filing status, gross income and exclusions, business income and expenses, tax credits and estimated taxes. Prerequisite: None Corequisite: None				This course is designed to prepare students for the Accreditation Council for Accountancy and Taxation (ACAT) exam. It also serves as a capstone course covering financial accounting, internal control, professional ethics, business consulting services, managerial accounting, business law and taxation. Prerequisite: ACCT1101 AND ACCT1120 AND ACCT2213 AND ACCT2255 AND ACCT2620 Corequisite: ACCT2622			
ACCT 2256	Income Tax-Business	3	2/1/0	Medical Administrative Assistant			
This course provides an explanation and interpretation of the Internal Revenue Code as applied to sole proprietorships, partnerships and corporations. Topics include business income, expenses, business tax credits, withholding and payment of established estate and trust tax issues. Prerequisite: ACCT2255 Corequisite: None				<hr/>			
ACCT 2291	Volunteer Income Tax Assistance	1	0/1/0	ADMM 1110	Medical Documentation Fundamentals	4	2/2/0
This course prepares students for preparation of federal and state income tax returns for individuals. The emphasis is on form preparation with the use of computerized tax preparation software. Prerequisite: ACCT2255 Corequisite: None				This course covers the fundamentals of health care documentation and medical record production, legal and ethical issues and responsibilities, text expansion software usage, utilization of medical references, and grammar and punctuation in health care-related communication. Prerequisite: None Corequisite: None			
ACCT 2295	Certified Bookkeeper Review Course	3	3/0/0	ADMM 1112	Speech Recognition Software	1	0/1/0
This course is designed to prepare students to take and pass the national Certified Bookkeeper examination in order to obtain the Certified Bookkeeper designation conferred by the American Institute of Professional Bookkeepers (AIPB). The course content will include adjustments and error correction, payroll and depreciation, inventory and internal controls. Prerequisite: ACCT2211 Corequisite: None				This course exposes students to speech (voice) recognition software. This type of software is used to create medical reports in health care facilities. Speech recognition software enables individuals to train a computer to recognize their voices and use that computer to create, edit and format documents. Prerequisite: None Corequisite: None			
				ADMM 1122	Medical Office Procedures	4	3/1/0
				This course offers hands-on training in the tasks performed by medical administrative personnel in medical office settings. Topics include health care careers, legal and ethical responsibilities, medical appointments and calendars, professional communication			

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
	including telephone techniques, health information responsibilities, meeting and travel arrangements, introduction to medical office management and career search strategies. Prerequisite: None Corequisite: HLTH1116				and insurance purposes. The course utilizes practical examples to reinforce coding principles and provides an introduction to computer applications related to coding. Prerequisite: ADMM1152 Corequisite: None		
ADMM 1140	Medical Language Applications	3	3/0/0	ADMM2258	Certified Professional Coder Examination Review	1	1/0/0
This course provides an in-depth exploration of medical terms used in pharmacology, radiology, laboratory and pathology, surgery, psychiatry, oncology, podiatry and physical and occupational therapy. Spelling, proofreading and analysis of medical documentation will be reviewed along with a study of a variety of medical documents. A solid foundation of medical terminology is cultivated in this course. Prerequisite: HLTH1116 Corequisite: None				This course prepares students to take the Certified Professional Coder (CPC) examination. Review of CPT, ICD and HCPCS II coding will be an integral part of this course. Practice examinations will be taken under timed conditions. The course assists the student in establishing a personal plan for continued development in preparation for the certification examination. Prerequisite: None Corequisite: None			
ADMM 1150	Medical Billing/Insurance	4	3/1/0	ADMM2260	Certified Professional Coder - Hospital Examination Review	1	1/0/0
This course provides information related to medical billing and health insurance. Topics covered include billing and statement preparation in the medical office, introduction to medical coding, types of health insurance coverage, insurance claim processes and related ethical and legal issues. Prerequisite: None Corequisite: HLTH1116				This course prepares students to take the Certified Professional Coder - Hospital (CPC-H) examination. Review of CPT, ICD and HCPCS II coding will be an integral part of this course. Practice examinations will be taken under timed conditions. The course assists the student in establishing a personal plan for continued development in preparation for the certification examination. Prerequisite: ADMM2252 Corequisite: None			
ADMM 1152	Outpatient Coding	4	3/1/0	ADMM2268	Advanced Medical Transcription	3	1/2/0
This course is an introduction to medical coding and emphasizes coding in medical offices and other outpatient care facilities. Course topics include ICD-9 and ICD-10, CPT and HCPCS procedural coding, and legal and ethical issues related to outpatient coding practices. Prerequisite: HLTH1116 Medical Terminology OR HLTH1108 Introduction to Anatomy and Physiology Corequisite: None				This course covers transcription of advanced original health care dictation using advanced proofreading, editing and research skills, while meeting progressively demanding accuracy and productivity standards. Prerequisite: ADMM1162 Corequisite: None			
ADMM 1160	Beginning Medical Transcription	3	1/2/0	ADMM2270	Medical Office Simulation	2	1/1/0
This course covers the transcription of basic health care dictation, incorporating skills in the English language, technology, medical knowledge, proofreading, editing and research, while meeting progressively demanding accuracy standards. Prerequisite: None Corequisite: HLTH1116 AND ADMM1110				This course is a capstone experience for students enrolled in a medical administrative program. Medical office responsibilities such as appointment scheduling, registration, health information management, and billing and financial operations are included in this project-based course. This course should be taken in the last semester prior to graduation as students will employ skills mastered over the course of their program enrollment. Students will develop 10-key skills necessary for billing and insurance practices in a medical facility. Prerequisite: ADMM1122 Corequisite: None			
ADMM 1162	Intermediate Medical Transcription	3	1/2/0	ADMM2272	Medical Transcription Practicum	3	0/3/0
This course is designed to teach the transcription of intermediate original health care dictation using intermediate proofreading, editing and research skills, while meeting progressively demanding accuracy and productivity standards. Prerequisite: ADMM1160 Corequisite: None				This course provides an office-simulation setting to give students experience in performing medical transcription on all levels of reports, multiple report types and multiple specialties. The student will apply all previously learned skills in utilizing references and word expansion techniques. Prerequisite: ADMM1162 Corequisite: None			
ADMM 2122	Medical Office Management	3	3/0/0	ADMM2276	Evaluation and Management Coding Practices	3	2/1/0
This course examines the many responsibilities of a medical office manager. Whether in a small private practice or in a large group practice, a medical office manager must be aware of current regulations in the health care industry and how these regulations affect the operations of a health care organization. Office management, business operations, human resources, financial management and marketing for health care organizations are also explored. Prerequisite: ADMM1122 Corequisite: None				This course will teach students to appropriately assign evaluation and management codes based on physician documentation. Students will abstract information from health care documentation and assign appropriate levels of service. Prerequisite: ADMM1152 Corequisite: None			
ADMM 2150	Medicare Coding and Billing Applications	3	2/1/0	ADMM2290	Medical Administrative Internship	3	0/0/3
This course will teach the principles of Medicare coverage, billing, coding and payment for both inpatient and outpatient services. It will provide students with the knowledge and tools for developing the skills needed to submit accurate claims to Medicare, maintain compliance, prevent potential missed revenue and avoid unnecessary claim and coding denials. Prerequisite: None Corequisite: ADMM1152				This course provides the student with practical occupational experience in a health care-related facility. Each internship is an individualized experience. Each student prepares a training plan in conjunction with the training site to provide guided experiences related to the skills and knowledge acquired in the medical administrative programs. Prerequisite: None Corequisite: None			
ADMM 2154	Hospital Billing	2	1/1/0	ADMM2292	Medical Transcription Internship	3	0/0/3
This course covers billing processes related to the hospital claim form. Billing for inpatient, ambulatory surgery and hospital-based outpatient services is covered. Prerequisite: ADMM1150 OR ADMM1152 Corequisite: None				This course provides the student with practical occupational experience in a health care-related facility. Each internship is an individualized experience. Each student prepares a training plan in conjunction with the training site to provide guided experiences related to the skills and knowledge acquired in the medical transcription field. Prerequisite: ADMM2268 Corequisite: None			
ADMM2234	Professional Development	2	2/0/0				
This course covers the development of professional work behaviors and communication, analysis of the dynamics of the health care work environment and exploration of professional development and career opportunities relating to medical administrative/support staff. Prerequisite: ADMM1122 Medical Office Procedures or ADMM1152 Medical Billing and Insurance or ADMM1162 Intermediate Medical Transcription Corequisite: None							
ADMM2235	RMT Exam Review	1	1/0/0				
This course prepares students to take the Registered Medical Transcriptionist (RMT) examination. Review of medical transcription rules and language will be integral components of this course. Practice examinations will be taken under timed conditions. The course will assist the student in determining a plan of study and continued learning in the area of medical language in preparation for the RMT certification examination. Prerequisite: ADMM1162 Intermediate Medical Transcription Corequisite: None							
ADMM2252	Advanced Coding	3	2/1/0				
This course is a continuation of ADMM1152 Outpatient Coding. The student will apply coding knowledge by abstracting information from outpatient records for billing							

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
ADMS 1100	Keyboarding I This course covers the development of keyboarding and formatting techniques. Emphasis is on building speed and accuracy in the operation of the alphabetic, numeric, symbol and service keys and in introducing document formatting concepts. Proofreading skills are stressed. Prerequisite: None Corequisite: None	3	1/2/0	ADMS 1140	Internship This course is designed to provide the student with a purposeful occupational experience in the administrative support careers field. Each internship is an individualized experience. A training plan is created for each student in conjunction with the training site to provide experience related to the skills and knowledge acquired in the program. Prerequisite: None Corequisite: None	2	0/0/2
ADMS 1102	Keyboarding II This course covers advanced formatting and text editing techniques. Emphasis is on building speed and increasing accuracy in the operation of the alpha, numeric and symbol keys and in developing text editing concepts, critical thinking and decision making. Enhanced proofreading, editing and revising skills are developed. Prerequisite: ADMS1100 Corequisite: None	3	1/2/0	ADMS 1142	Career Internship I This is a career enrichment course designed to give students an in-depth understanding of professional employment expectations and opportunities. This course will emphasize the expectations career professionals face in today's workplace regarding interpersonal communication, decision making, ethical behavior, policies, professional conduct, project completion, team building, and time and resource management. Students will use course concepts and skills to complete a professional project in their area of career interest. Prerequisite: None Corequisite: None	2	0/0/2
ADMS 1104	Skillbuilding This course is designed to increase keyboarding speed and improve accuracy through personal goal setting, error analysis and intensive corrective practice work. Prerequisite: None Corequisite: None	1	0/1/0	ADMS 1150	Intro to Windows This course covers basic information about computer hardware and software and the use of the Windows operating environment for application packages. Prerequisite: None Corequisite: None	1	0/1/0
ADMS 1108	Data Entry This course introduces the basic principles and techniques of operating data entry equipment. The course also develops a skill level proficiency in data entry. Prerequisite: None Corequisite: None	3	1/2/0	ADMS 1152	Intro to Word Processing This course covers the operation of personal computer hardware and the use of word processing applications to perform word processing functions. Prerequisite: None Corequisite: None	1	0/1/0
ADMS 1110	Word Processing This course gives students an in-depth understanding of the word processing techniques needed to facilitate the production, documentation, storage and relay of information. The course stresses increased proficiency in the computer production of a variety of business documents. Prerequisite: None Corequisite: None	3	2/1/0	ADMS 1154	Intro to Spreadsheets This course covers the operation of personal computer hardware and the use of spreadsheet software. Prerequisite: None Corequisite: None	1	0/1/0
ADMS 1112	Desktop Publishing This course introduces the concepts, terminology, techniques and applications of desktop publishing and incorporates advanced document processing skills. The student develops skills in critical thinking, decision making and creativity. In addition, the student will reinforce collaborative learning in planning, designing and evaluating business documents. Prerequisite: None Corequisite: None	3	1/2/0	ADMS 1156	Intro to Database This course covers the operation of personal computer hardware and the use of database software. Prerequisite: None Corequisite: None	1	0/1/0
ADMS 1116	Business Communications I This course covers composing, editing and proofreading memos, letters and other business documents. The principles of grammar, punctuation, spelling and word usage are developed and applied. The application of teamwork and critical-thinking skills are included in the course. Prerequisite: Completion of ENGL0050 and ENGL0040 with a grade of C or higher OR ENGL0096 with a grade of C or higher OR placement in ENGL1101. Corequisite: None	3	2/1/0	ADMS 1158	Intro to Presentation Software This course covers the operation of personal computer hardware and the use of presentation software. Prerequisite: None Corequisite: None	1	0/1/0
ADMS 1120	Office Procedures This course covers procedures relevant to a traditional office and new procedures relevant to an electronic automated office. Topics may include work organization, time management, ergonomics, scheduling, organizing meetings, processing mail, telephone procedures and arranging travel. The course also provides the student with an in-depth exposure to the role and responsibilities of a receptionist. Prerequisite: None Corequisite: None	3	2/1/0	ADMS 1160	Intro to Internet This course teaches the fundamentals of the World Wide Web and its operation. Students will learn to use an Internet browser to browse Web pages, understand Web page management techniques, save and print material obtained from a website and communicate with others on the Web. Prerequisite: None Corequisite: None	1	0/1/0
ADMS 1124	Proofreading/Editing This course provides instruction and practice to improve proofreading and editing skills. Students detect and correct errors in capitalization, content, format, grammar, keyboarding, number usage, punctuation, spelling, word division and word usage. Students use standard revision and editing symbols to edit for clarity and conciseness. Prerequisite: None Corequisite: None	2	1/1/0	ADMS 1162	Intro Desktop Publishing This course introduces the concepts, terminology, techniques and applications of desktop publishing. Prerequisite: None Corequisite: None	1	0/1/0
ADMS 1128	Records/Database Management This course is an introduction to the procedures and rules for indexing and storing documents in alphabetic, numeric, geographic, subject and chronological systems. It also includes an introduction to the procedures for managing document/record storage systems. Applications include electronic storage and retrieval using database software for microcomputers. Prerequisite: None Corequisite: None	3	2/1/0	ADMS 1190	Keyboarding II This course covers advanced formatting and text editing techniques that focus on developing enhanced proofreading, editing and revising skills. Emphasis is on building speed and increasing accuracy in the operation of the alpha, numeric and symbol keys and in developing text editing concepts, critical thinking and decision-making. Prerequisite: None Corequisite: ADMS1100	1	0/1/0
ADMS 1130	Office Software Applications This course is designed to provide students with software application skills in spreadsheets, databases and email as used in the office environment. Topics include applying document formatting, managing workbooks/worksheets, demonstrating importing and exporting of data, refining queries, generating forms and reports, organizing items using folders, customizing calendar settings, scheduling meetings and appointments, and creating groups and distribution lists. Prerequisite: None Corequisite: None	3	2/1/0	ADMS 1200	Keyboarding I/Keyboarding II This course covers the development of keyboarding and formatting techniques. Emphasis is on building speed and accuracy in the operation of the alphabetic, numeric and symbol keys, as well as introducing document formatting while progressing to more advanced concepts. This course will also cover advanced formatting and text editing techniques that focus on developing enhanced proofreading, editing and revising skills. Prerequisite: None Corequisite: None	4	2/2/0
				ADMS 1242	Career Internship II This is the second-level enrichment course designed to provide students with real-life experience in a professional environment by applying academic business principles. The course will emphasize more in-depth projects and tasks within the workplace. Emphasis will be on interpersonal communication, decision making, problem solving, organization and project management. Students will be required to accept higher-level responsibilities, tasks and projects as assigned per the site supervisor or faculty member. Prerequisite: ADMS1142 Corequisite: None	2	0/0/2

ADMS 1300	Word Processing/Advanced Word Processing	4	2/2/0
This course provides students with an in-depth understanding of the word processing techniques needed to facilitate the production, documentation, storage and relay of information. This course will stress increased proficiency in the computer production of a variety of business documents. Students will also work with more complicated projects that incorporate many of the upper-level skills required in the advanced portion of this course.			
Prerequisite: None			
Corequisite: None			
ADMS 2124	Computer Technology Information	3	2/1/0
This course provides instruction on advanced microcomputer techniques. Topics include file transfer options, malicious programs, software management, networking and security, data communications and software evaluation, selection and installation. The investigation of new technologies and future trends in technologies will also be covered in this course.			
Prerequisite: None			
Corequisite: None			
ADMS 2202	Advanced Word Processing	3	2/1/0
This course will provide students who have attained a basic understanding of word processing software with a more in-depth knowledge of the product. Students will work with more complicated projects that incorporate many of the upper-level skills required at this level.			
Prerequisite: ADMS1110			
Corequisite: None			
ADMS 2205	Advanced Word Processing	1	0/1/0
This course provides students with an in-depth understanding of advanced word processing techniques needed to facilitate the production, documentation, storage and relay of information. The course will stress increased proficiency in the computer production of a variety of business documents. Students will also work with more complicated projects that incorporate many of the upper-level skills required at this level.			
Prerequisite: ADMS1110			
Corequisite: None			
ADMS 2212	Integrated Office Software Applications	3	2/1/0
This course is designed to enhance and reinforce software skills through project-based activities by extensive use of integrating applications using word processing, spreadsheets, databases, presentations, media development and basic Web page development for both actual and simulated business applications. This course will improve Internet search skills, develop teamwork and enhance critical-thinking and problem-solving skills as will be experienced in the office setting.			
Prerequisite: ADMS1130 OR CPTR1104			
Corequisite: None			
ADMS 2216	Business Communications II	3	2/1/0
This course is designed to advance the student's knowledge of formatting and editing techniques for business writing. It will provide an in-depth concentration on reviewing and/or further development of memos, letters and a wide variety of other business documents, as well as a review of ongoing practical applications of grammar, word and language mechanics. This course will also advance the student's knowledge in proofreading, editing and revising techniques for business writing in diverse business situations. Teamwork and critical thinking skills will also be included in this course for collaborative and individual writing.			
Prerequisite: ADMS1116			
Corequisite: None			
ADMS 2218	Presentation Applic (PPT)	1	0/1/0
This course covers applications of presentation software using the personal computer. Topics include custom formatting, animation, hyperlinks, Web pages, linking and embedding objects, and interactive presentations.			
Prerequisite: None			
Corequisite: None			
ADMS 2222	Adv Desktop Publishing	3	1/2/0
This course expands on the concepts and applications developed in the introductory desktop publishing class. The student will develop advanced skills in all aspects of desktop publishing, including the development of Web pages.			
Prerequisite: ADMS1112			
Corequisite: None			
ADMS 2240	Internship	3	0/0/3
This course is designed to provide students with a purposeful occupational experience in the administrative support careers field. Each internship is an individualized experience. A training plan is created for each student in conjunction with the training site to provide experience related to the skills and knowledge acquired in the program.			
Prerequisite: None			
Corequisite: None			

Administrative Management Technology

ADMT 1173	Microsoft Office Access Certification	1	0/1/0
This course prepares participants to sit for the Microsoft Office Access MCAS (Microsoft Certified Application Specialist) certification. Class outcomes are aligned with certification objectives. Exam objectives are categories of examination tasks identified by subject-matter experts that certify an ability to productively use Microsoft Office programs. These categories are organized into skill sets representing the more basic functions of each Office program.			
Prerequisite: CPTR1104			
Corequisite: None			
ADMT 1174	Microsoft Office PowerPoint Certification	1	0/1/0
This course prepares participants to sit for the Microsoft PowerPoint certification (Microsoft Office certification). Class outcomes are aligned with certification objectives. Exam objectives are categories of examination tasks identified by subject-matter experts that certify an ability to productively use Microsoft Office programs.			
Prerequisite: CPTR1104			
Corequisite: None			
ADMT 2110	Topics in Administrative Management Technology	1	0/1/0
The goal of this course is to introduce students to a range of topics in the career field of the administrative professional. Topics will vary each semester and could range from office technology trends to soft skills to employment trends. Course may be repeated for credit with a change in subtitle.			
Prerequisite: Permission of Instructor			
Corequisite: None			
ADMT 2222	Event Planning	2	2/0/0
This course explores the principles and practices involved in planning and administrating a special business event. Topics will include differentiating the various types of business events, analyzing the process and procedures necessary to plan an event, identifying various resources needed to organize an event and venue selection criteria.			
Prerequisite: None			
Corequisite: None			
ADMT 2224	Applied Event Management	1	0/1/0
Students in this course will apply classroom and textbook principles by collaborating with other students and faculty to plan, promote and execute an authentic event on campus, working with area businesses and organizations. This course is a continuation of ADMT2222.			
Prerequisite: ADMT2222			
Corequisite: None			
ADMT 2236	Administrative Project Management	3	2/1/0
Project management is a powerful set of tools and practices that provides a systematic approach to planning, organizing, controlling and leading a project to successful completion. This course guides students through a step-by-step process for managing projects from the initial planning stage to final completion and evaluation. Successful implementation of project management processes is dependent on developed interpersonal skills. Therefore, this course also compares and contrasts project management and self-management skills by reviewing the discipline of emotional intelligence.			
Prerequisite: CPTR1104			
Corequisite: None			
ADMT 2300	Office Graphics and Presentations	3	2/1/0
This course is designed to provide the student with the design and layout techniques of available software applications needed to produce business publications and visual presentations. Emphasis is on available software tools, presentation options and design, as well as presentation considerations of the target audience. Upon completion, the student should be able to demonstrate the ability to design and produce business presentations and publications.			
Prerequisite: CPTR1104			
Corequisite: None			
ADMT 2600	Trends in Office Technology	3	2/1/0
This course is designed to address current trends in the administrative professional industry, with emphasis on the use of office technology. Topics will vary but could include trends in electronic mail, multimedia interaction, presentation hardware and software, and Internet technologies and applications relevant to the business world. Upon completion, the student should be able to demonstrate an awareness of current technological applications for the modern office.			
Prerequisite: CPTR1104			
Corequisite: None			
ADMT 2900	Administrative Professional Internship	1-3	None
This course provides students with actual work experience in an administrative professional career. A training plan is created for each student in conjunction with the training site to provide experience related to the skills and knowledge acquired in the program. Each internship is an individualized experience. Therefore, this course offers a flexible, variable credit experience. The student may choose from 1, 2 or 3 credits, depending on the number of hours pre-arranged with the internship site supervisor. Each credit will require 45 hours of on-the-job learning.			
Prerequisite: Instructor approval			
Corequisite: None			

Automotive Service Technology

AMST 1102	Alignment and Suspension I	3	1/2/0
This course focuses on the various types of suspension systems currently in use. Systems covered include McPherson strut, leaf spring, coil spring and torsion bar. Also covered will be caster, camber and toe, and other alignment angles; wheel balance using the latest road force technology; and operation, diagnosis and repair of manual and power steering systems.			
Prerequisite: None			
Corequisite: TRNS1102			
AMST 1105	Brakes I	3	1/2/0
This course teaches the basic principles of disc and drum brakes, hydraulic system fundamentals, parking brakes and power assist units. Emphasis is placed on operation, diagnosis and repair of various types of brake systems. Basic operation of anti-lock brake systems will also be covered.			
Prerequisite: None			
Corequisite: TRNS1102			
AMST 1109	Starting and Charging	3	2/1/0
This course involves the understanding and service of batteries, charging systems and starting systems. The student will perform tests on these items using bench testing and vehicle testing. Repair will involve rebuilding items, as well as weighing the cost of replacement.			
Prerequisite: None			
Corequisite: TRNS1102			
AMST 1111	Automotive Electronics	3	2/1/0
This course involves understanding Ohm's law, multimeter usage, schematic reading, operation of electrical circuits and electronic components. The student will perform electrical tests and repairs on training boards as well as various vehicles. This course is a Prerequisite: for all second-year automotive courses.			
Prerequisite: None			
Corequisite: TRNS1102			
AMST 1114	Basic Maintenance Service	1	1/0/0
This course will provide the introduction to basic vehicle maintenance. Included will be identification of service points and procedures required for maintenance. Fluid types, brake inspection, tire rotation and service information will be addressed.			
Prerequisite: None			
Corequisite: None			
AMST 1116	General Automotive Service	5	3/2/0
This course will involve concepts and hands-on application in multiple areas of auto repair. Included will be small areas of brakes, electrical, starting and charging systems, and tune-up. This course provides basic repair knowledge of service that is performed in a maintenance environment.			
Prerequisite: None			
Corequisite: None			
AMST 1122	Engines I	3	2/1/0
This course covers the fundamentals of internal combustion engine operation, repair and maintenance. The procedures for removal, replacement, diagnosing, rebuilding and assembly are presented. Proper tool and equipment application and failure diagnosis are emphasized.			
Prerequisite: None			
Corequisite: TRNS1102			
AMST 1126	Engines II	3	1/2/0
This course covers the disassembly, diagnosis, measurement, service, assembly and adjustment of engines and components. Cylinder heads, valve trains, cylinder block assemblies, cooling and lubrication systems are thoroughly covered.			
Prerequisite: None			
Corequisite: None			
AMST 1132	Drive Trains I	3	2/1/0
This course covers service and theory of operation with clutch, manual transmission, drive shaft and drive axle systems. Service will involve removal, disassembly, repair, reassembly and adjustment of the mentioned items. Diagnostics and repair of noise vibration and harshness in the drive train system will also be performed.			
Prerequisite: None			
Corequisite: None			
AMST 1136	Drive Trains II	3	1/2/0
This course covers drive axles, drive shafts, front and rear wheel bearings and analysis of vehicle noise vibration and harshness. Theory, service skills and diagnosis are covered on bench and in-vehicle units. Drive line phasing, alignment and balance are covered.			
Prerequisite: None			
Corequisite: None			
AMST 2201	Alignment and Suspension II	3	2/1/0
This is a continuation course from the Alignment and Suspension I class. The student will perform repairs and adjustments pertaining to wheel alignments and work with electrical sensors and controls affecting a vehicle's stability control. Diagnostics and repair of steering columns and supplemental restraints also will be covered.			
Prerequisite: None			
Corequisite: None			
AMST 2206	Body Electrical/Mechanical I	3	1/2/0
This course teaches diagnosis and repair of interior and exterior lighting, safety			

devices, comfort systems, and door, window and seat control systems. The student will use wiring diagrams to pinpoint body electrical concerns. Window, door and seat control service will also be performed. Common vehicle accessories will be addressed.			
Prerequisite: None			
Corequisite: TRNS1102			
AMST 2209	Body Elec/Mechanical II	3	1/2/0
This course focuses on computer-controlled body components and safety systems. Diagnostics will involve the use of scan tools, multimeters and lab scopes applied to a variety of body controlled devices. Students will learn how the various controllers communicate with each other through a variety of bussed circuits.			
Prerequisite: None			
Corequisite: None			
AMST 2211	Exhaust Analysis Fuel Sys	3	2/1/0
This course will cover the various emission devices used on an automobile as well as the fuel delivery to maintain an efficient operating engine. Items covered will be PCV systems, EGR systems, air injection systems, evaporative systems, catalytic converters and fuel injection controls. Students will diagnose and repair problems using a variety of equipment on project vehicles.			
Prerequisite: None			
Corequisite: None			
AMST 2214	Electronic Powertrain Control I	3	2/1/0
This course will cover the introduction to vehicle computer systems and related components that assist in the management of engine fuel, ignition and emission systems. Sensor inputs, management operation and operational commands are addressed.			
Prerequisite: None			
Corequisite: None			
AMST 2218	Electronic Powertrain Control II	3	1/2/0
In this course, students will study the many electronic control systems used on today's passenger cars and light trucks. Second-generation on-board diagnostics strategy will be covered for ignition, fuel and emissions systems. The course will also incorporate hybrid technology, high pressure gas fuel injection, and diesel injection operation and testing.			
Prerequisite: TRNS1102 AND AMST1111			
Corequisite: None			
AMST 2220	Ignition Systems	3	2/1/0
This course will cover the operation of the ignition system. StudentS will learn how various ignition systems work so they will have the understanding to diagnose and repair ignition problems.			
Prerequisite: None			
Corequisite: None			
AMST 2225	Brakes II	3	2/1/0
This class is a continuation of AMST 1105 Brakes I. Students will look at a progression of anti-lock brake, traction control, electronic stability control and manufacturer variations of these systems. Students will perform scan tool diagnostics, circuit analysis, circuit repair and bleeding procedures involving anti-lock brake systems. The student will perform on-car operations with brake part replacement, machining of drums and rotors, and hydraulics.			
Prerequisite: None			
Corequisite: None			
AMST 2233	Automatic Transmission I	3	2/1/0
This course involves the principles of the many systems combined into an automatic transmission. The student will understand planetary gearing, clutch operation, band application and one-way clutching as it pertains to power flow through the transmission. The student will disassemble and make necessary adjustments and repairs on a variety of transmissions. The student will perform transmission fluid and filter changes where applicable.			
Prerequisite: AMST1111 AND TRNS1102			
Corequisite: None			
AMST 2237	Automatic Transmissions II	3	1/2/0
The student will practice many of the procedures used in transmission diagnosis, vehicle repair sequences, scan tool data interpretation and diagnosis, transmission removal, installation and adjustment. Transmission cooling system diagnosis and service are also covered.			
Prerequisite: None			
Corequisite: AMST2233			
AMST 2240	Heating Ventilation and Air Conditioning	3	1/2/0
This course teaches the principles of heating, air conditioning and ventilation systems. Types and designs, component variations, diagnosis, testing and repair are studied and practiced on functioning units. System performance, recovery, evacuation and recharging are also covered in depth.			
Prerequisite: None			
Corequisite: TRNS1102			
AMST 2292	Internship	1	0/0/1
This course is designed by the student and advisor in cooperation with industry to provide an on-the-job training experience for the student. The student will prepare an internship plan consistent with 45 hours of internship time. The plan should reflect the internship site, student knowledge, prior coursework and skills. This course will provide the student with an opportunity to integrate the skills, knowledge and concepts gained in previous coursework into an occupational experience.			
Prerequisite: TRNS1102			
Corequisite: None			

Anthropology

ANTH 1100 Introduction to Anthropology 3 3/0/0
Meets MnTC Goal Areas 5 and 8. This course is a survey of human nature through time and around the world. It examines the physical nature of our species, archaeology, the study of cultural behavior and linguistic studies.

Prerequisite: None
Corequisite: None

ANTH 1300 Cultural Anthropology 3 3/0/0
Meets MnTC Goal Areas 5 and 8. In this course students will gain an understanding of the major issues and theoretical approaches inherent to the study of human society and culture. Emphasis is placed on the origins, development and variation of cultures as well as the growing global interdependence of nations and peoples.

Prerequisite: None
Corequisite: None

ANTH 1400 Physical Anthropology 3 3/0/0
Meets MnTC Goal Areas 3 and 8. In this course students will gain an understanding of the bio-cultural evolution of prehistoric and modern cultures and the geographic, historical and cultural forces which explain human diversity. This course includes a lab-like experience.

Prerequisite: None
Corequisite: None

Architectural Technology

ARCH 1122 Computer Aided Drafting for Architecture 4 2/2/0
This course covers the development of three-dimensional architectural modeling and documentation using AutoCAD for Architecture software. Emphasis is on creating and editing custom component styles.

Prerequisite: CADD1102 AND ENGR1134
Corequisite: None

ARCH 1126 Residential Project I 3 1/2/0
This course covers the design development and documentation of single-family living. Students will be introduced to residential design styles as well as proper documentation methods.

Prerequisite: ENGR1126 AND ENGR1134
Corequisite: None

ARCH 2218 Architectural Internship 3 0/0/3
This course provides the student with an occupational experience in the architectural technology field. Each internship is an individualized experience.

Prerequisite: ARCH1126
Corequisite: None

ARCH 2220 Specification Writing for Construction 3 1/2/0
This course covers the implementation and inclusion of specifications, construction materials and finishes into a set of construction documents.

Prerequisite: None
Corequisite: None

ARCH 2226 Residential Project II 4 1/3/0
This course introduces building design and construction requirements for multi-family housing. The course covers the processes for the selection of building materials and their integration into construction documents.

Prerequisite: ARCH1122 AND ARCH1126
Corequisite: None

ARCH 2230 Mechanical and Electrical Integration 2 1/1/0
This course reviews the examination of mechanical, plumbing and electrical systems in buildings. Content includes analysis of plumbing and heating, ventilation and air conditioning (HVAC) systems, and power and lighting systems.

Prerequisite: ARCH1122 AND ARCH1126
Corequisite: None

ARCH 2232 Civil and Structural Integration 3 2/1/0
This course will review the incorporation of civil and structural engineering drawings in coordination with building systems. Content will include analysis of civil and structural drawings and their relationship to commercial and residential building types.

Prerequisite: ARCH2230
Corequisite: None

ARCH 2236 Architectural Presentation 2 0/2/0
Students in this course will develop design schematics and a set of presentation drawings for a commercial project. Emphasis is on verbal and visual presentation techniques.

Prerequisite: ARCH1122 AND ARCH1126
Corequisite: None

ARCH 2244 Commercial Projects 4 1/3/0
This course covers the construction document process for commercial building design while having the student complete a self-guided capstone project. Content will include

final detailing, scheduling and sheet set layout from a given design developed project.

Prerequisite: ARCH2226 AND ARCH2240
Corequisite: None

ARCH 2248 CADD Alternatives 3 1/2/0
This course will familiarize the student with computer drafting and modeling software for the graphic design of residential construction.

Prerequisite: None
Corequisite: None

ARCH 2250 Project Administration 2 1/1/0
This course provides an understanding of architectural firm structures and legal issues as well as project management procedures used throughout documentation, bidding and construction administration.

Prerequisite: ARCH2226
Corequisite: None

ARCH 2256 Rendering Architecture 3 1/2/0
This course provides the advanced use of computer-aided drafting and modeling using AutoCAD for Architecture software and its related rendering application. The course will develop CADD configuration skills, advanced modeling techniques and various presentation renderings.

Prerequisite: ARCH1112
Corequisite: None

Art

ART 1107 Foundations of Art, 2-D 3 3/0/0
Meets MnTC Goal Area 6F. This course is an introduction to creative thinking, interpretation and self-expression. Students will explore basic two-dimensional elements and principles through the use of various media, tools, materials and processes. Color theory will be emphasized.

Prerequisite: None
Corequisite: None

ART 1108 Foundations of Art, 3-D 3 3/0/0
Meets MnTC Goal Area 6F. Through this course, students are introduced to basic three-dimensional concepts as well as a variety of materials and technical processes. Students will create three-dimensional designs that explore form and space.

Prerequisite: None
Corequisite: None

ART 1110 Intro to Art 3 3/0/0
Meets MnTC Goal Area 6F. This course provides an introduction to the elements and principals of visual arts and to the creative process. Students are encouraged to use a variety of media in drawing, painting and sculpture.

Prerequisite: None
Corequisite: None

ART 1111 Drawing I 3 3/0/0
Meets MnTC Goal Area 6F. This course introduces students to the basic drawing media, techniques and traditions of drawing. Students are exposed to the work of artists, draftsmen and illustrators and are subsequently guided through a wide variety of drawing experiences and applications.

Prerequisite: None
Corequisite: None

ART 1112 Painting I 3 3/0/0
Meets MnTC Goal Area 6F. Students examine historical and contemporary painting approaches and directions in their beginning experiences with acrylic and/or oil paint, including the study of basic concepts, techniques, formal issues, technology, imagery, color theory and pigment theory.

Prerequisite: None
Corequisite: None

ART 1117 Printmaking I 3 3/0/0
Meets MnTC Goal Areas 2 and 6F. Students will create original works in a variety of printmaking techniques with emphasis on relief, monoprnt/monotype and serigraphy.

Prerequisite: None
Corequisite: None

ART 1118 Watercolor I 3 3/0/0
Meets MnTC Goal Area 6F. This course will introduce students to the fundamental principles, techniques and materials of watercolor media. Students will explore color and design concepts, including composition and the elements of art; traditional and experimental approaches with watercolor media; the fundamentals of the critique process; and traditional and contemporary artworks from the visual canon. Personal expression and visual and critical problem solving are major components of this course.

Prerequisite: None
Corequisite: None

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
ART 1121	World of Art I	3	3/0/0	ART 2260	Art, Portfolio Design and Professional Development 1	0/0/1	
Meets MnTC Goal Areas 6 and 8. This course is a survey of architecture, painting and sculpture and their historical and social contexts. Specific periods from prehistoric through the Middle Ages will be introduced.				Meets MnTC Goal Area 6F. Art students will learn how to create an electronic portfolio, showcasing their work for transfer or professional purposes. Students will also explore ways to promote themselves as artists using the latest technology.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
ART 1122	World of Art II	3	3/0/0	ART 2261	Art, Portfolio Design and Professional Development 2	1/0/1	
Meets MnTC Goal Areas 6 and 8. This introductory course gives students a deeper appreciation and knowledge of Western art and the cultures that created it. This course focuses on the fascinating changes that occurred in the Italian Renaissance and continues through to modern artists and influences of the 20th century.				Meets MnTC Goal Area 6F. Art students will create an electronic portfolio of their work, write professional documents, explore ways to promote themselves as artists using the latest technology, research exhibition opportunities and explore and experience non-art-production professions in the field of art.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
ART 1123	Global Art History: Asian, Islamic, African, Mesoamerican	3	3/0/0	American Sign Language			
Meets MnTC Goal Areas 6 and 2. Throughout the semester students will explore the influences and philosophies that have impacted art in regions outside of the Western world. Topics vary but will include the origins and historic development of art in African, Asian, Islamic and Mesoamerican cultures.				<hr/>			
Prerequisite: None				ASL 1111 American Sign Language and Deaf Culture I 3 3/0/0			
Corequisite: None				This course covers the beginning fundamental principles of American Sign Language (ASL) and introduces information about the Deaf Community and Deaf Culture. The course will familiarize students with basic ASL vocabulary and grammar, including hand shapes, body movements and facial expressions to convey meaning.			
ART 1124	American Art	3	3/0/0	Prerequisite: DVCM0006 AND ENGL0050 OR ENGL1101			
Meets MnTC Goal Areas 6 and 7. This course explores the great variety and depth of North American art. Native American, colonial, Latino and contemporary art are the focus of the course.				Corequisite: None			
Prerequisite: None				ASL 1112 American Sign Language and Deaf Culture II 3 3/0/0			
Corequisite: None				This course covers the fundamental principles of Level II American Sign Language (ASL) and introduces more advanced information about the Deaf Community and Deaf Culture. This course will focus on expanding knowledge and usage of ASL vocabulary including fingerspelling, numbers and classifiers, and continues with more complex ASL grammar and sentence structure.			
ART 1140	Handbuilt Ceramics	3	3/0/0	Prerequisite: ASL1111			
Meets MnTC Goal Area 6F. This course will develop the skills of ceramics, focusing on handbuilding. Using the methods of coil, pinching and slab building, the students will make a variety of forms, ranging from functional to sculptural. Students will create finished products, including the use of glaze and other finishes. The nature of handbuilding techniques provides a more immediate opportunity to express creativity.				Corequisite: None			
Prerequisite: None				ASL 1113 American Sign Language and Deaf Culture III 4 4/0/0			
Corequisite: None				This course is designed to offer continued study of American Sign Language (ASL) and Deaf Culture. Emphasis will be placed on improvements in speed and fluency along with reinforcement of appropriate grammar usage and conversational skills. This course will also introduce deaf idioms and their use within Deaf Culture.			
ART 1141	Ceramics I	3	2/1/0	Prerequisite: ASL1112			
Meets MnTC Goal Area 6F. Students learn about pottery tools and their uses, construction methods such as coil and slabs, aspects of pottery form and design, formulation and application of glazes, and operation of a ceramic kiln. The course is designed for the novice.				Corequisite: None			
Prerequisite: None				ASL 1114 American Sign Language and Deaf Culture IV 4 4/0/0			
Corequisite: None				This course focuses upon the grammatical features of ASL and vocabulary expansion. Content of this course will focus on sentence construction, inflecting verbs and classifiers. Fluency and accuracy of finger spelling will continue to be developed as well as the use of lexicalized signs and numbering.			
ART 2111	Drawing II	3	3/0/0	Prerequisite: ASL1113			
Meets MnTC Goal Areas 2 and 6F. This course focuses on student use and understanding of a variety of drawing media such as pencil, pastel, pen and ink, and charcoal. Advanced use of composition and color is emphasized.				Corequisite: None			
Prerequisite: ART1111				ASL 1115 American Sign Language and Deaf Culture V 3 3/0/0			
Corequisite: None				This course focuses on advanced vocabulary, communicative functions and language techniques for effective expression of meaning and context of ASL.			
ART 2112	Painting II	3	3/0/0	Prerequisite: ASL1114 AND Grade of C or better in ASL1114			
Meets MnTC Goal Areas 2 and 6F. Students research and examine historical and contemporary painting approaches and directions informing their social, historical, philosophical, artistic, etc. choices regarding subject matter. Self-generated subject matter and research, intermediate-level use of composition, color theory and technique are emphasized.				Corequisite: None			
Prerequisite: ART1112				ASL 2000 Advanced Fingerspelling, Numbers, and Classifiers 2 2/0/0			
Corequisite: None				This course focuses on enhancement of receptive and expressive fingerspelling and number skills. It also includes the fundamentals of American Sign Language classifiers.			
ART 2114	Photographic Art I	3	3/0/0	Prerequisite: ASL1114 AND Grade of C or better in ASL1114			
Meets MnTC Goal Areas 2 and 6F. This course introduces students to photographic equipment, materials, processes and philosophies while examining photography and its role in contemporary culture with focus on artistic content. Traditional photographic processes, digital photographic processes and alternative printing and presentation processes are explored, and artistic rationale and execution are examined.				Corequisite: None			
Prerequisite: None				ASL 2100 Linguistics of American Sign Language 3 3/0/0			
Corequisite: None				This is an introduction to the linguistic structure of American Sign Language. This course includes linguistic fields, communication systems, syntax, phonology and grammar. This course also contains other linguistic elements unique to spatially- and visually-based languages such as morphemes, phonemes, semantics and pragmatics.			
ART 2241	Advanced Ceramics	3	2/1/0	Prerequisite: ASL1114 AND Grade of C or better in ASL1114			
Meets MnTC Goal Area 6F. This course will build on the skills developed in Ceramics I with emphasis on wheel throwing, glazing and firing techniques.				Corequisite: None			
Prerequisite: ART1141				Quality			
Corequisite: None				<hr/>			
ART 2250	Art Mentor Experience	2	0/0/2	ATEC 2238 Quality Planning and Control 3 3/0/0			
This course gives students the opportunity to work side-by-side with professional artists. Students will select an artist mentor based on the media and techniques the student chooses to explore. Students will meet with an art faculty adviser to select a mentor and to create a plan of study for the semester. Registration for this course is by instructor permission only.				This is an introductory course surveying quality-related topics from both qualitative and quantitative points of view. The course is structured to address the quality system, the management system and the technical system approaches to quality planning and management. Topics related to people, leadership, application, implementation, data collection and analysis and quality standards are included in this course.			
Prerequisite: ART1107 AND ART1111				Prerequisite: None			
Corequisite: None				Corequisite: None			

Biological Sciences

BIOL 1102 Introduction to Horticulture 3 2/1/0
Meets MnTC Goal Area 3. The course is an introductory study of green plants and their growth. The course will explore basic plant anatomy, morphology, physiology, taxonomy, pathology, propagation, soil science and plant nutrition, and ethnobotany. This course includes both lecture and lab.
Prerequisite: College-level reading skills.
Corequisite: None

BIOL 1104 Biology of Human Concerns 3 2/1/0
Meets MnTC Goal Areas 2 and 3. This course explores issues related to human biology with reference to genetics, nutrition, health, disease or other contemporary issues. Elements of molecular, cell and organismal biology are introduced as needed to understand the topics studied. This course is intended for non-science majors and consists of lecture and laboratory components.
Prerequisite: None
Corequisite: None

BIOL 1107 Environmental Science Issues 3 3/0/0
Meets MnTC Goal Areas 2, 3 and 10. This course involves the discussion and study of ecosystems, biodiversity, human adaptations to and modifications of those ecosystems, and current environmental problems and their possible solutions. This course includes lab-like experiences including an ecosystem observation and data analysis. This course is for non-science majors.
Prerequisite: None
Corequisite: None

BIOL 1108 Env Science Issues Lab 1 0/1/0
Meets MnTC Goal Areas 2, 3 and 10. This course includes laboratory work completed in conjunction with BIOL 1107 Environmental Science Issues. Laboratory experiences may include lab and field exercises, computer simulations and collection and analysis of data related to current environmental issues and their possible solutions. This optional lab must be taken concurrently with BIOL 1107.
Prerequisite: None
Corequisite: None

BIOL 1115 Introduction to Biotechnology 3 3/0/0
Meets MnTC Goal Area 3. This course is designed to acquaint students with the field of biotechnology including historical development, current technologies and future trends. An overview of the molecular and genetic principles and processes used to manipulate living organisms and their products will be presented, as well as forensic, medical, agricultural and industrial applications. The course will also examine the ethical implications of biotechnology and genetic engineering. Laboratory simulations and other lab-like experiences provide opportunities for students to perform techniques common in the field, gather and analyze experimental data and troubleshoot procedures.
Prerequisite: None
Corequisite: None

BIOL 1122 General Biology I 4 3/1/0
Meets MnTC Goal Areas 2 and 3. This course is an introduction to the structure and function of living systems with an emphasis on cellular and molecular biology. Fundamental concepts include the chemical basis of life, cell structure and function, cell division, metabolism, classical and molecular genetics, and biotechnology. This course includes a laboratory component incorporating experimental design, microscopic work, and cellular and molecular biology techniques. Along with BIOL1123, this course is part of a two-semester sequence of general biology that can be taken in either order.
Prerequisite: Assessment into ENGL 1101 or college-level writing equivalent.
Corequisite: None

BIOL 1123 General Biology II 4 3/1/0
Meets MnTC Goal Areas 3 and 10. This course is an introduction to living organisms, emphasizing evolution, biological diversity and ecology. Topics will include mechanisms of evolution, classification and diversity of life, structure and function of organisms, and interaction of organisms at all levels of an ecosystem. This course includes a laboratory component incorporating field activities, microscopic work, dissection and plant systems. Along with BIOL1122, this course is part of a two-semester sequence of general biology that can be taken in either order.
Prerequisite: Assessment into ENGL 1101 or college-level writing equivalent.
Corequisite: None

BIOL 1125 Basic Immunology 2 1/1/0
This course is intended for Medical Laboratory Technician students and other health professionals. Topics covered include principles of antigens, antibodies and their combination in health, disease and serological laboratory procedures. The course discusses hepatitis, AIDS, lupus, rheumatoid arthritis, Lyme disease, syphilis, infectious mononucleosis and streptococcal infections.
Prerequisite: None
Corequisite: None

BIOL 1152 Food Science 3 3/0/0
Meets MnTC Goal Area 3. This course addresses the use of public policy and food technology to reduce or control risks in our food supply. An overview of microbiological, chemical and environmental risks will be presented, as well as government and industry controls used to ensure food safety. This course includes laboratory-like components. Students will use common laboratory techniques to identify select

food-borne pathogens and utilize principles of risk assessment and hazard analysis to perform a disease outbreak investigation.

Prerequisite: None
Corequisite: None

BIOL 1161 Introduction to Freshwater Biology 3 2/1/0
Meets MnTC Goal Areas 3 and 10. This course introduces students to basic principles of freshwater biology. Topics include the origins and features of basins and channels, the aquatic environment, basic water chemistry, aquatic organisms and aquatic ecology. Class includes a lab.
Prerequisite: Completion of ENGL0050 and ENGL0040 with a grade of C or higher OR ENGL0095 with a grade of C or higher OR placement in ENGL1101
Corequisite: None

BIOL 2010 General Ecology 4 3/1/0
Meets MnTC Goal Areas 3 and 10. This course provides a study of the structure and function of ecological systems, including an application of ecological principles to local and global environmental issues. Topics covered include energy flow, nutrient cycling, organization, ecological succession, population dynamics (including the ecology of species interactions and factors that influence and regulate population numbers) and linkages among species and ecosystem functions. Lecture is accompanied by laboratory and field exercises.
Prerequisite: Completion of Math1020 or placement in a college-level math AND BIOL1111 AND BIOL1112
Corequisite: None

BIOL 2202 Principles of Nutrition 3 3/0/0
Meets MnTC Goal Areas 2 and 3. This course is a study of the fundamental principles of nutrition. This course will cover food composition, diet planning, utilization of food nutrients in the body and the requirements for nutrients in infancy, childhood, teen years, athletes, adults and the elderly. Also included are discussions about current trends in nutrition, the relationship of diet and disease, and cultural differences in dietary practices. Using the basic principles of nutrition, students will have a lab-like experience tracking, measuring, calculating and analyzing their diet and presenting the results in a written analytical report.
Prerequisite: CHEM1100 OR CHEM1111 OR BIOL2260 OR BIOL1122 OR Instructor permission
Corequisite: None

BIOL 2220 General Microbiology 4 3/1/0
Meets MnTC Goal Area 3. This course provides an overview of the structure and function of microorganisms, including archaea, bacteria, viruses, fungi and parasites. Students will examine the molecular diversity, genetics, physiology and ecology of these organisms in relation to microbial evolution, industrial and applied applications, and host-pathogen interactions. Lecture is accompanied by laboratory experiences, including aseptic technique, differential staining procedures, cultural and physical characteristics, biochemical testing, microbial control, microbiology of water and soil, and identification of unknown cultures.
Prerequisite: BIOL1122
Corequisite: None

BIOL 2240 Genetics 4 3/1/0
Meets MnTC Goal Area 3. This course is a study of the basis of heredity with emphasis on modern molecular and classical Mendelian genetics. It is open to all students but is recommended for students majoring in biology and health-related areas. This course includes a laboratory which explores molecular and classical genetic techniques.
Prerequisite: CHEM1100 AND BIOL1122 OR CHEM1101 AND BIOL1122 OR CHEM1111 AND BIOL1122
Corequisite: None

BIOL 2260 Human Anatomy and Physiology I 3 3/0/0
Meets MnTC Goal Area 3. This course is a comprehensive introductory overview of human anatomy and physiology that includes basic fundamental concepts of cell biology, tissues and organs making up the integumentary, skeletal, muscular and nervous systems. It is the first of a two-semester sequence in which anatomy and physiology are studied with an emphasis on structure and functions of systems. This course contains a lab-like component.
Prerequisite: Assessment into ENGL 1101 or college-level writing equivalent.
Corequisite: None

BIOL 2261 Human Anatomy and Physiology I Lab 1 0/1/0
Meets MnTC Goal Area 3 when taken with BIOL 2260. This course is the laboratory component of a comprehensive introductory overview of human anatomy and physiology that includes basic fundamental concepts of cell biology, tissues and organs making up the integumentary, skeletal, muscular and nervous systems. This course is the first of a two-semester sequence in which anatomy and physiology are studied with an emphasis on structure and functions of systems.
Prerequisite: Assessment into ENGL 1101 or college-level writing equivalent.
Corequisite: BIOL 2260

BIOL 2262 Human Anatomy and Physiology II 3 3/0/0
Meets MnTC Goal Area 3. This course is a continuation of Anatomy and Physiology I. Topics will include the study of cells, tissues and organs making up the endocrine, cardiovascular, lymphatic and immune, respiratory, digestive, urinary and reproductive systems. Emphasis is on the structure and function of included systems. This course contains a lab-like component.
Prerequisite: Assessment into ENGL 1101 or college-level writing equivalent. AND BIOL2260 AND BIOL2261
Corequisite: None

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
BIOL 2263	Human Anatomy and Physiology II Lab	1	0/1/0	BIOT 2220	Biotechnology Methods II	3	1/2/0
<p>Meets MnTC Goal Area 3 when taken with BIOL 2262. This course is the laboratory component of a comprehensive introductory overview of human anatomy and physiology that includes basic fundamental concepts of cells, tissues and organs making up the endocrine, cardiovascular, respiratory, digestive, urinary and reproductive systems. This course is the second of a two-semester sequence in which anatomy and physiology are studied with an emphasis on structure and functions of systems. Prerequisite: BIOL2260 AND BIOL2261 AND assessment into ENGL 1101 or college-level writing equivalent. Corequisite: BIOL2262</p>				<p>This course is the second in a two-semester sequence designed to train laboratory technicians in the fundamental technologies, procedures and processes utilized within the biotechnology industry. This course emphasizes technical skills development, record-keeping and communication skills, compliance with federal regulations, and conformity to good laboratory and good manufacturing practices (GLPs/GMPs). This course meets for one hour of lecture and four hours of laboratory each week. Prerequisite: BIOT2210 Corequisite: None</p>			
BIOL 2265	Diagnostic Microbiology	4	3/1/0	BIOT 2230	Fundamentals of Bioprocessing	3	2/1/0
<p>Meets MnTC Goal Area 3. This course discusses microorganisms of medical importance in relationship to disease and diagnosis, emphasizing identification of common pathogenic bacteria, fungi, yeast and parasites, specimen collection and introducing virology and immunology. Laboratory covers basic techniques including reasons for specimen rejection, identification of normal flora and pathogens, morphology, classification and culturing of bacteria, identification of bacterial unknowns, fungi and parasites. Prerequisite: Assessment into or successful completion of ENGL 1101 or college-level reading and writing equivalent. Corequisite: None</p>				<p>This course is designed to train laboratory technicians in the technologies, procedures and processes utilized in the biotechnology industry to manufacture biologically-derived products. This course emphasizes the basic science, cellular metabolism and growth techniques used in the industry, examples of bioprocessed products currently on the market, conformity to good laboratory and good manufacturing practices (GLPs/GMPs), and compliance with federal regulations. Prerequisite: BIOT2210 Corequisite: None</p>			
BIOL 2266	Diagnostic Microbiology	5	4/1/0	BIOT 2231	Industry Experience	2	0/0/2
<p>Meets MnTC Goal Area 3. This course is the study of microorganisms of medical importance in relationship to disease and diagnosis. This course also emphasizes identification of bacteria in patient specimens, specimen collection and antimicrobial susceptibility testing, as well as introducing virology, mycology, parasitology and immunology. The laboratory covers basic techniques of identification of normal flora, pathogenic bacteria, fungi and parasites, including morphology, classification and cultivation of bacteria. Each student will be required to identify bacterial unknowns in broth. The course has four hours of lecture and one two-hour laboratory per week. Prerequisite: Assessment into or successful completion of ENGL 1101 or college-level writing equivalent. Corequisite: None</p>				<p>This two-credit course is designed to raise the level of exposure to equipment and methodologies used in the biotechnology industry. Students will gain practical experience utilizing established skill sets and develop new skill sets unique to industry. In addition, this course includes professional development components such as resume building, e-folios and interviewing skills. Prerequisite: BIOL1115 Corequisite: None</p>			
BIOL 2267	Medical Microbiology	3	3/0/0	Construction			
<p>Meets MnTC Goal Area 3. This course is the study of the structure and the classification of bacteria, viruses, parasites and fungi of medical importance. It emphasizes the transmission of disease agents, signs and symptoms, immunology, immunization, control of microbial growth, specimen collection/transport, methods of identification and antimicrobial resistance. This lecture course includes lab-like components. Prerequisite: Assessment into ENGL 1101. Corequisite: None</p>				BLDG 1102 Construction Safety 1 1/0/0			
<p>This course provides students with an understanding of occupational safety practices, basic requirements, purpose and enforcement of general safety rules. Prerequisite: None Corequisite: None</p>				BLDG 1110 Principles of Residential and Commercial Construction 3 1/2/0			
BIOL 2268	Medical Microbiology Lab	1	0/1/0	<p>Students work in small groups with industry specialists and education professionals. Students attend multiple classroom and lab activities where they learn safety requirements for construction environments, proper use of a variety of hand tools, applications of shop equipment, the residential and commercial building process, and small equipment operations. Students will participate in a speed interviewing exercise with industry experts and learn about occupations in the construction trades profession. Prerequisite: Instructor approval Corequisite: None</p>			
<p>This laboratory course includes the fundamental techniques of cultivation, staining, biochemical analysis and identification of known and unknown bacterial isolates, and antimicrobial susceptibility testing. Morphological examination and pathogenesis of fungi, protozoans and helminths are also addressed. Prerequisite: Assessment into ENGL1101 or college-level writing equivalent. Corequisite: BIOL2267</p>				BLDG 1114 Blueprint Reading I 2 2/0/0			
BIOL 2970	Internship Experience	1 - 3	None	<p>This course provides the student with a working knowledge of blueprints and specifications. The student gains an understanding of blueprints, then interprets and applies this knowledge to job situations. Prerequisite: None Corequisite: None</p>			
<p>This course is designed to provide students with a monitored meaningful work experience related to their field of interest. This experience will increase their employability and enhance their life skills. Completion of this course requires a written report and an evaluation from the student's supervisor. Each internship is an individualized experience, therefore this course is offered with variable credits. The student may choose from 1, 2 or 3 credits as prearranged with the internship site supervisor and corresponding faculty. Each credit will require a minimum of 45 hours of on-the-job learning. This course will be graded pass/fail only. Prerequisite: Instructor approval Corequisite: None</p>				BLDG 1120 Construction Estimating I 2 1/1/0			
				<p>This course covers the mathematical procedures used in material estimating and completing quantity takeoffs for building projects. Prerequisite: None Corequisite: None</p>			
Biotechnology				Business Management			
BIOT 2207	Nanobiotechnology and Nanobiomedicine	3	2/1/0	BMGT 1112	Business Plan Development	2	1/1/0
<p>This second-year course is intended to expose students to the applications of nanotechnology in the biotechnology and biomedical areas of industry, research and development. The course emphasizes technologies utilized in the fabrication and production of nanomaterials, their applications in biotechnology and biomedicine, future trends, and the societal, ethical and environmental implications of these technologies. Prerequisite: BIOL1111 AND BIOL1115 Corequisite: None</p>				<p>Students will have hands-on training in developing a business plan for their very own business idea. Financial statement analysis, risk management, business law and understanding the business environment will all become a part of the business plan. Prerequisite: None Corequisite: None</p>			
BIOT 2210	Biotechnology Methods I	3	1/2/0	Business			
<p>This course is the first in a two-semester sequence designed to train laboratory technicians in the fundamental technologies, procedures and processes utilized in the biotechnology industry. This course emphasizes technical skills development, record-keeping and communication skills, compliance with federal regulations and conformity to good laboratory practices (GLPs) and good manufacturing practices (GMPs). This course meets for one hour of lecture and four hours of laboratory each week. Prerequisite: BIOL1111 AND BIOL1115 AND CHEM1111 Corequisite: None</p>				BUS 1120 Spreadsheet and Database Concepts 3 3/0/0			
				<p>This course provides the student with in-depth coverage of a spreadsheet and a database management system as used in a business setting. Students should be familiar with Windows and word processing. Prerequisite: None Corequisite: None</p>			

Course #	CourseTitle	CR	Lec/Lab/OJT
BUS 1141	Introduction to Business	3	3/0/0
This course is designed to give the student an overview of the business and economic factors that sustain our American enterprise system. Topics included are economic systems and the foundations of American business, international business, fundamentals, management, forms of a business enterprise including franchises, human resources management, marketing and consumer behavior, accounting, securities markets and the ethical and social responsibilities of business. Prerequisite: None Corequisite: None			
BUS 1143	Office Procedures	3	3/0/0
This is a capstone course in office organization, business ethics and responsibilities of office workers. Emphasis is placed on decision-making ability and the exercise of good human behavior. The course will cover all aspects of the office, from behavior to technologies used. This course will also cover what it means to be a professional in any field. Two of the topics covered are group dynamics and looking like a professional. Prerequisite: None Corequisite: None			
BUS 1146	Personal Finance	3	3/0/0
This course is an introduction to personal financial management and planning. Topics covered include key factors that affect personal income, budgeting, cash-flow management, use of credit and credit cards, planned borrowing, managing taxes and major expenditures including housing, automobiles, insurance and investments. Prerequisite: None Corequisite: None			
BUS 1158	Free Market Enterprise	2	2/0/0
Students in Free Enterprise (SIFE) is an internationally recognized organization designed to educate students about how to ethically engage in the free enterprise system to serve the economic interests of individuals and communities. Through this course, students will develop and execute various free enterprise projects and present their results at a regional competition. Prerequisite: Approval from SIFE advisor Corequisite: None			
BUS 1170	Intro to Agribusiness, Food Systems and Global Agriculture	3	3/0/0
This course is an introduction to the economic environment of the agribusiness sectors of our economy. The course examines the role agriculture plays in the U.S. and global economies. Concepts to be examined include but are not limited to management of agribusiness, marketing of agribusiness, finance of agribusiness and government involvement in agriculture and agribusiness. Prerequisite: None Corequisite: None			
BUS 1300	Financial Statement Analysis	3	3/0/0
This course covers principles used in analyzing financial statements and budgets. Students learn how to prepare, read and analyze financial statements. Topics include analysis of income statements, balance sheets, flow of funds, risk, obtaining and spreading statements, cash flow projections, capital accounts and financial ratios. Prerequisite: None Corequisite: None			
BUS 2150	Legal Environment of Business	3	3/0/0
This course offers an overview of the American legal system and provides an introduction to what a business person should know about the law and the American legal system. Major content areas will include the court system, trial process, alternative dispute resolution, business and the Constitution, the administrative process, torts and product liability, common law of contracts, employment law, employment discrimination, anti-trust law, international business and ethics. Prerequisite: None Corequisite: None			
BUS 2202	Mgmt Information Sys	3	3/0/0
The course is a survey course of management information systems. An information system is a set of interrelated components working together to collect, retrieve, process, store and disseminate information for purposes of facilitating, planning and decision making in business and other organizations. The student will gain invaluable knowledge as to how a business solves problems using an information system. Prerequisite: None Corequisite: None			
BUS 2204	Principles of Management	3	3/0/0
This course examines the historical and philosophical foundations of management as well as current theory and practices. Managerial decisions as a planner, organizer, motivator, controller and leader of a diverse workforce in a competitive environment are identified and evaluated. It is a study of the basic principles of business management, to include the functional, scientific, behavioral and systems approaches. Current literature, concepts, models and applications may be included as well as the use of case studies. Prerequisite: None Corequisite: None			
BUS 2206	Principles of Marketing	3	3/0/0
This course is an introductory study of marketing and will include the nature and significance of marketing to both consumers and industrial firms, the marketing mix, market segmentation, target market identification, the product, channels of distribution and pricing systems. Basic factors affecting policy and strategy issues in marketing will also be examined. The course will describe economic, legal, behavioral,			

environmental, competitive and technological factors as they affect product, pricing, promotion and marketing-channel decisions.

Prerequisite: None
Corequisite: None

BUS 2220 Global Business **3 3/0/0**

This course will introduce the student to business operations surrounding global trade and identify interconnected issues. Businesses are increasingly challenged by multinational corporations, international trade policies, cultural and religious differences, environmental movements and human rights groups, which often play a leading role in defining and framing the global agenda. Understanding why nations do business with each other, how communication plays a vital role, what cultural features influence business practices, how competitive dynamics affect organizations and what legal considerations must be followed will prepare students for a rapidly-changing global economy.

Prerequisite: None
Corequisite: None

Computer-Aided Drafting

CADD 1102 Fundamentals of CADD **4 2/2/0**

This course provides the fundamentals of computer-aided drafting using the latest version of AutoCAD drafting software. The course develops the fundamental CADD skills necessary to produce and print complex drawings and sheet sets.

Prerequisite: None
Corequisite: None

CADD 1105 CADD for Interior Design **2 2/0/0**

This course employs CADD for interior design projects. Floor plans, space planning, elevations and perspectives are created.

Prerequisite: CADD1102
Corequisite: None

CADD 1114 Intro to Solids and Parametric Modeling **4 2/2/0**

This course is an introduction to solid modeling and model-derived drawing layouts using the latest versions of the Autocad, Inventor and Solidworks drawing software.

Prerequisite: CADD1102 AND MCDD1102
Corequisite: None

CADD 2214 Advanced Solids and Parametric Modeling **4 2/2/0**

This course covers advanced part modeling, assembly modeling, sheet metal and presentation files in the latest versions of the Inventor and Solidworks drawing software.

Prerequisite: CADD1114
Corequisite: None

Carpentry

CARP 1102 Prin of Framing **3 3/0/0**

This course is designed to provide an understanding of the principles of floor, wall, stair and roof framing.

Prerequisite: None
Corequisite: None

CARP 1104 Framing I **6 0/6/0**

This course is designed to provide experience in constructing basic floor frames, wall frames, stair frames, and ceiling and roof frames.

Prerequisite: None
Corequisite: None

CARP 1108 Interior Finish I **4 1/3/0**

This course provides an understanding of the materials used for interior finishing, plus hands-on experience in the application of these materials.

Prerequisite: None
Corequisite: None

CARP 1110 Introduction to Cabinet Building **3 1/2/0**

This course covers basic kitchen design, cabinet planning, sizing and construction joints necessary for fabrication of a quality cabinet. The student will construct a basic upper and base cabinet. The student will learn how to laminate a countertop and install it.

Prerequisite: None
Corequisite: None

CARP 1112 Exterior Finish I **3 1/2/0**

This course provides the student with a basic knowledge of exterior finishes to building construction and installation. During the course the student will learn about and install various wall sidings, soffits and fascia coverings.

Prerequisite: None
Corequisite: None

CARP 2106 Footings and Foundations **2 1/1/0**

This course prepares the student with the knowledge and skills necessary to complete site layout, footings and foundations for residential construction.

Prerequisite: None
Corequisite: None

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
CARP 2202	Prin of Framing II	3	3/0/0				
This course is designed to enhance the student's knowledge of framing concepts from CARP1102. The instruction will explore complex applications of floor, wall, stair and roof construction.							
Prerequisite: CARP1102 AND CARP1104							
Corequisite: None							
CARP 2204	Concrete Technology	2	0/2/0				
This course prepares the student with the knowledge and skills necessary to complete concrete flat work (basement floors, garage floors, driveways and sidewalks) for residential construction.							
Prerequisite: CARP2106							
Corequisite: None							
CARP 2206	Adv Framing Applications	6	0/6/0				
This course is designed to increase the student's knowledge and skill level in floor, wall, stair, ceiling and roof framing. During this course the student will construct and install floor, wall, stair, ceiling and roof assemblies.							
Prerequisite: CARP1104							
Corequisite: None							
CARP 2208	Exterior Finish II	3	0/3/0				
This course is designed to increase the student's knowledge, skills and proficiency in the application of windows, doors and roofing.							
Prerequisite: CARP1112							
Corequisite: None							
CARP 2210	Interior/Exterior Finish Prin	3	3/0/0				
This course is designed to increase the student's knowledge of the materials and principles used in applying insulation, drywall, doors, interior trim and cabinets as well as exterior wall coverings, soffits, gutters and decks.							
Prerequisite: CARP1108 AND CARP1112							
Corequisite: None							
CARP 2212	Interior Finish II	4	0/4/0				
This course is designed to increase the student's knowledge, skills and proficiency in the application of doors, trim, stair finish, cabinet installation, insulation and drywall.							
Prerequisite: CARP1108							
Corequisite: None							
CARP 2214	Exterior Siding	2	0/2/0				
This course provides the student an opportunity to install common window and exterior door units, exterior trim and exterior wall finish materials.							
Prerequisite: None							
Corequisite: None							
CARP 2216	Deck Construction	2	0/2/0				
This course focuses on application and techniques necessary to select materials and construct decks, railings and stairs according to a predetermined plan.							
Prerequisite: CARP1112 AND CARP2210							
Corequisite: None							
CARP 2218	Soffits, Gutters, Gables	2	0/2/0				
This course provides practice for the student in the application of various exterior finish materials to the fascia, soffit and gable areas including special methods for gutters.							
Prerequisite: None							
Corequisite: None							
CARP 2220	Carpentry Internship	3	0/0/3				
This course provides the student with the opportunity to work for a contractor on a construction site practicing the skills learned in the first and second semesters of the Carpentry curriculum. The student experiences working with other employees under various working conditions.							
Prerequisite: None							
Corequisite: None							
CARP 2224	Advanced Cabinets	4	1/3/0				
This course provides advanced cabinet construction techniques for students. Emphasis is placed on doors, roll-outs, veneering and laminating.							
Prerequisite: CARP1110							
Corequisite: None							
CARP 2226	Special Projects/Topics	2	0/2/0				
The student works with an advisor/instructor to develop a contract with specific content goals in areas deemed applicable to the carpentry industry and the student's career plan. This opportunity may be limited due to conditions such as instructor/lab/material availability.							
Prerequisite: None							
Corequisite: None							
Child Care Education							
CDEV 1105	Development/Guidance	3	3/0/0				
This course provides an overview of childhood development from conception through age 8, with emphasis in the following areas: physical, cognitive, language, creative and social-emotional. It integrates theory with developmentally appropriate practice in home, center-based and school settings. In addition, this course gives the student an introduction to positive child guidance techniques for individual and group settings. This course will help students to understand behavior problems and identify strategies to prevent and resolve problem behaviors.							
Prerequisite: None							
Corequisite: None							
CDEV 1107	Introduction to Early Education	3	2/1/0				
This course explores career opportunities with children and investigates a variety of child development programs for children ages birth through 8. Students will examine job requirements, duties, regulations and personal characteristics of successful workers. In addition, this course will guide the student in obtaining skills needed to maintain a safe and healthy child development setting.							
Prerequisite: None							
Corequisite: None							
CDEV 2200	Integrating Play	3	2/1/0				
This course examines play during the infant, toddler, preschool and primary school years of development. This course will examine theories of play, discover how play promotes development, examine the physical environment and its relation to play, and construct play materials appropriate to the play of children. Play is the work of children.							
Prerequisite: None							
Corequisite: None							
CDEV 2229	Imaginative Learning	3	2/1/0				
This course provides an exploration of the home, center or school environment for children ages birth through 8. It includes an examination of both indoor and outdoor space in relation to arrangement, maintenance and evaluation. Students apply their knowledge in an actual work setting. The focus is on designing learning environments and developmentally appropriate practice in methods and materials for art, literacy, music, math, science, physical development, and social and multicultural studies.							
Prerequisite: CDEV1105 AND CDEV1107							
Corequisite: None							
CDEV 2236	Occupational Experience	1	0/0/1				
This course provides an opportunity to apply knowledge and skill in an actual child development setting. Students will demonstrate competence in promoting health, safety and nutrition; guiding children; arranging learning environments; and communicating with parents.							
Prerequisite: None							
Corequisite: None							
CDEV 2238	Integrating Children with Special Needs	3	2/1/0				
This course examines the development of and provides hands-on experiences for children with special needs in an integrated child care or primary school-age setting. Students integrate knowledge of developmental needs, developmentally appropriate environments and effective teaching methods.							
Prerequisite: CDEV2229							
Corequisite: None							
CDEV 2241	Observing and Assessing	2	1/1/0				
This course provides the student with an opportunity to observe and assess children's development. Under the supervision of an instructor, the student observes, records, interprets and develops plans to strengthen the development of infants through primary school-age children. Student will construct a child study based on assessments gathered throughout the course of the semester for one specific child.							
Prerequisite: CDEV 2200 and CDEV 2229							
Corequisite: None							
CDEV 2242	Infant/Toddler Program	3	2/1/0				
This course provides an overview of infant/toddler learning experiences in either home or center-based settings. Students integrate knowledge of developmental needs, developmentally appropriate environments, and effective caregiving and teaching methods.							
Prerequisite: CDEV1105 AND CDEV1107 AND CDEV2200 AND CDEV2229							
Corequisite: None							
CDEV 2244	Parent Professional Relations	3	3/0/0				
This course covers the relationship between the caregiver and the child's family. The students will explore strategies to maintain professional relationships with co-workers, parents and outside organizations. Cultural diversity/dynamics, bias, public education, housing, employment, crime, health care, legal services and social services will be explored.							
Prerequisite: None							
Corequisite: None							
CDEV 2246	Foundations in Literacy	3	3/0/0				
This course is an overview of early language acquisition, how literacy is best developed and what activities child care providers can do to promote the foundation for literacy development.							
Prerequisite: CDEV1105 AND CDEV1107 AND CDEV2200 AND CDEV2229							
Corequisite: None							
CDEV 2290	Internship	3	0/0/3				
This course provides an opportunity to apply knowledge and skill in an actual child development setting. Students implement a variety of learning experiences that are developmentally appropriate and culturally sensitive for a specific group of children. This course is to be taken during the student's final semester in the program.							
Prerequisite: None							
Corequisite: None							

Chemistry

CHEM 0095 Essential Chemistry Skills 1 1/0/0
This course covers basic chemistry concepts and elementary mathematical and problem-solving skills necessary for success in a first-semester chemistry course. It is strongly encouraged for students who are apprehensive about taking chemistry and are enrolled in CHEM1100 or CHEM1111. Concurrent enrollment with CHEM1100 or CHEM1111 is recommended.

Prerequisite: MATH0090
Corequisite: None

CHEM 1100 Fund Concepts Chemistry 3 2/1/0
Meets MnTC Goal Areas 2 and 3. Course deals with substances, their structures and properties, the changes they undergo and the laws that govern those changes. Intended for prospective elementary teachers, non-science majors and those who need background for General Chemistry. This course includes a lab.

Prerequisite: MATH0090 AND Math 0090 OR assessed into a higher math
Corequisite: None

CHEM 1101 Prin of General Chemistry 4 3/1/0
Meets MnTC Goal Areas 2 and 3. This course will provide the student with a basic understanding of the general principles of inorganic chemistry and includes the topics: atomic structure, stoichiometry, solutions, bonding, thermochemistry and properties of solids, liquids and gases. The laboratory component introduces techniques, methods and instrumentation.

Prerequisite: MATH0090 AND Math 0090 OR tested into a higher math
Corequisite: None

CHEM 1104 Medical Chemistry 4 3/1/0
This introductory course for Medical Laboratory Technician students covers the analytical principles, techniques and correlation of results in the science of body chemistry. Other topics in the course include instrumentation, calculations, preparations of reagents, quality assurance and quality control, specimen collection, transportation, analysis and results reporting.

Prerequisite: CHEM1100 OR CHEM1101 OR CHEM1111
Corequisite: None

CHEM 1105 Medical Chemistry 3 2/1/0
This an introductory course for Medical Laboratory Technician students covering the analytical principles, techniques and correlation of results in the science of body chemistry. Other topics included in the course are instrumentation, calculations, preparations of reagents, quality assurance and quality control, specimen collection, transportation, analysis and results reporting.

Prerequisite: CHEM1100 OR CHEM1111
Corequisite: None

CHEM 1111 General Inorganic Chemistry I 5 4/1/0
Meets MnTC Goal Areas 2 and 3. This course is the first of a two-course series (CHEM1111 and CHEM1112). Students will learn the general chemistry principles: atomic structure, stoichiometry, solutions, bonding, thermochemistry, electronic structure, periodic properties of the elements, intermolecular forces and properties of solids, liquids and gases. The course includes a lab.

Prerequisite: MATH1020 OR instructor permission for students who do not score high enough on the placement exam for placement into Chem1111 but wish to enroll in Chem1111. Students with this permission must co-register for Chem 0095.
Corequisite: None

CHEM 1112 General Inorganic Chemistry II 5 4/1/0
Meets MnTC Goal Areas 2 and 3. This course is the second course of a two-course series (CHEM1111 and CHEM1112). Students will learn the general chemistry principles: solution chemistry, kinetics, chemical equilibrium, acid-base chemistry, solubility equilibrium, thermodynamics, oxidation-reduction, electrochemistry, coordination chemistry, nuclear chemistry and introductory environmental chemistry. The course includes a lab.

Prerequisite: CHEM1111
Corequisite: None

CHEM 1115 Introduction to Organic and Biochemistry 4 3/1/0
Meets MnTC Goal Areas 2 and 3. This course consists of both lab and lecture sessions. Students will learn the fundamental concepts in organic and biochemistry: properties, classification and nomenclature of hydrocarbons and compounds containing various functional groups; basic organic reaction mechanisms; and structure and metabolism of carbohydrates, lipids, proteins and nucleic acids.

Prerequisite: CHEM1100
Corequisite: None

CHEM 2224 Organic Chemistry I 5 4/1/0
Meets MnTC Goal Areas 2 and 3. This course is the first course of a two-course series (CHEM2224 and CHEM2225). Students will learn organic chemistry principles including introduction to the classification, structure, reactions and reaction mechanisms of carbon compounds. The following topics will be included: structures and properties of organic compounds, methane and the alkanes, stereo chemistry, substitution and elimination reactions, electrophilic and free radical addition, alkenes, alkynes, and various functional groups, conjugation and resonance, benzene and the aromatics, aromatic-aliphatic compounds, alcohols and ethers. The course includes a lab which will include techniques for the purification, synthesis and characterization of organic compounds and the study of organic reactions. Green chemistry techniques will be practiced whenever possible.

Prerequisite: CHEM1112
Corequisite: None

CHEM 2225 Organic Chemistry II 5 4/1/0

Meets MnTC Goal Areas 2 and 3. This course is the second course of a two-course series (CHEM2224 and CHEM2225). Students will learn the reactions and characteristics of various organic chemistry groups. The following topics will be included: aldehydes and ketones, carboxylic acids, amines, amides, phenols, carbanions, esters, aromatics, heterocyclic compounds, macromolecules and the possible addition of selected topics such as carbohydrates, fats, amino acids and proteins. The course includes a lab which will include purification, synthesis, and characterization of organic compounds and the study of organic reactions. Green chemistry techniques will be practiced whenever possible.

Prerequisite: CHEM2224
Corequisite: None

CHEM 2970 Internship Experience 1-3 None

This course is designed to provide students with a monitored meaningful work experience related to their field of interest. This experience will increase their employability and enhance their life skills. Completion of this course requires a written report and an evaluation from the student's supervisor. Each internship is an individualized experience, therefore this course is offered with variable credits. The student may choose from 1, 2 or 3 credits as prearranged with the internship site supervisor and corresponding faculty. Each credit will require a minimum of 45 hours of on-the-job learning. This course will be graded pass/fail only.

Prerequisite: Instructor approval
Corequisite: None

Chinese

CHIN 1101 Introduction to Chinese 3 3/0/0

Meets MnTC Goal Area 8. This course will introduce students to the Beijing (Mandarin) dialect of Chinese including basic grammar, the Pin Yin system of transliteration and reading and writing Chinese characters.

Prerequisite: None
Corequisite: None

Civil Engineering Technology

CIVL 1000 Introduction to Civil Engineering Technology 2 2/0/0

This course provides an overview of the fields of civil engineering technology. It includes a historical background, present practices and future challenges of the civil engineering profession. Topics discussed include ethics, professional responsibility, written and oral communications, concepts of analysis, design, interpretation of results and decision making.

Prerequisite: None
Corequisite: None

CIVL 1102 Survey I: Fundamentals 2 1/1/0

The student will learn the principles of vertical distance measurement, as well as construction staking and the compiling of field notes typical of the civil engineering field. This course will focus on the use of various surveying equipment and procedures.

Prerequisite: None
Corequisite: None

CIVL 1119 Survey II: Land Surveys 3 1/2/0

This course covers survey principles involved in civil engineering technology including topographic surveys, utilities, drainage and roadway alignment. This course emphasizes the use of Total Station and GPS for collecting data and CAD/Civil software for processing data.

Prerequisite: CIVL1102
Corequisite: None

CIVL 1138 CADD II: Plan Layout 3 2/1/0

This course introduces students to industry-specific civil design software. Students will learn concepts relating to civil engineering drawings including topography, site planning, mapping and downloading survey data to create digital terrain models.

Prerequisite: CADD1102
Corequisite: None

CIVL 2209 Construction Inspection 3 2/1/0

This course involves the study and performance of procedures necessary in the inspection and documentation of general construction of public works projects. Topics include inspector responsibilities, project management, aggregate base, concrete and bituminous inspection.

Prerequisite: CIVL1102 OR CIVL1102
Corequisite: None

CIVL 2210 Road Design 3 2/1/0

The student will complete drawings and computations typical of those used in the design of roadways. These may include control line location maps, topographic drawings, cross sections, plan and profile earthwork computations.

Prerequisite: CIVL1119 AND CIVL1138
Corequisite: None

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
CIVL 2230	Civil Engineering Technology Internship	3	0/0/3	COMM2220	Oral Interpretation	3	3/0/0
The civil engineering technology internship provides the student with an opportunity to apply skills and knowledge acquired in prior courses in the occupational setting. Students will develop a plan for the internship with the cooperation of the employer and the instructor.				Meets MnTC Goal Area 6. This course is intended to introduce students to the principles and techniques of selecting and analyzing appropriate literary selections and the interpretation of literature through vocal and nonverbal delivery.			
Prerequisite: CIVL1138				Prerequisite: SPCH1114			
Corequisite: None				Corequisite: None			
CIVL 2232	Survey III: Legal Surveys	3	2/1/0	COMM2230	Intercultural Communication	3	3/0/0
The student will apply history, principles, rules and laws pertaining to land surveying. The student will research land survey records, identify property boundaries, reconstruct land surveys and draft legal descriptions. Students will also participate in boundary survey projects.				Meets MnTC Goal Area 7. This course explores the nature of communication within and between cultures and co-cultures. This class will challenge students to think about their own cultural assumptions and explore ways in which these assumptions differ from those held by people in other cultures. Students will review theories of communication and culture and will examine how culture is evident in languages, behaviors, rituals, norms and worldviews. Students will observe and describe their own cultural background and will learn to respectfully communicate with members of other cultures.			
Prerequisite: CIVL1119				Prerequisite: Assessment into ENGL 1101			
Corequisite: None				Corequisite: None			
CIVL 2234	Utility Design	3	2/1/0	COMM2240	Family Communication	3	3/0/0
The student will learn principles of sanitary, storm and water system layouts, design and construction. Design criteria and standards, plan and profile principles, cost estimating, construction staking and inspection of the different systems will be emphasized.				Meets MnTC Goal Area 2. This course provides an introduction to how communication functions in various families. The course will include theoretical and practical applications of family communication in our everyday lives. An emphasis will be placed on how effective communication may enhance family relationships as well as how destructive communication may harm family relationships.			
Prerequisite: CIVL1119 AND CIVL1138				Prerequisite: Completion of ENGL0050 and ENGL0040 with a grade of C or higher OR ENGL0095 with a grade of C or higher OR placement in ENGL1101			
Corequisite: None				Corequisite: None			
CIVL 2238	CADD III: Project Design	3	2/1/0	COMM2250	Gender Communication	3	3/0/0
This course will focus on the application of civil design computer-aided drafting software for the completion of a project, where students apply principles of civil engineering drawing.				Meets MnTC Goal Area 7. This course examines communication as it relates to our gendered lives. The course explores how societal views on gender are formed, maintained and transformed through various communication patterns and practices. Practical and theoretical knowledge of gendered communication and its influences on personal and professional relationships will be incorporated and analyzed.			
Prerequisite: CIVL1138				Prerequisite: Completion of ENGL0050 and ENGL0040 with a grade of C or higher OR ENGL0095 with a grade of C or higher OR placement in ENGL1101			
Corequisite: None				Corequisite: None			
CIVL 2240	Introduction to Geographic Information Systems	3	3/0/0	Construction Electricity			
The course will discuss different types of geographic information systems (GIS) and their capabilities, with the main focus on ESRI ArcMAP software. Topics will include GIS data collection and input, GIS data types and basic mapping concepts.				CONE 1100 Electrical Safety 1 1/0/0			
Prerequisite: CPTR1100 OR CPTR1104				This course provides students with an understanding of occupational safety practices and requirements associated with working in the electrical industry. It also covers the purpose and enforcement of general safety rules.			
Corequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
CIVL 2244	Survey IV: Equipment Software	3	2/1/0	CONE 1102 Introduction to Electric Circuit Theory 4 2/2/0			
This course covers the application of TDS Survey Pro software as it applies to the TDS Ranger and Recon total stations data collectors. Students will learn these various software routines to make them more efficient with their day-to-day surveying.				This introductory course provides the student with knowledge of electrical theory including atomic structure, Ohm's Law, series circuits, parallel circuits, complex circuits and sine wave principles as related to the National Electrical Code.			
Prerequisite: CIVL1102				Prerequisite: None			
Corequisite: None				Corequisite: None			
CIVL 2246	Introduction to Hydrology	3	3/0/0	CONE 1104 Introduction to National Electrical Code 2 2/0/0			
This course will include introduction to hydraulic principles, hydrology, pipe and open channel flow, watershed analysis and storm water regulations.				This course provides the student with an introduction to the National Electrical Code. The student develops basic skills and understanding of the National Electrical Code and how it applies to electrical applications in the field.			
Prerequisite: CIVL2234 AND CIVL2240				Prerequisite: None			
Corequisite: None				Corequisite: None			
Communication							
COMM 1100	Communication and Effective Human Relations	3	3/0/0	CONE 1107 Introduction to Residential Wiring 3 1/2/0			
Meets MnTC Goal Areas 1 and 2. This course is designed to provide individuals with basic communication principles for positive relationships in career settings. This is accomplished through oral, written and intra/interpersonal communication skills which are valued for life and work experiences. Changes in the life/work environment are characterized by greater cultural diversity, the performance of more work by teams and the need for greater ability to cope effectively with life/work issues and problems that require extensive knowledge of human relationships.				This course provides a fundamental technical understanding of residential wiring. Basic wiring skills for residential occupancies will be practiced in lab settings while applying National Electrical Code standards.			
Prerequisite: ENGL0096 OR ENGL0040 AND ENGL0050 OR by assessment				Prerequisite: None			
Corequisite: None				Corequisite: None			
COMM 1120	Introduction to Public Speaking	3	3/0/0	CONE 1108 Electrical Circuit Theory 4 2/2/0			
Meets MnTC Goal Area 1. This course clarifies the process of oral communication, clarifies the basic principles of public speaking and allows the student to increase the application of these principles while both speaking and listening.				This course provides the student with an understanding of complex AC circuits, single-phase and three-phase circuit connections, transformer principles and calculations.			
Prerequisite: Assessment into ENGL 1101				Prerequisite: CONE1102			
Corequisite: None				Corequisite: None			
COMM 1130	Small Group Communication	3	3/0/0	CONE 1110 Electric Motors and Generators 4 2/2/0			
Meets MnTC Goal Areas 1 and 2. This course focuses on communication issues in small groups and the importance of small group work in business today. An emphasis will be placed on improving communication skills for successful teamwork, group cohesiveness and the responsibility to group goals and tasks. Students will be provided with opportunities to build their group communication skills through practice.				This course provides a fundamental understanding of electric motor and generator theory and basic skills. This course includes types, construction, operation, installation and maintenance of electric motors and generators.			
Prerequisite: Assessment into ENGL 1101				Prerequisite: CONE1102			
Corequisite: None				Corequisite: None			
COMM 1140	Interpersonal Communication	3	3/0/0				
Meets MnTC Goal Area 1. This course will focus on improving students' abilities to communicate effectively in one-to-one dyadic encounters by providing experience-based instruction. Extensive in-class and out-of-class analyses allow the student to examine his/her own and others' informal social interactions. The long-term goal is for the student to apply interpersonal communication theories to daily interactions and draw his/her own conclusions about the effectiveness of interpersonal communication.							
Prerequisite: Assessment into ENGL 1101							
Corequisite: None							

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
CONE 1112	Residential Wiring	3	1/2/0	CONE 1175	Best Maintenance Practices I	2	1/1/0
<p>This course provides students with expanded technical understanding and skills necessary for residential wiring. Students will be provided with experience for installations common to residential structures including general receptacles, lighting and designated circuit layout and installation.</p> <p>Prerequisite: CONE1107 Corequisite: None</p>				<p>More than 70 percent of equipment failures in industry and manufacturing are self-induced by a company's own maintenance workers, policies or attitudes, resulting in downtime or lost production. This course covers the Best Maintenance Practices as determined by top industrial and manufacturing companies. This course covers permanent repairs as related to specific tasks such as bearing replacement, chains, belts, coupling, lubrication, proper alignment and packing and seals.</p> <p>Prerequisite: None Corequisite: None</p>			
CONE 1114	National Electrical Code	2	2/0/0	CONE 2202	Heating/Cooling Controls	3	1/2/0
<p>This course provides students with an understanding of National Electrical Code articles related to overcurrent protection, raceways, special systems, panelboards, motors, compressors, transformers and the State Electrical Act.</p> <p>Prerequisite: CONE1104 Corequisite: None</p>				<p>This course introduces basic electric heating, gas, oil, heat pump and cooling system installation and control. Topics included are installing wiring for heating and air conditioning systems, replacing controls, measuring instruments and schematic interpretation.</p> <p>Prerequisite: CONE1107 Corequisite: None</p>			
CONE 1115	Solar Photovoltaic Installation	1	1/0/0	CONE 2205	Introduction to Commercial Wiring	3	1/2/0
<p>This course covers the installation of photovoltaic (PV) solar panels and associated equipment. Topics include principles of operation, payback, safety concerns, site selection, system types and sizing. The primary focus is how to install the units so they are in compliance with the National Electrical Code.</p> <p>Prerequisite: None Corequisite: None</p>				<p>This course examines the material and design aspects of commercial wiring. Topics included are raceways, boxes, design requirements for conduit layouts, circuit overcurrent protection and lighting.</p> <p>Prerequisite: CONE1104 AND CONE1122 Corequisite: None</p>			
CONE 1116	Conduit/Tool Applications	2	0/2/0	CONE 2206	Introduction to Motor Control Applications	3	2/1/0
<p>Numerous applications and skills will be developed in this course including bending, threading and installation of various types of conduit. This course also provides a review of the operation and safety of both hand and power tools used in the construction electricity field.</p> <p>Prerequisite: CONE1100 Corequisite: None</p>				<p>This course provides an understanding of motor control symbols, line diagrams, contractors, starters and operating circuits. Lab procedures demonstrate components, circuitry and operation learned in theory. Measured data is recorded and interpreted.</p> <p>Prerequisite: CONE1108 AND CONE1110 Corequisite: None</p>			
CONE 1118	Electrical Services	3	2/1/0	CONE 2208	Programmable Logic Controllers	2	1/1/0
<p>This course covers requirements and installation of service entrance equipment. Topics include service materials, installation procedures, meters, service and conduit sizes, panel types, bonding, grounding and overcurrent protection.</p> <p>Prerequisite: CONE1104 Corequisite: None</p>				<p>This course covers the theory, operation, installation, hardware, software and practical applications of programmable logic controllers. Basic PLC programming techniques for counters, timers and sequencers will be presented.</p> <p>Prerequisite: None Corequisite: None</p>			
CONE 1120	Electrical Blueprints	3	2/1/0	CONE 2211	Electronic Motor Control	3	2/1/0
<p>The student will learn to read commercial blueprints with an emphasis on electrical circuitry including lighting, power, service, feeders and special systems. The course also introduces the student to CAD drawings.</p> <p>Prerequisite: CONE1124 Corequisite: None</p>				<p>This course provides application of basic theory and operation to electronic motor control including semi-conductors, rectifiers, regulators and amplifiers.</p> <p>Prerequisite: CONE1108 Corequisite: None</p>			
CONE 1122	Introduction to Electrical Materials	1	0/1/0	CONE 2212	Commercial Wiring	3	1/2/0
<p>This course provides the student with an introduction to the electrical material used in industry. The student develops basic skills and understanding of the material and how it applies to electrical applications in the field.</p> <p>Prerequisite: None Corequisite: None</p>				<p>This course covers materials and design aspects of commercial wiring, in particular lighting and fuse applications. Topics included are lighting and lamp installation and selection, fuse selection, special outlets, load schedule, short circuit calculations and emergency illumination.</p> <p>Prerequisite: CONE2205 Corequisite: None</p>			
CONE 1124	Introduction to Electrical Blueprint Reading	2	1/1/0	CONE 2214	Industrial Wiring	2	1/1/0
<p>This course provides the student with a working knowledge of residential blueprints and specifications. The student gains an understanding of blueprints, then interprets and applies this knowledge to the electrical industry.</p> <p>Prerequisite: None Corequisite: None</p>				<p>This course covers the installation methods and materials used in industrial wiring. Topics include transformers, busways, motor installation, industrial metering, overcurrent system coordination, ground detection, grounding systems, surge protection, distribution, special systems and industrial hazardous locations, and the study of the National Electrical Code relating to these topics.</p> <p>Prerequisite: CONE1114 Corequisite: None</p>			
CONE 1130	Electrical Blueprints	3	2/1/0	CONE 2216	Motor Control Application	3	1/2/0
<p>The student will learn to read commercial blueprints with an emphasis on electrical circuitry including lighting, power, service, feeders and special systems. The course also introduces the student to CAD drawings.</p> <p>Prerequisite: CONE1124 Corequisite: None</p>				<p>This course provides an advanced understanding of circuits controlling motors. Topics include jogging, braking, plugging, reduced voltage starting, phase loss protection, latching relays, time delay relays and safety requirements. Lab procedures demonstrate components, circuitry and operation learned in theory. Measured data is recorded and interpreted.</p> <p>Prerequisite: CONE2206 Corequisite: None</p>			
CONE 1140	Power-Limited Exam Prep	2	2/0/0	CONE 2217	Building Automation I	2	0/2/0
<p>This course covers the knowledge base associated with the Minnesota Power-Limited Technician license and includes all of the topics identified in the Minnesota Board of Electricity PLT study guide. Subjects covered include those found in the National Electrical Code and in the Minnesota laws and rules. Additional subjects covered include technical terminology, formulas and procedures that are essential elements of the PLT examination, not all of which are found in the NEC.</p> <p>Prerequisite: None Corequisite: None</p>				<p>This course introduces students to building automation systems. These systems are becoming critical required components used for green buildings, energy conservation and building safety systems. Topics covered in this course include electrical energy production, alternative energy sources and interconnection of renewable sources to existing power systems. This course also covers green utilization equipment and controls such as lighting, heating, ventilating and air conditioning, and plumbing.</p> <p>Prerequisite: None Corequisite: None</p>			
CONE 1170	Predictive Maintenance Technology	2	1/1/0	CONE 2218	Building Automation II	2	0/2/0
<p>This course is designed to introduce students to the current predictive maintenance technology used in the Best Maintenance Practices as used by top-performing companies in industry. The course will cover infrared thermography, vibration analysis, ultrasonic detection, oil spectrum analysis, motor current analysis and other technologies. These methods are used in electrical and mechanical maintenance programs in industry to predict failures of electrical connections, equipment, bearings and other critical machines found in industry. Students will also be introduced to Best Maintenance Practices and their impact on the future of industry in the United States.</p> <p>Prerequisite: None Corequisite: None</p>				<p>This course is a continuation of Building Automation I. Topics covered include more critical building safety and security systems. These systems include fire systems and security and access control systems; voice, data and video systems; and automated building operations. Students will gain hands-on experience installing, programming and troubleshooting live systems.</p> <p>Prerequisite: CONE2217 Corequisite: None</p>			

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
CONE 2220	Electrician Internship This course provides the student with the opportunity to work for an electrician or in another approved electrical setting. The student will experience working at the job site with other employees and under various working conditions. Prerequisite: None Corequisite: None	3	0/0/3	CONE 2250	Special Topics/Projects The student works with an advisor and instructor to develop a contract with specific goals in areas deemed applicable to the construction electricity industry and the student's career plan. This opportunity may be limited by conditions such as instructor/lab/material availability. Prerequisite: None Corequisite: None	2	0/2/0
CONE 2222	Advanced Programmable Logic Controllers This course presents practical applications of programmable logic controllers with emphasis on advanced programming techniques and analog modules, input devices and hands-on wiring of PLC circuits. PLC programs are created and installed for operation of actual electrical equipment. Prerequisite: CONE2208 Corequisite: None	3	1/2/0	Construction Management			
CONE 2225	Transformers This course covers the concepts of transformer operation. Single-phase and three-phase (polyphase) transformer operation and installation methods are explored. Included in the course are the following topics: transformer operation, transformation relationships, transformer losses, transformer types, transformer testing, series and parallel operation, connections, instrument transformers and maintenance procedures. National Electrical Code requirements for transformer installations are developed and utilized. Prerequisite: CONE1108 Corequisite: None	2	0/2/0	CONM 1102	Site/Building Layout This course provides the student with the basic knowledge and hands-on skills necessary to lay out a building site and establish elevations for construction. Prerequisite: None Corequisite: None	2	1/1/0
CONE 2226	Agricultural Wiring This course introduces the design of farm wiring systems. Electrical distribution, dairy, poultry and hog structures will be included. Field crop storage, hog, dairy, poultry, farm shop, machinery shed and irrigation wiring are presented, along with farmstead lighting. Prerequisite: BLDG1102 AND GSMS1110 Corequisite: None	2	1/1/0	CONM 1108	Principles of Estimating This course covers material, labor and equipment estimating, which make up the primary portion of the direct costs used in a construction bid. These procedures are the first step in completing accurate bids for construction projects of all sizes. Prerequisite: None Corequisite: None	4	2/2/0
CONE 2228	Electrical Troubleshooting This course provides an application of principles of construction electricity to a variety of situations for the purpose of identifying and solving electrical problems. Emphasis is placed on electrical circuits pertaining to residential, commercial, industrial and motor control applications. Prerequisite: 36 credits of CONE courses Corequisite: None	1	0/1/0	CONM 1124	Building Systems This course is a comprehensive treatment of the various techniques, systems and methodologies utilized in the construction industry and will help the student prepare for the responsibilities of supervision on a modern construction project. Prerequisite: None Corequisite: None	3	3/0/0
CONE 2234	Hydraulics/Pneumatics This course provides the knowledge of pneumatic and hydraulic controls necessary for the electrician employed in an industrial setting. Prerequisite: None Corequisite: None	2	1/1/0	CONM 2204	Materials Testing This course covers inspection techniques, methods of material measurement, documentation, material sampling and testing methods for soils and concrete. Prerequisite: None Corequisite: None	3	1/2/0
CONE 2236	Industrial Motor Maintenance This course includes principles of industrial motor maintenance and experience with maintenance and troubleshooting situations common to industrial settings. Prerequisite: CONE1110 Corequisite: None	2	1/1/0	CONM 2206	Building Codes This course is designed to introduce the Uniform Building Code to students in the construction field, where a basic knowledge of the code's requirements is needed. Emphasis will be placed on the development and proper use of the code. Prerequisite: None Corequisite: None	2	2/0/0
CONE 2238	Low Voltage Wiring This course provides students with an understanding of installation procedures and National Electrical Code requirements for coax, telephone, fire alarm, security, fiber optic, cat 4, cat 5 and other low-voltage wiring systems. Prerequisite: None Corequisite: None	2	1/1/0	CONM 2208	Construction Bidding This course will explore standard construction contract documents and project estimating procedures and their use in building a competitive bid. Prerequisite: CONM1108 Corequisite: None	2	1/1/0
CONE 2240	Code Update This course provides the experienced electrician and advanced student with an overview of the National Electrical Code (NEC) and the State Electrical Act and can be used in preparing for the journeyman or masters electrical exam. Prerequisite: 30 CONE credits AND or experience in the electrical field Corequisite: None	1	1/0/0	CONM 2210	Construction Scheduling Planning and scheduling are important management tools. In this course students will work with several scheduling techniques commonly used in the construction industry to bring projects to timely and economically successful ends. Prerequisite: BLDG1120 OR CONM2208 Corequisite: None	3	2/1/0
CONE 2244	National Electrical Code Changes This course covers recent changes in the National Electrical Code and how they will affect current wiring practices. The course is approved for continuing education hours. Prerequisite: CONE1104 Corequisite: None	1	1/0/0	CONM 2212	Site Management This course covers construction site management from the standpoint of best utilization of site, facilities and services in a safe and efficient manner to complete construction projects. Prerequisite: None Corequisite: None	3	3/0/0
CONE 2246	Advanced Electronics This course provides theory, operation and practical applications of various field-effect transistors, thyristors, photosensitive devices, sensing devices and wave chopping circuitry. Prerequisite: CONE2211 Corequisite: None	2	1/1/0	CONM 2214	Safety Management This course includes construction management applications in the areas of safety and health. Students will have an opportunity to write construction company safety policies and work directly with other governmental safety and health programs and policies as they are used by construction companies. Prerequisite: None Corequisite: None	3	3/0/0
CONE 2247	Advanced Electronics This course provides theory, operation and practical applications of various field effect transistors, thyristors, photosensitive devices, sensing devices and wave chopping circuitry. Prerequisite: CONE2211 Corequisite: None	3	1/2/0	CONM 2216	Computer Estimating This course provides the fundamentals of estimating utilizing computer software and/or Timberline estimating software and explores the use of spreadsheet and database software in estimating. Prerequisite: CONM2208 AND CPTR1104 OR MCDD2204 AND CPTR1104 Corequisite: None	2	1/1/0
CONE 2248	Code Applications This course applies the principles of the National Electrical Code to job-specific situations. Prerequisite: CONE1104 AND CONE1114 Corequisite: None	2	1/1/0	CONM 2222	Construction Management Internship This course will provide construction management students with an opportunity to apply and extend their knowledge, practice their skills, integrate behaviors and explore areas of employment within the construction industry. Students will perform activities consistent with program outcomes in an industry setting with the supervision of the site employer. Prerequisite: None Corequisite: None	2	0/0/2

Cosmetology

COSM 1000 Principles and Practices 3 3/0/0

This course is intended for manicurists, estheticians and some transfer students. In a condensed form, this course will include the topics of chemistry, electricity, salon business, professional image, anatomy and infection control.

Prerequisite: None
Corequisite: None

COSM 1103 Shampooing and Rinsing 1 1/0/0

This course covers shampooing and draping. Students will learn the importance of selecting the correct shampoo for various hair types.

Prerequisite: None
Corequisite: None

COSM 1105 Hairstyling 1 1/0/0

This course will instruct students in conducting services in a safe environment. Students will learn styling and finishing techniques to complete a hairstyle to the satisfaction of the client.

Prerequisite: None
Corequisite: None

COSM 1107 Haircutting 1 1/0/0

This course will help students develop a strong foundation in haircutting. Students will learn basic sectioning and cutting techniques, along with instruction in how to use scissors, razors and clippers to achieve a strong foundation in haircutting.

Prerequisite: None
Corequisite: None

COSM 1111 Properties of the Hair and Scalp 1 1/0/0

In this course students will learn the different layers of the hair and how it can be damaged. It is essential for students to be able to analyze a client's hair, determine what type of damage the hair has experienced and prescribe corrective treatment.

Prerequisite: None
Corequisite: None

COSM 1117 Shampooing and Rinsing 1 1/0/0

This course covers shampooing and draping. Students will learn the importance of selecting the correct shampoo for various hair types.

Prerequisite: None
Corequisite: None

COSM 1119 Haircutting 1 1/0/0

This course will help students develop a strong foundation in haircutting. Students will learn basic sectioning and cutting techniques, along with correct use of scissors, razors and clippers to achieve a strong foundation in haircutting.

Prerequisite: None
Corequisite: None

COSM 1121 Histology of the Skin 1 1/0/0

In this course the student will learn the basic structure of the skin and its function. The student will learn how to conduct services in a safe environment and how to take measures to prevent spreading infectious and contagious diseases.

Prerequisite: None
Corequisite: None

COSM 1123 Facials/Make-Up/Hair Removal 1 1/0/0

In this course the student will learn the uses of various skin care products and their correct application to different skin types. The student will learn basic make-up application, including artificial lashes, and basic massage movements to assist in providing basic skin care services.

Prerequisite: None
Corequisite: None

COSM 1125 Nail Structure and Growth 1 1/0/0

In this course the student will learn the structure of the nail. The student will recognize various disorders and which disorders can be serviced in the salon.

Prerequisite: None
Corequisite: None

COSM 1129 Hairstyling 1 1/0/0

This course will instruct students in conducting services in a safe environment. Students will learn the styling and finishing techniques to complete a hairstyle to the satisfaction of the client.

Prerequisite: None
Corequisite: None

COSM 1130 Properties of the Hair and Scalp 1 1/0/0

In this course students will learn the different layers of the hair and how it can be damaged. It is essential for students to be able to analyze a client's hair, determine what type of damage the hair has experienced and prescribe corrective treatment.

Prerequisite: None
Corequisite: None

COSM 1137 Principles of Hair Design 1 1/0/0

This course will give students an understanding of design and how to incorporate design into creating a pleasing hairstyle for each client's facial features.

Prerequisite: None
Corequisite: None

COSM 1149 Advanced Hair Design 1 0/1/0

This course provides advanced skill training in hair cutting, chemical control and hair color.

Prerequisite: None
Corequisite: None

COSM 1155 Professional Image 1 1/0/0

This course relates to proper conduct and business dealings with employers, clients and co-workers, as well as others with whom students will come in contact.

Prerequisite: None
Corequisite: None

COSM 1157 Histology of the Skin 1 1/0/0

In this course students will learn the basic structure of the skin and its function. Students will learn how to conduct services in a safe environment and how to take measures to prevent spreading infectious and contagious diseases.

Prerequisite: None
Corequisite: None

COSM 1159 Facials, Make-Up, and Hair Removal 1 1/0/0

In this course students will learn the uses of various skin care products and how to apply them to different skin types. Students will learn basic make-up application, including artificial lashes, and basic massage movements to assist in providing basic skin care services.

Prerequisite: None
Corequisite: None

COSM 1161 Nail Structure and Growth 1 1/0/0

In this course students will learn the structure of the nail, how to recognize various disorders and which disorders can be serviced in the salon.

Prerequisite: None
Corequisite: None

COSM 1162 Airbrushing Techniques 1 0/1/0

This course teaches students the art of airbrushing techniques on natural and artificial nails. Topics include client consultation, safety and sanitation.

Prerequisite: None
Corequisite: None

COSM 1163 Hair Color 1 1/0/0

In this course students will learn how to conduct a color service in accordance with a client's needs and the importance of using a variety of salon products and techniques to achieve the appropriate color outcome.

Prerequisite: None
Corequisite: None

COSM 1171 Principles of Hair Design 1 1/0/0

This course will give students an understanding of design and how to incorporate design into creating a pleasing hairstyle for each client's facial features.

Prerequisite: None
Corequisite: None

COSM 1173 Chemistry and Electricity 1 1/0/0

In this course students will learn the two types of electricity, how they are measured and the safety devices pertaining to electricity. Many of the services students will provide actually change the hair, skin and nails chemically. It is essential that students have a good working knowledge of chemistry in order to provide the safest and most effective services.

Prerequisite: None
Corequisite: None

COSM 1177 Infection Control 1 1/0/0

In this course students will learn the nature of various organisms, how they relate to disease and how their spread can be prevented in the salon and at school.

Prerequisite: None
Corequisite: None

COSM 1179 Minnesota Cosmetology Laws and Rules 1 1/0/0

This course prepares students for the Laws and Rules portion of their state license examination.

Prerequisite: None
Corequisite: None

COSM 1185 The Art of Clipper Cutting 1 0/1/0

In this course students will learn the art of clipper cutting and beard design. This course will include client consultation, safety and sanitation.

Prerequisite: None
Corequisite: None

COSM 1200 Salon Practicum 1 - 18

In this course, students will work in a licensed salon in order to meet the required 1550 hours of salon experience stipulated by the State Board of Cosmetology. Students will use this course to supplement their existing salon experience. Credits will be awarded to reflect the number of additional hours the student will work in order to meet the state requirements.

Prerequisite: None
Corequisite: None

COSM 2000 Artistry in Hairstyling 1 1/0/0

This course focuses on the various types of non-surgical hair additions. Students will learn about the care and styling of wigs and basic braiding procedures to create hairstyles that are pleasing to clients.

Prerequisite: None
Corequisite: None

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
COSM 2100	Chemical Texture Services	1	1/0/0	CPTR 1106	Microcomputer Databases	3	2/1/0
Students will learn about hair relaxation and wave formation techniques in accordance with manufacturers' directions. Other topics in the course include consulting with clients to determine their needs and preferences and the importance of conducting chemical services in a safe environment. Prerequisite: None Corequisite: None				This course covers database concepts, design and construction using the latest database software. Topics include database normalization and table relationships, database objects, file creation, file manipulation, queries, macros, form development and report generation. Database programming concepts will also be introduced. Prerequisite: None Corequisite: None			
COSM 2200	Manicuring/Pedicuring	1	1/0/0	CPTR 1108	CISCO 1	3	1/2/0
In this course students will learn basic manicuring and pedicuring procedures. Students will understand the importance of providing services in a safe environment. Prerequisite: None Corequisite: None				This is an introduction to networking. This course covers a network model, basic networking math, basic network devices and an introduction to network design. Prerequisite: None Corequisite: None			
COSM 2300	Anatomy of the Head, Face and Neck	1	1/0/0	CPTR 1110	Visual Basic Program I	3	2/1/0
In this course students will learn basic anatomy of the head, face and neck so they can perform the services for which they are trained and qualified. Prerequisite: None Corequisite: None				This course covers an introduction to the Visual Basic programming language. It covers language basics and program structure. Topics include graphical interface design and development, control properties, event-driven procedures, variables, scope, expressions, operators, functions, decision-making structures, looping structures and database access. Prerequisite: None Corequisite: None			
COSM 2400	Advanced Nail Techniques	1	1/0/0	CPTR 1112	Visual Basic Program II	3	2/1/0
In this course students will learn how to conduct a client consultation to determine client needs and preferences. Students will learn about a variety of salon products that will enable them to provide nail services to clients. Prerequisite: None Corequisite: None				This course is the second and final course in the basic programming language. Topics include looping, menus, arrays, subroutines, sorting, strings and files. Prerequisite: CPTR1110 Corequisite: None			
COSM 2500	Salon Business	1	1/0/0	CPTR 1114	COBOL Programming I	3	2/1/0
In this course students will learn how to manage their time to provide efficient client services. Students will learn the necessary steps to retain clients and how to market salon products and maintain business records. Prerequisite: None Corequisite: None				This course is an introduction to the COBOL language and covers the fundamentals of the COBOL language and programming techniques. Programming assignments are completed in the lab. Topics include sequential file access and report formatting. Prerequisite: None Corequisite: None			
COSM 2600	Professional Image	1	1/0/0	CPTR 1115	COBOL Programming	4	3/1/0
In this course students will learn about the importance of physical presentation, beauty and wellness, and ergonomics in the salon. Prerequisite: None Corequisite: None				This course provides an overview of the COBOL programming language. Students will gain a solid foundation in the fundamentals of COBOL coding including knowledge of COBOL syntax, program structure, program design, execution and debugging. Maintenance and modification of typical business applications will also be coded throughout the course. Prerequisite: None Corequisite: None			
COSM 2700	Nail Art	1	0/1/0	CPTR 1118	CISCO 2	3	2/1/0
In this course students will perform various forms of nail art techniques and designs on natural and artificial nails. This course will include client consultation, safety and sanitation. Prerequisite: None Corequisite: None				This course covers additional OSI layer topics, network routing and auditing. Students learn and practice accepted router configuration procedures. Prerequisite: CPTR1108 OR CSCI1205 Corequisite: None			
COSM 2800	Alexandria Body Sugaring	1	1/0/0	CPTR 1122	Microcomputer Maintenance	3	1/2/0
In this course students will learn how to remove hair using the Alexandria Professional Body Sugaring advanced system. The course includes theory and thorough knowledge of the correct techniques employed in the practice of body sugaring. Prerequisite: None Corequisite: None				This course covers the operation, diagnosis, troubleshooting and basic repair of microcomputer components. Topics include hardware compatibility, system architecture, memory, input devices, video displays, disk drives, modems and printers. Prerequisite: None Corequisite: None			

Computer

CPTR 1001	Introduction To Programming and Scripting	3	1/2/0	CPTR 1125	IT Essentials	3	1/2/0
This course is an introduction to computer programming. Emphasis will be on programming concepts, program design methodology, program debugging, problem solving and writing clear code. Prerequisite: None Corequisite: None				This course is designed for students seeking entry-level computer hardware and software skills. Target students include those who want to prepare for careers in information and communication technology (ICT) and students who want to gain skills and working knowledge of how computers work, how to assemble computers and how to troubleshoot hardware and software issues. Prerequisite: None Corequisite: None			
CPTR 1100	Fund Computer Concepts	1	0/1/0	CPTR 1129	RPG Programming	4	2/2/0
This course provides a general overview of the frequently used functions of a personal computer. Computer hardware, operating systems, electronic mail, Internet and a brief introduction to an office software package will be covered. Prerequisite: None Corequisite: None				This course is an introduction to RPG programming and AS400 system operations. The student will learn the basics of operating the AS400 and begin writing RPG programs. These programs will include building physical files, writing RPG code, compiling, error finding and producing reports. There will be a strong emphasis on developing logic to program more intermediate RPG programs. A high concentration will be on the structure of the student's calculation specifications. Students will learn how to add, delete and update data to physical files through their RPG programs. Students also will be developing screen programs where users can enter data. Prerequisite: None Corequisite: None			
CPTR 1102	Introduction to Macintosh	3	2/1/0	CPTR 1130	IT Essentials II	3	1/2/0
This course covers the operation of Macintosh computer hardware and software, the Macintosh operating system and an introduction to Microsoft Office Suite software. Prerequisite: None Corequisite: None				This is an advanced course for computer hardware, including desktop and laptop personal computers, operating systems, basic IT security and basic networking fundamentals. Topics covered include computer hardware and operating system configurations, building a basic network, networking technologies and protocols, and preventive maintenance and troubleshooting of information technology hardware, software, security and networked devices. Prerequisite: CPTR1125 Corequisite: None			
CPTR 1104	Intro to Computer Tech	3	2/1/0				
This course covers the operation of personal computer hardware and software. It provides an overview of a personal computer operating system and word processing, spreadsheet, presentation, email, scheduling, Internet and database management software. Prerequisite: None Corequisite: None							

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
CPTR 1138	Information Systems	3	2/1/0		and relational database management systems to store, retrieve, edit, manipulate and format data for end users and decision makers.		
	This course is an introduction to information systems. Topics include an overview of data communications and information systems used in a variety of organization types, network hardware, software, topologies and resources, hardware and communications standards, and the systems development life cycle.				Prerequisite: CPTR1106		
	Prerequisite: None				Corequisite: None		
CPTR 1142	Network Essentials	3	2/1/0	CPTR 2234	Linux II	3	2/1/0
	This course gives students both the knowledge and hands-on skills necessary to work with network operating systems in a network administration environment.				The primary focus of this course is Linux networking, security, ethics and privacy.		
	Prerequisite: None				Prerequisite: CPTR2224		
	Corequisite: None				Corequisite: None		
CPTR 1148	Microcomputer Operating System	3	1/2/0	CPTR 2236	Network Security	3	2/1/0
	This course covers basic information about computer hardware and software and the use of the Windows operating system. Topics include file management techniques, utilizing common screen elements, multitasking, object linking and customizing the desktop.				This course deals with the understanding of basic network security. Students learn how to manage systems to guard against various security threats.		
	Prerequisite: None				Prerequisite: CPTR1148 AND CPTR2272		
	Corequisite: None				Corequisite: None		
CPTR 1166	Word Processing and Spreadsheets	4	2/2/0	CPTR 2238	Database Integration	3	2/1/0
	This course covers the basics of word processing and spreadsheet concepts, development and use.				This course covers the integration of data from multiple databases with strategies for development of integrated database applications. In working with these databases the student will store, organize and analyze data. Students will be responsible for setting up new databases and maintaining existing databases.		
	Prerequisite: None				Prerequisite: CPTR2230 AND CPTR2242		
	Corequisite: None				Corequisite: None		
CPTR 1170	Web Engineering I	3	2/1/0	CPTR 2242	Java Programming	3	2/1/0
	This course is an introduction to programming and maintaining professional Web pages for the business environment. Topics will include page design, authoring tools, accessibility issues and Web page and website development. Focus will be given to client-side programming languages such as HTML and JavaScript, Web server software, Web server maintenance and Internet protocols.				In this course the student utilizes the Java programming language to create both Internet applets and applications.		
	Prerequisite: None				Prerequisite: None		
	Corequisite: None				Corequisite: None		
CPTR 1178	Robotics	3	2/1/0	CPTR 2245	Enterprise Network Technologies	3	2/1/0
	This course teaches basic robot building, programming and troubleshooting. The robot building includes working with multiple motors and sensors on a robot. The robot program includes working with a graphical and command line programming environment. Along with reading current literature about robotics, this class provides the student the fundamentals of robotics.				This course will introduce information technologies used in an enterprise network environment. Possible technologies the course will cover are SANs, virtualization, clustering, enterprise wireless, VPN connectivity, structured cabling and network management. The course will discuss how these technologies provide 24/7 availability and introduce the concept of green technologies.		
	Prerequisite: None				Prerequisite: CPTR2272		
	Corequisite: None				Corequisite: None		
CPTR 2000	Mobile Application Development	3	1/2/0	CPTR 2252	Microcomputer Systems Project	3	1/2/0
	This course teaches software development for popular mobile operating systems. Focus will be on the creation of platform-specific user interfaces, data storage and network use.				Students utilize learning in previous courses to design and implement solutions to a business need. Activities include learning about current business practices and preparation for employment.		
	Prerequisite: CPTR1170 OR INTD1108				Prerequisite: CPTR2272 OR CPTR2230		
	Corequisite: None				Corequisite: None		
CPTR 2200	CISCO 3	3	2/1/0	CPTR 2258	Microcomputer System Projects	2	0/2/0
	This course is a study of ethernet problems and solutions. The course covers ethernet segmentation options and VLAN configuration. The student will practice solving these problems.				Students utilize the content of previous computer and network technology courses to design and implement an information system/networking solution to a business need. Hardware and software projects may include designing, installing, upgrading or expanding a computer network. Students may work on individual projects.		
	Prerequisite: CPTR1118				Prerequisite: CPTR2272		
	Corequisite: None				Corequisite: None		
CPTR 2208	CISCO 4	3	2/1/0	CPTR 2262	Internet Protocol Version 6	3	2/1/0
	This course covers WAN configuration and remote access configuration. Students will practice design and configuration of systems to solve WAN and remote access problems.				This course teaches how to manage systems using Internet Protocol Version 6. The emphasis is protocol management on networking devices.		
	Prerequisite: CPTR2200				Prerequisite: CPTR2200		
	Corequisite: None				Corequisite: None		
CPTR 2220	COBOL Programming II	3	2/1/0	CPTR 2272	Network Operating Systems	3	2/1/0
	This is the second course in COBOL programming language. Topics include sorting, table processing, data manipulation, control break processing, sequential file maintenance, and indexed and relative files.				This course teaches functions of a network operating system so the student can effectively maintain and manage a network. The student learns how to establish and oversee the operations of a network, create logins, design and establish directory structures, and implement security.		
	Prerequisite: CPTR1114				Prerequisite: CPTR1148 OR CPTR1138 OR CPTR1125 OR CPTR2224		
	Corequisite: None				Corequisite: None		
CPTR 2224	Linux I	3	2/1/0	CPTR 2282	Email Administration	3	2/1/0
	This course deals with Linux installation, configuration and system administration. This course lays the groundwork for continued study of Linux.				This course provides students with the skill sets to design, install, troubleshoot, secure and perform daily administration for a directory services integrated email system. Students learn how to use cryptographic authentication techniques along with learning how to analyze email server system performance and support email client packages.		
	Prerequisite: None				Prerequisite: CPTR2272		
	Corequisite: None				Corequisite: None		
CPTR 2228	RPG/OS400 II	4	2/2/0	CPTR 2294	Internship	3	0/0/3
	This course is a continuation of the RPG/OS400 I course with more advanced RPG programming and OS400 operations introduced. A strong emphasis will be put on developing screen programs that call one another and pass parameters between them. A large programming project will be given students at mid-semester in which they will develop many programs that are related and dependent on each other.				This course provides students with the opportunity to apply knowledge and skill sets learned in concurrent coursework. Students will perform activities in an employer-supervised industry setting that is consistent with program outcomes. Students will also utilize interpersonal communication skills within the context of applying knowledge and skill sets.		
	Prerequisite: CPTR1128				Prerequisite: CPTR1138		
	Corequisite: None				Corequisite: None		
CPTR 2230	Structured Query Language	3	2/1/0	CPTR 2296	Topics in Computers	3	1/2/0
	This course covers the basics of SQL (Structured Query Language) programming. SQL is a popular computer language that is used by small and large business organizations and computer programmers. The primary purpose of SQL is in working with databases				The goal of this course is to introduce students to a computer topic chosen from a wide range of classic and state-of-the-art research, techniques, systems and technologies		

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
	in the field of computer programming or networking. Topics will vary each semester. Course may be repeated for credit with a change in subtitle. Prerequisite: None Corequisite: None						
CPTR 2400	Web Integration	3	1/2/0				
	This course covers advanced Web programming concepts with focus on database and information system integration for business software. Topics will include secure programming methodologies, user account authentication and Web forms. Server-side programming languages will be utilized. Prerequisite: CPTR1170 OR instructor's approval Corequisite: CPTR2230 AND CPTR2242 OR instructor's approval						
Criminal Justice							
CRJU 1101	Introduction to Criminal Justice	3	3/0/0				
	This course serves as an introduction to the American criminal justice system including police, courts and correctional systems. Minnesota Police Officer Standards and Training Board objectives are also covered in this course. Prerequisite: None Corequisite: None						
CRJU 1102	Policing and Practices	3	3/0/0				
	This course includes an introduction into the development of American policing and an understanding of the modern roles and functions of police in a democratic society. These roles and functions include responsibilities in peacekeeping, law enforcement, community policing and customer service. Minnesota Police Officer Standards and Training Board learning objectives are also covered. Prerequisite: None Corequisite: None						
CRJU 1104	Juvenile Justice and Delinquency	3	3/0/0				
	This course covers the study of juvenile delinquency, the theories of causation and the methods of corrections. It also examines the juvenile court and correctional systems. Minnesota juvenile law will be explored as it relates to the Minnesota Police Officer Standards and Training objectives. Prerequisite: None Corequisite: None						
CRJU 1106	Introduction to Corrections/Probation	3	3/0/0				
	This course examines the historical and contemporary correctional theories and programs with emphasis on the current organizational structure. Probation, parole and correctional alternatives are also explored. Prerequisite: None Corequisite: None						
CRJU 1108	Physical Control Tactics for Corrections	3	2/1/0				
	This course will deal with use of force issues relating to correctional officers, defensive tactics and control techniques, proper restraint techniques and less-than-lethal weapons training. Lecture and practical applications are included in the course. Minnesota Police Officer Standards and Training Board learning objectives relating to physical control and less-than-lethal weapons are also covered. Prerequisite: None Corequisite: None						
CRJU 1109	Law Enforcement Behavioral Science	3	3/0/0				
	This course is devoted primarily to Minnesota Police Officer Standards and Training objectives including but not limited to the following areas: cultural awareness, stress management, domestic abuse, crisis intervention, communication, bias-motivated crimes, victims, ethics and human behavior. Prerequisite: None Corequisite: None						
CRJU 1117	Special Topics in Criminal Justice	3	3/0/0				
	This course looks at a variety of contemporary issues that are considered to be hot spots in law enforcement and criminal justice such as police pursuits, deadly force, gangs, terrorism, etc. Applicable Minnesota Police Officer Standards and Training Board learning objectives are also covered. Prerequisite: None Corequisite: None						
CRJU 2201	Criminal Law	3	3/0/0				
	This is a course in substantive law, including the elements of major crimes and possible legal defenses. This course also familiarizes students with the Minnesota criminal statutes focusing on Minnesota Police Officer Standards and Training Board objectives. Prerequisite: None Corequisite: None						
CRJU 2202	Criminal Procedures	3	3/0/0				
	This course covers the study of constitutional law and criminal procedures utilizing the opinions of the United States Supreme Court and the Minnesota rules of criminal procedure. Emphasis is placed on the constitutional guidelines for law enforcement, rules of arrest, search and seizure, and the Minnesota Rules of Criminal Procedure. Minnesota Police Officer Standards and Training Board learning objectives relating to						
	criminal procedure are also covered. Prerequisite: None Corequisite: None						
CRJU 2206	Police Report Writing	3	3/0/0				
	This course provides the technical understanding and practical application in basic police report writing, field note taking and standardized report forms commonly used by law enforcement. Emphasis is placed on developing a clear, concise style in expressing factual, relevant information in an acceptable format relevant to criminal case procedures. Minnesota Police Officer Standards and Training Board learning objectives for police report writing are also covered. Prerequisite: ENGL1101 OR GSCO1102 Corequisite: None						
CRJU 2209	Criminal Investigations	3	3/0/0				
	This course covers the methodology of criminal investigations from the preliminary investigation to the court proceedings. It also covers evidence recognition, collection and preservation. Police reporting relevant to investigations is also covered, along with all Minnesota Police Officer Standards and Training Board learning objectives relating to investigation of crime. Prerequisite: None Corequisite: None						
CRJU 2210	Introduction to Criminalistics	3	2/1/0				
	This is an introduction to the principles involved in the application of scientific and technical methods used in the discovery, review and evaluation of physical evidence. The interpretation of evidence and the linkage to suspects is also covered. Minnesota Police Officer Standards and Training Board learning objectives for collection and preservation of evidence are also covered. Prerequisite: None Corequisite: None						
CRJU 2235	Criminal Justice Internship	3	0/0/3				
	This is a practical learning experience in criminal justice in the area of the student's interest. This course is usually scheduled after the student has completed one full year of coursework. Prerequisite: None Corequisite: None						
Computer Science							
CSCI 1101	Computer Essentials	1	1/0/0				
	This course is intended for those with minimal or no computer skills. Basic computer hardware and software terminology and the basics of microcomputer operating systems will be covered, as well as Internet and email operations. In addition, introductory word processing skills will be taught using one of the industry's common word processing packages. No credit given if taken after another computer course. Prerequisite: None Corequisite: None						
CSCI 1110	Informatics	3	3/0/0				
	This course explores how data is gathered and analyzed and how it can be applied to information technology solutions to maximize the benefits of data analysis, including increases in the efficiency and productivity of information systems. Students will explore the social, ethical and personal implications of implementing information technologies and how information processes can impact business on a local and global level. Prerequisite: None Corequisite: None						
CSCI 1120	Computer Programming Basic	3	3/0/0				
	This course is an introduction to programming and problem-solving techniques using the Visual Basic programming language. Prerequisite: MATH0090 Corequisite: None						
CSCI 1121	Computer Science I	4	4/0/0				
	This course is an introduction to computer science. It includes algorithm design and structured programming using a high-level programming language. Key components of this course are designing, coding, debugging and documenting programs using techniques of good programming style. This course is intended primarily as a first course for computer science majors and/or minors. Prerequisite: None Corequisite: None						
CSCI 1122	Computer Science II	4	4/0/0				
	This course focuses on advanced programming concepts including an introduction to data structures, analysis of algorithms, recursion, searching, sorting and memory management. Prerequisite: CSCI1121 Corequisite: None						

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
CSCI 1155	Computer Utilization in Business and Society	3	3/0/0	CSEC 2222	Network Security Design	3	2/1/0
<p>This course is designed to provide a technical background for understanding the use of computers in the real world. The course will cover both hardware and software and their applications in the world today. One of the highest-rated commercially available applications software packages will be used to gain skills necessary for word processing, electronic spreadsheets, databases and presentations. Students will use the Internet and electronic mail on a regular basis.</p> <p>Prerequisite: None Corequisite: None</p>				<p>This course will give the student the opportunity to conduct a vulnerability analysis on a network in order to practice or refine the attack methodologies with the hacker tools and techniques that the student was exposed to during the various program courses. The student must demonstrate the ability to design, plan and execute a vulnerability analysis against an organization network. The student must prepare a written report and mode of the security design, attack methodology, tools and techniques.</p> <p>Prerequisite: CSEC2204 Corequisite: CSEC2210</p>			
CSCI 1205	Network Fundamentals	4	4/0/0	CSEC 2228	Network Defense	3	2/1/0
<p>This is the first course in a four-course, HTML-based curriculum that focuses on TCP/IP ethernet routed and switched networks. Through the four-course program, students learn the information needed to prepare them for the Cisco Certified Networking Associate (CCNA) exam (an industry certification that will position students for immediate job openings or prepare them for computer engineering and science-focused college studies).</p> <p>Prerequisite: None Corequisite: None</p>				<p>This course introduces the student to the various methodologies for defending the network. The student will be introduced to the concepts, principles, type and topologies of firewalls to include packet filtering, proxy firewalls, application gateways, circuit gateways and stateful inspection.</p> <p>Prerequisite: CSEC1110 AND CSEC2210 Corequisite: None</p>			
<h2>Computer Network Security</h2>							
CSEC 1102	Careers in Information Systems	1	1/0/0	CTEC 2204	Advanced Technical Support	3	2/1/0
<p>This course is for students who are interested in computer-related careers. Students will research careers in information technology including job duties, various job titles, salary ranges, employment and advancement prospects, and the skills and training required. Students in this course will complete individual college and career planning and goal setting plans.</p> <p>Prerequisite: None Corequisite: None</p>				<p>This course will emphasize advanced technical support topics such as project management, product development, software evaluation and selection, technical writing and end-user training. Students will apply their technical knowledge and experience to actual case studies.</p> <p>Prerequisite: ITSS1100 Corequisite: None</p>			
CSEC 1110	Fundamentals of IT Security	3	2/1/0	CTEC 2240	Technical Support Internship	3	0/0/3
<p>This course introduces the basics of network security. The student will be introduced to network vulnerabilities and threats and how to safeguard computer networks from those vulnerabilities and threats. This course will expose the student to network security planning, network security technology, network security organization and legal and ethical issues associated with network security.</p> <p>Prerequisite: None Corequisite: None</p>				<p>This is a hands-on course in a computer industry setting. The student will apply skills, knowledge and behaviors acquired in prior courses to the computer business situation. The student will provide phone and/or direct support to computer customers and gain a working knowledge of the technical analyst position.</p> <p>Prerequisite: None Corequisite: None</p>			
CSEC 2202	Introduction to Wireless Networking	3	2/1/0				
<p>This is an introductory course that will focus on the design, planning, implementation, operation and troubleshooting of wireless networks. It covers a comprehensive overview of technologies, security and design best practices with particular emphasis on hands-on skills.</p> <p>Prerequisite: None Corequisite: None</p>							
CSEC 2204	Managing Directory Services	3	2/1/0				
<p>This course is designed to further students' understanding of directory services. Directory services provide a central repository for the information available on the network. The student will learn that the first function of the directory is to provide information about objects in the directory including users and resources such as file shares, printers or email boxes. In addition, the student will learn that the information contained in the directory is crucial for the correct and secure operation of the network.</p> <p>Prerequisite: CPTR2272 Corequisite: None</p>							
CSEC 2210	Security Breaches and Countermeasures	3	2/1/0				
<p>This course introduces the student to the various methodologies for attacking a network. The student will be introduced to concepts, principles and techniques, supplemented by hands-on exercises for attacking and disabling a network. The course will emphasize network attack methodologies with the emphasis on student use of network attack techniques and tools.</p> <p>Prerequisite: CSEC1110 Corequisite: None</p>							
CSEC 2212	Web Security	3	2/1/0				
<p>This course will give students hands-on training in securing Web communications and websites. Students will learn the common vulnerabilities of websites, implementing e-business security policies, identifying security threats, developing countermeasures and managing the deployment of security solutions.</p> <p>Prerequisite: CPTR2224 AND CPTR2272 Corequisite: None</p>							
CSEC 2218	Disaster Recovery	2	1/1/0				
<p>This course includes preparation of a disaster recovery plan, implementation of the plan and recovering from a disaster. This course takes an enterprise-wide approach to developing a disaster recovery plan. Students will learn how to restore a network in the event of a disaster.</p> <p>Prerequisite: CSEC1110 Corequisite: None</p>							
<h2>Computer Technical Support</h2>							
<h2>Culinary Arts</h2>							
CULN 1102	Introduction to Foodservice Preparation	4	4/0/0	CULN 1104	Soups, Stocks and Sauces	2	2/0/0
<p>This course covers terminology, equipment, basic food products and cooking techniques and kitchen safety.</p> <p>Prerequisite: None Corequisite: None</p>				<p>This course covers the introduction and application of many soups, stocks and sauces that are the basis for the preparation of many food items that appear on restaurant menus.</p> <p>Prerequisite: None Corequisite: None</p>			
CULN 1106	Salad and Baking Lab	6	0/6/0	CULN 1112	Poultry and Seafood	3	3/0/0
<p>This course covers food production in the food service salad and baking areas with the practical hands-on applications required for anyone to work in the pastry/baking area as well as the pantry/salad area in a commercial kitchen.</p> <p>Prerequisite: None Corequisite: None</p>				<p>This course is an introduction to poultry, fish and seafood from basic classifications to preparation methods, handling techniques, market forms and accompaniments.</p> <p>Prerequisite: None Corequisite: None</p>			
CULN 1118	Fry and Broiler Lab	5	0/5/0	CULN 1120	Kitchen Math and Formulas	1	1/0/0
<p>This course covers the skills required of a cook working various positions in a commercial food service production line, focusing on the equipment and techniques used. Food product information is also included in this course.</p> <p>Prerequisite: CULN1102 Corequisite: None</p>				<p>This course is an assessment and review of math skills necessary for food-service workers. Functions with whole numbers, fractions, decimals and percentages are covered and applied to food-service calculations and formulas.</p> <p>Prerequisite: None Corequisite: None</p>			

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
CULN 1122	Sanitation Certification		1 1/0/0	CUST 1060	Occupational Safety and Risk Management	2	2/0/0
This course covers the basics of safe food handling procedures, safe food storage, cleaning and sanitizing, and purchasing and receiving safe food. This course follows the FDA Model Food Code, and students will test for the Servsafe Certification exam at the conclusion of the class.				This course is an introduction to occupational safety and health in business and industry. It includes studying the Occupational Safety and Health Act, accident prevention techniques, job task analysis and safety design including ergonomics, job and system safety, empowering employees, and training employees for safe practices. Participants will discuss best practices to gain management and employee commitment to the development of a safety culture.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
CULN 1124	Menu Planning and Merchandising		2 2/0/0	<hr/>			
This course covers the introduction to menus, including the design, copy writing and layout, as well as the application of food service marketing principles on which the success or failure of the modern restaurant depends.				Voice and Video Over Internet Protocol			
Prerequisite: None				CVNP 2210 Voice, Video and Data Convergence			
Corequisite: None				4 2/2/0			
CULN 2202	Meats		2 2/0/0	This course covers the theory and environmental impact of voice, video and data converged networks. Topics covered in this course include review of the medium and equipment used to transport converged signals and the different transport protocols supporting convergence. Converged network design includes incorporating green technologies, calculating power consumption, configuring and troubleshooting converged networks.			
This course covers the identification of meat cuts from beef, pork, lamb and veal and proper cooking and usage for fabricated cuts. It includes USDA inspection, quality and yield standards of meats as used in the food service industry.				Prerequisite: CPTR1108 OR TECH1106			
Prerequisite: None				Corequisite: None			
Corequisite: None				CVNP 2212 Voice Over IP and IP Telephony			
CULN 2204	Breakfast Preparation Lab		5 0/5/0	4 2/2/0			
This course covers the hands-on application of the skills required by a breakfast cook, ranging from basic egg cookery to breakfast buffet set-up and service, and the preparation of food products on the typical breakfast menu of a restaurant.				This course covers the theory, installation, configuration and monitoring of traditional voice communications systems and voice communications systems designed to operate over an IP (Internet Protocol) network. Today's data communications networks use IP for address assignment, traffic identification, quality of service and other features required to transport multiple signals over one data connection. Topics covered in this course include components of business communications systems, voicemail systems, call features, IP telephony call control protocols, codec algorithms and quality of service techniques.			
Prerequisite: None				Prerequisite: CPTR1118			
Corequisite: None				Corequisite: None			
CULN 2206	Buffet and Garde Manger Lab		3 0/3/0	CVNP 2214 Voice, Video and Data Convergence			
This course covers the food art portion of entry-level positions in food service. It also provides an exposure to buffet service and some of the classical forms of food presentation and display.				3 2/1/0			
Prerequisite: None				This course covers the theory and environmental impact of voice, video and data converged networks. Topics covered in this course include review of the medium and equipment used to transport converged signals and the different transport protocols supporting convergence. Converged network design includes incorporating green technologies, calculating power consumption and performing an on-site evaluation for an existing converged network system.			
Corequisite: None				Prerequisite: CPTR1108			
Corequisite: None				Corequisite: None			
CULN 2214	Quantity Food Preparation and Butcher Lab		6 0/6/0	CVNP 2216 Voice over Internet Protocol (VoIP) and IP Telephony 3			
This course covers the hands-on preparation of meats, fish, poultry, soups, stocks, sauces, pasta, grains, starches and vegetables required in the production area in many food service operations. It also covers the hands-on application of meat cutting and processing, as well as other functions performed in the butcher shop area of the food service operation.				2/1/0			
Prerequisite: None				This course covers the theory, installation, configuration and monitoring of traditional voice communications systems and voice communications systems designed to operate over an IP (Internet Protocol) network. Today's data communications networks use IP for address assignment, traffic identification, quality of service and other features required to transport multiple signals over one data connection. Topics covered in this course include components of business communications systems, voicemail systems, call features, IP telephony call control protocols, codec algorithms and quality of service techniques.			
Corequisite: None				Prerequisite: CPTR1118			
Corequisite: None				Corequisite: None			
CULN 2222	Production and Planning Supervision Lab		6 2/4/0	CVNP 2220 Video Over Internet Protocol			
This course provides the practical application of the principles of supervision that are part of a chef's daily routine. It includes application of learned skills in the areas of production, supervising, menu writing, purchasing, storeroom operation and merchandising.				4 2/2/0			
Prerequisite: None				In this course the student will learn how to encode and decode video IP signals to be transported over converged networks and connect equipment to perform associated functions. Video conferencing, IPTV, HDTV, 3G cell phone video, content protection and other new technology formats will be explored and researched to give the student a better understanding of video over Internet protocol technologies.			
Corequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
CULN 2228	Food Cost Control		3 3/0/0	CVNP 2222 Voice Video Over IP Systems Project			
This course covers the cost structure of food service operations and provides methods and applications to monitor and control food and labor costs.				3 1/2/0			
Prerequisite: None				This is a capstone course for the Voice Video over Internet Protocol Certificate. Students will work on projects to design and configure a converged network and configure applications to run over the network. Students will analyze the environmental impact of their designs and perform testing and troubleshooting. Students will present their designs and discuss any green technologies used in the designs.			
Corequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
CULN 2236	Ethnic Foods		2 1/1/0	CVNP 2224 Video over Internet Protocol			
This course covers the history, origin and preparation methods of food products of various countries and ethnic groups.				3 2/1/0			
Prerequisite: None				In this course the student will be introduced to applications and technologies developed to encode and decode digital video signals transported over converged networks. Video technology includes video formats, video conferencing applications, Internet Protocol television (IPTV) ecosystems, high definition television technology (HDTV), broadband television and video for personal device playback. The course will also review content protection practices.			
Corequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
CULN 2238	Confectionery Art		2 1/1/0	<hr/>			
This course covers the skills and techniques required to decorate and present cakes, pastries and desserts.				Custom Training			
Prerequisite: None				CUST 1010 Wood Properties: Strength and Quality			
Corequisite: None				3 3/0/0			
CULN 2240	Internship		2 0/0/2	This course introduces students to the properties of wood as a manufacturing material. The course will focus on the physical, mechanical and chemical aspects of wood and wood products in the manufacturing environment. Participants will learn quality specifications and requirements which are standard for the needs of today's wood-based products.			
This course provides the student with an internship experience to allow him or her to apply what has been learned in the classroom and practiced in the lab. The internship will take place in a commercial food service establishment under the supervision of the employer/designee.				Prerequisite: None			
Prerequisite: None				Corequisite: None			
Corequisite: None							

Custom Training

CUST 1010 Wood Properties: Strength and Quality **3 3/0/0**
This course introduces students to the properties of wood as a manufacturing material. The course will focus on the physical, mechanical and chemical aspects of wood and wood products in the manufacturing environment. Participants will learn quality specifications and requirements which are standard for the needs of today's wood-based products.
Prerequisite: None
Corequisite: None

Voice and Video Over Internet Protocol

CVNP 2210 Voice, Video and Data Convergence **4 2/2/0**
This course covers the theory and environmental impact of voice, video and data converged networks. Topics covered in this course include review of the medium and equipment used to transport converged signals and the different transport protocols supporting convergence. Converged network design includes incorporating green technologies, calculating power consumption, configuring and troubleshooting converged networks.
Prerequisite: CPTR1108 OR TECH1106
Corequisite: None

CVNP 2212 Voice Over IP and IP Telephony **4 2/2/0**
This course covers the theory, installation, configuration and monitoring of traditional voice communications systems and voice communications systems designed to operate over an IP (Internet Protocol) network. Today's data communications networks use IP for address assignment, traffic identification, quality of service and other features required to transport multiple signals over one data connection. Topics covered in this course include components of business communications systems, voicemail systems, call features, IP telephony call control protocols, codec algorithms and quality of service techniques.
Prerequisite: CPTR1118
Corequisite: None

CVNP 2214 Voice, Video and Data Convergence **3 2/1/0**
This course covers the theory and environmental impact of voice, video and data converged networks. Topics covered in this course include review of the medium and equipment used to transport converged signals and the different transport protocols supporting convergence. Converged network design includes incorporating green technologies, calculating power consumption and performing an on-site evaluation for an existing converged network system.
Prerequisite: CPTR1108
Corequisite: None

CVNP 2216 Voice over Internet Protocol (VoIP) and IP Telephony 3 **2/1/0**
This course covers the theory, installation, configuration and monitoring of traditional voice communications systems and voice communications systems designed to operate over an IP (Internet Protocol) network. Today's data communications networks use IP for address assignment, traffic identification, quality of service and other features required to transport multiple signals over one data connection. Topics covered in this course include components of business communications systems, voicemail systems, call features, IP telephony call control protocols, codec algorithms and quality of service techniques.
Prerequisite: CPTR1118
Corequisite: None

CVNP 2220 Video Over Internet Protocol **4 2/2/0**
In this course the student will learn how to encode and decode video IP signals to be transported over converged networks and connect equipment to perform associated functions. Video conferencing, IPTV, HDTV, 3G cell phone video, content protection and other new technology formats will be explored and researched to give the student a better understanding of video over Internet protocol technologies.
Prerequisite: None
Corequisite: None

CVNP 2222 Voice Video Over IP Systems Project **3 1/2/0**
This is a capstone course for the Voice Video over Internet Protocol Certificate. Students will work on projects to design and configure a converged network and configure applications to run over the network. Students will analyze the environmental impact of their designs and perform testing and troubleshooting. Students will present their designs and discuss any green technologies used in the designs.
Prerequisite: None
Corequisite: None

CVNP 2224 Video over Internet Protocol **3 2/1/0**
In this course the student will be introduced to applications and technologies developed to encode and decode digital video signals transported over converged networks. Video technology includes video formats, video conferencing applications, Internet Protocol television (IPTV) ecosystems, high definition television technology (HDTV), broadband television and video for personal device playback. The course will also review content protection practices.
Prerequisite: None
Corequisite: None

Diesel Equipment Technology - Case IH and New Holland

DCNH 1116 CNH (Case New Holland) 3 0/0/3
Supervised Occupational Experience (SOE) I

Students will apply skill sets previously learned specific to Case New Holland equipment and will also be introduced to curriculum skill sets to be delivered in future semesters. Skill sets will be identified in a training plan developed by industry and instructor.
Prerequisite: None
Corequisite: None

DCNH 1118 CNH (Case New Holland) 7 0/0/7
Supervised Occupational Experience (SOE) II

Students will apply skill sets previously learned specific to Case New Holland equipment and will also be introduced to curriculum skill sets to be delivered in future semesters. Skill sets will be identified in a training plan developed by industry and instructor.
Prerequisite: None
Corequisite: None

DCNH 2210 Mobile Hydraulics 4 2/2/0

This course covers the hydraulic components specific to Case New Holland farm and heavy equipment. This will include hydrostatic transmission, electric over hydraulic control valves and electronic control components. It will also include troubleshooting of live units with proper testing equipment used in up-to-date service centers.
Prerequisite: DSET1112 AND DSET1100
Corequisite: None

DCNH 2218 CNH (Case New Holland) 3 0/0/3
Supervised Occupational Experience (SOE) III

Students will apply skill sets previously learned specific to Case New Holland equipment and will also be introduced to curriculum skill sets to be delivered in future semesters. Skill sets will be identified in a training plan developed by industry and instructor.
Prerequisite: None
Corequisite: None

DCNH 2230 Adv Engines and Fuel Systems I 3 1/2/0

This course is designed to give the student an understanding of the theory, operation, troubleshooting and repair of diesel engine intake, exhaust and fuel systems used in CNH equipment.
Prerequisite: None
Corequisite: None

DCNH 2238 Transmissions and Drive Systems 4 1/3/0

This course covers procedures to test, troubleshoot and rebuild power shift and other specialized transmissions used on agricultural equipment and industrial powered equipment as related to Case New Holland equipment. This course also includes final drives and related components including removal, repair, installation and adjustment of major units and components.
Prerequisite: DSET1110
Corequisite: None

DCNH 2242 Advanced Engines and Fuel Systems 6 2/4/0

This course is designed to give students an understanding of medium- and heavy-duty diesel engines used in Case New Holland equipment. Engines being studied include but are not limited to Cummins, Iveco, International Harvester and New Holland. Areas of study include base engine components, intake and exhaust systems, emission control devices, lubrication systems, cooling systems and fuel systems.
Prerequisite: DSET1132 AND DSET1134
Corequisite: None

Diesel Equipment Technology - John Deere

DEER 1116 John Deere Supervised Occupational Experience (SOE) I 3 0/0/3

Students will apply skill sets previously learned specific to John Deere equipment and will also be introduced to curriculum skill sets to be delivered in future semesters. Skill sets will be identified in a training plan developed by industry and instructor.
Prerequisite: None
Corequisite: None

DEER 1118 John Deere Supervised Occupational Experience (SOE) II 7 0/0/7

Students will apply skill sets previously learned specific to John Deere equipment and will also be introduced to curriculum skill sets to be delivered in future semesters. Skill sets will be identified in a training plan developed by industry and instructor.
Prerequisite: None
Corequisite: None

DEER 2210 Mobile Hydraulics 4 2/2/0

This course covers the hydraulic components specific to John Deere heavy equipment. This will include hydrostatic transmission, electric over hydraulic control valves and electronic control components. It will also include troubleshooting of live units with proper testing equipment used in up-to-date service centers.
Prerequisite: DSET1112 AND DSET1100
Corequisite: None

DEER 2218 John Deere Supervised Occupational Experience (SOE) III 3 0/0/3

Students will apply skill sets previously learned specific to John Deere equipment. Skill sets will be identified in a training plan developed by industry and instructor.
Prerequisite: None
Corequisite: None

DEER 2230 Adv Engines and Fuel Systems I 3 1/2/0

This course is designed to give the student an understanding of the theory, operation, troubleshooting and repair of diesel engine intake, exhaust and fuel systems used in John Deere industrial equipment.
Prerequisite: None
Corequisite: None

DEER 2238 Transmissions and Drive Systems 4 1/3/0

This course covers procedures to test, troubleshoot and rebuild power shift and other specialized transmissions used on construction equipment as it relates to John Deere. This course also includes final drives and related components including removal, repair, installation and adjustment of major units and components.
Prerequisite: DSET1110
Corequisite: None

DEER 2242 Advanced Engines and Fuel Systems 6 2/4/0

This course is designed to give students an understanding of medium- and heavy-duty diesel engines used in John Deere construction and forestry equipment. Engines being studied include but are not limited to John Deere, Isuzu and Yanmar. Areas of study include base engine components, intake and exhaust systems, emission control devices, lubrication systems, cooling systems and fuel systems.
Prerequisite: DSET1132 AND DSET1134
Corequisite: None

Dental

DENT 1100 Biomaterials 3 2/1/0

This is a foundation course that provides in-depth instruction and practice in identifying the materials, their purposes and properties as they are used during chairside and laboratory procedures. Material manipulation is a critical requirement of the lab component of this course. Laboratory safety measures and infection control are emphasized.
Prerequisite: None
Corequisite: None

DENT 1102 Dental Anatomy 2 2/0/0

The lecture portion of the course introduces the student to basic terminology for understanding the structures that form the foundation for tooth function, normal anatomy of the oral cavity and tooth and root morphology. Special topics include survey of dental anomalies, cavity classification and forensic dentistry.
Prerequisite: None
Corequisite: None

DENT 1103 Introduction for Dental Health Care Providers 2 1/1/0

The student will be introduced to fundamental knowledge required in the practice of dentistry. Topics to be covered include blood-borne pathogens, concepts and procedures of infection control, medical emergencies, first aid in the dental setting and patient privacy rights.
Prerequisite: None
Corequisite: None

DENT 1104 Dental Health Care Providers II 1 1/0/0

This course will build on student learning in Introduction to Healthcare Providers I. Students will be challenged to go beyond definitions and practices and understand the what, why and how of blood-borne pathogens, concepts, standards and procedures of infection control, medical emergencies, first aid in the dental setting and patient privacy rights.
Prerequisite: None
Corequisite: None

DENT 1106 Dental Radiology Lecture 3 3/0/0

This course includes an overview of the history of x-ray development and a review of basic mathematics and radiation physics as they apply to x-ray production. Radiographic film and digital image quality are explored. Explanation of darkroom chemistry, radiation asepsis and safety are covered. Other topics include interpretation of normal anatomy, dental film and digital image analysis, radiographic interpretation and evaluation, and quality assurance issues.
Prerequisite: None
Corequisite: None

DENT 1122 Dental Ethics and Jurisprudence 1 1/0/0

This course focuses on the ethical and legal implications of providing dental, dental assisting and dental hygiene care. The practice acts for Minnesota and North Dakota will also be studied.
Prerequisite: None
Corequisite: None

Dental Assisting

DNAS 1103 Clinical Assisting I 6 3/3/0

This course includes an orientation to the history of dentistry, educational requirements, credentialing opportunities and professional associations for dental and allied dental careers. The student is provided with instruction in the use of dental equipment, instruments and supplies; principles of four-handed dentistry; concepts of infection control and instrument recirculation; management of medical and dental emergencies; and procedures related to oral diagnosis, preventive dentistry and restorative dentistry.

Prerequisite: None
Corequisite: None

DNAS 1105 Clinical Assisting II 5 1/4/0

This course prepares the student to adapt chairside skills to assisting with dental specialties as they are performed in the general practice. Students will apply skills developed in Dental Anatomy, Biomaterials, Biodental Science and Dental Practice Management as they apply to the practice of dental assisting.

Prerequisite: DNAS1103
Corequisite: None

DNAS 1106 Biodental Science 3 3/0/0

This course provides an introduction to anatomy and physiology, an introduction to dental histology, embryology and an overview of head and neck anatomy using the universal charting system. This course is also designed to give the student a basic concept of microbiology, disease transmission and a survey of oral pathology and pharmacology. The student will also be introduced to the basic concepts of understanding nutrition in the dental profession.

Prerequisite: DENT1103
Corequisite: None

DNAS 1114 Dental Prac Management 2 2/0/0

This course provides the student with instruction in the principles and applications that are related to the management of a dental office. Emphasis is placed on managing patient records through computer-generated charting, financial records, third-party payments, appointment scheduling, inventory and recall systems.

Prerequisite: None
Corequisite: None

DNAS 1119 Advanced Functions 5 2/3/0

This course is designed to provide the student with instruction and practice to perform the clinical competency in the following intra-oral functions approved by the Minnesota Board of Dentistry: taking radiographic exposures, performing mechanical polishing, taking preliminary impressions and bite registrations, applying topical fluoride, placing and removing periodontal dressing, removing excess cement, monitoring nitrous oxide-induced patients, induction of nitrous oxide/oxygen sedation, excess bond removal from orthodontic appliances with rotary instruments and applying pit and fissure sealants. In addition the following intra-oral functions are taught and practiced to laboratory competency: removing sutures, preliminary adaptation of temporary (provisional) crowns, performing selected orthodontic functions, applying bleaching agents and performing approved endodontic procedures.

Prerequisite: DNAS1103 OR DENT1114
Corequisite: None

DNAS 1143 Clinical Affiliations 5-6 None

This is a faculty-supervised course at extramural sites with dentists and dental auxiliaries providing ancillary supervision. The student will be provided with clinical experiences by affiliations in general dentistry and/or specialized practices. Emphasis is on professionalism in performing general chairside and advanced intraoral procedures.

Prerequisite: Acceptance into the Dental Assisting program.
Corequisite: None

DNAS 1144 Clinical Affiliations 6 0/0/6

This is a faculty-supervised course at extramural sites with dentists and dental auxiliaries providing ancillary supervision. The student will be provided with clinical experiences by affiliations in general dentistry and/or specialized practices. Emphasis is on professionalism in performing general chairside and advanced intraoral procedures.

Prerequisite: Acceptance into the Dental Assisting program.
Corequisite: None

DNAS 1210 Radiology Lab 1 0/1/0

Dental assisting students expose full-mouth series, both film-based and digital, extra-oral and specialized radiographs on adult and child mannequins. Emphasis is placed on protection against x-ray hazards and record keeping. Students will also process, mount and evaluate radiographs for diagnostic value. In addition, they will use radiographs to explain dental health and treatment plans. Lab sessions will allow students to develop radiographic skills, and clinic sessions create an opportunity for students to enhance their efficiency in radiographic technique.

Prerequisite: DENT1106 AND DNAS1106
Corequisite: None

DNAS 1212 Radiology Lab II 1 0/1/0

Dental assisting students expose full-mouth series, both film-based and digital, extra-oral and specialized radiographs on adult and child patients. Emphasis is placed on protection against x-ray hazards and record keeping. Students will also process, mount

and evaluate radiographs for diagnostic value. In addition, they will use radiographs to explain dental health and treatment plans. Lab sessions will allow students to develop radiographic skills, and clinic sessions create an opportunity for students to enhance their efficiency in radiographic technique.

Prerequisite: DNAS1210
Corequisite: None

DNAS 1215 Dental Specialties 1 1/0/0

This course introduces the student to the dental specialties of pediatric dentistry, periodontics, oral and maxillofacial surgery, endodontics, orthodontics and prosthodontics, both fixed and removable. This course will provide the student with an introduction to the clinical procedures with each of the specialties listed. Students will research various dental assisting specialties by interviewing dental assistants in specialty practices.

Prerequisite: None
Corequisite: None

Dental Hygiene

DNHY 1104 Dental Anatomy Lab 1 0/1/0

This is a lab course which provides opportunities for the student to work with tooth identification and charting systems, intraoral imagery and occlusion assessment. Special topics include survey of dental anomalies and cavity classifications.

Prerequisite: None
Corequisite: None

DNHY 1106 Head and Neck Anatomy 2 2/0/0

This course covers the study of hard and soft tissues of the head and neck including the skeletal, muscular and nervous systems, with particular emphasis on the masticatory system.

Prerequisite: Acceptance into the Dental Hygiene program
Corequisite: None

DNHY 1108 Oral Histology and Embryology 2 2/0/0

This course covers the study of the microscopic anatomy of the oral tissues and the embryonic development of the face and oral cavity with emphasis on the masticatory system.

Prerequisite: None
Corequisite: None

DNHY 1109 Radiology Lab 2 2/0/0

This course puts into practice knowledge gained from DNHY 1106 Dental Radiology Lecture. Students expose full-mouth series (film based and digital), extra-oral and specialized radiographs on adult and pedodontic patients or mannequins. Emphasis is placed on radiation safety practices, infection control and record keeping. Students will process, mount and evaluate radiographs for diagnostic value and quality. Emphasis is placed on radiological interpretation and patient education. The lab and clinical experiences are designed to create an opportunity for students to enhance their efficiency and quality of their radiographic techniques.

Prerequisite: None
Corequisite: None

DNHY 1110 Principles I 2 2/0/0

This course introduces the student to dental hygiene with emphasis on theory of preventative dentistry, OSHA standards, disinfectant/sterilants, formation of plaque and calculus, patient assessment and an introduction to the caries process and periodontal assessment.

Prerequisite: None
Corequisite: None

DNHY 1112 Dental Hygiene Practice I 3 0/3/0

This course provides an introduction to dental hygiene with emphasis on the practice of preventative dentistry, care and use of equipment, sterilization techniques and an introduction to instrumentation.

Prerequisite: None
Corequisite: None

DNHY 1118 Oral Pathology 2 2/0/0

This course covers the study of general processes as well as oral disease processes. Special emphasis is placed on clinical and radiographic recognition of pathology of the oral cavity.

Prerequisite: Accepted into the Dental Hygiene program and successful completion of Principles I, II, III; Head and Neck Anatomy; and Oral Histology and Embryology
Corequisite: None

DNHY 1119 Dental Hygiene Principles II 4 4/0/0

This course is a continuation of DNHY 1110 with continuing information on the fundamentals of dental hygiene, record keeping and basic instruction and care of special needs patients.

Prerequisite: DNHY1110
Corequisite: None

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
DNHY 1123	Dental Hygiene Practice II	5	0/5/0	DNHY 2240	Clinical Affiliation I	1	0/0/1
This course is a continuation of DNHY 112, Dental Hygiene Practice I, and introduces the student to further instrumentation theory, instrumentation techniques and procedures, clinical protocol, evaluation of medical/dental histories and radiographic surveys as prescribed by a dentist. This course provides the opportunity for the student to develop competence in clinical procedures.				Clinical rotations off campus in public health facilities to enhance dental hygiene clinical experience. The student will be introduced to a variety of dental hygiene experiences.			
Prerequisite: DNHY1112				Prerequisite: None			
Corequisite: None				Corequisite: DNHY2213			
DNHY 1124	Pain Control Lab	2	0/2/0	DNHY 2246	Clinical Affiliation II	1	0/0/1
This course provides the dental hygiene student with the knowledge and skills necessary to administer local anesthesia and other methods of pain control during dental procedures without inducing detrimental physiological side effects.				Clinical rotations off campus in public health facilities to enhance dental hygiene clinical experience. The student will be introduced to a variety of dental hygiene experiences.			
Prerequisite: DNHY1106 AND DNHY1136				Prerequisite: None			
Corequisite: None				Corequisite: DNHY2223			
DNHY 1130	Dental Hygiene Prin III	1	1/0/0	Diesel Equipment Technology			
This course is a continuation of DNHY1119 with emphasis on Minnesota Board of Dentistry allowable procedures for dental hygienists. The course includes the study of rubber dam placement, sealants, orthodontic patients, debonding and intraoral photography.				<hr/>			
Prerequisite: DNHY1123				DSET 1100 Diesel Equipment Fundamentals			
Corequisite: None				2 1/1/0			
DNHY 1132	Dental Hygiene Prac III	1	0/1/0	This course is designed to give the student an understanding of a diesel shop environment. Personal and shop safety will be emphasized. Hand tool, pneumatic tool, precision measuring tool and hardware identification, usage and safety will also be areas of study.			
This lab course is a continuation of DNHY1123 with emphasis on Minnesota Board of Dentistry allowable procedures for dental hygienists.				Prerequisite: None			
Prerequisite: DNHY1123				Corequisite: None			
Corequisite: None				DSET 1106 Fuel Systems	2	1/1/0	
DNHY 1136	Dental Pharmacology	2	2/0/0	This course covers the fundamentals of diesel engine fuel systems identification, minor repair, testing and troubleshooting. Mechanical governor operation, fuel system operation, fuel system/governor adjustments and related engine operation are studied.			
This course introduces dental hygiene students to basic drug categories, pharmacological pain control principles and various anesthesia techniques, with special emphasis on a succinct accounting of drugs as they relate to dentistry.				Prerequisite: None			
Prerequisite: None				Corequisite: None			
Corequisite: None				DSET 1110 Power Train I	3	1/2/0	
DNHY 2210	Dental Hygiene Prin IV	2	2/0/0	This course covers the operating principles, diagnosis and repair of drive train components. Components included will be clutches, mechanical transmissions, drive lines and drive axles.			
This course is a continuation of DNHY 1130 and introduces the student to dietary counseling, with special emphasis on advanced dental hygiene techniques including periodontal assessment and debridement, power instrumentation and implant maintenance.				Prerequisite: TRNS1102 OR DSET1100			
Prerequisite: DNHY1130				Corequisite: None			
Corequisite: None				DSET 1112 Hydraulics I	4	2/2/0	
DNHY 2213	Dental Hygiene Prac IV	6	0/6/0	This course covers the fundamentals of hydraulic systems. It is an introduction to hydraulic component operation, maintenance, repair and testing. These systems may be used in agricultural, industrial heavy equipment and trucks.			
This course is a continuation of DNHY1132 with emphasis on the treatment of moderate to advanced periodontal disease, the development of speed and an introduction to several advanced dental hygiene techniques.				Prerequisite: None			
Prerequisite: DNHY1132 AND the student must be accepted into the dental hygiene program and comply with the Dental Program Student/Faculty Handbook.				Corequisite: None			
Corequisite: DNHY2240				DSET 1114 Vehicle Brakes	3	1/2/0	
DNHY 2219	Periodontology	2	2/0/0	This course covers hydraulic and air brake system operation, service and diagnosis. Anti-lock braking systems will also be covered.			
This course covers the pathogenesis, diagnosis and treatment of periodontal disease. Emphasis will include the progression of periodontal disease, diagnostic methods, treatment modalities, advanced instrumentation and the role of the dental hygienist as a periodontal co-therapist.				Prerequisite: None			
Prerequisite: None				Corequisite: None			
Corequisite: None				DSET 1116 Fall Supervised Occupational Experience	3	0/0/3	
DNHY 2220	Dental Hygiene Prin V	1	1/0/0	Students will apply skill sets previously learned specific to their sponsoring dealer's equipment and will also be introduced to curriculum skill sets to be delivered in future semesters. Skill sets will be identified in a training plan developed by industry and instructor.			
This course is a continuation of DNHY2210 and dental hygiene patient oral risk assessments. Special focus includes topics of interest to the graduating hygienist including smoking cessation, extraoral/ intraoral self exam, resume writing, interview skills, professional development, service to the community and involvement in the professional association.				Prerequisite: None			
Prerequisite: DNHY2210				Corequisite: None			
Corequisite: None				DSET 1124 Diesel Shop Management	1	1/0/0	
DNHY 2223	Dental Hygiene Prac V	6	0/6/0	This course provides students an opportunity to visit John Deere, Case New Holland or general shops and work with on-site instructors as it relates to management procedures including parts, ordering inventory, repair order writing, payroll, employee-employer relations, customer relations and communication skills.			
This course is a continuation of DNHY2213 with emphasis on the treatment of moderate to advanced periodontal disease, the development of speed and an introduction to several advanced dental hygiene techniques.				Prerequisite: None			
Prerequisite: DNHY2213 AND the student must be accepted into the dental hygiene program and comply with the Dental Program Student/Faculty Handbook.				Corequisite: None			
Corequisite: DNHY2246				DSET 1130 Trans Elec/Start/Charge	4	2/2/0	
DNHY 2226	Community Dental Hygiene	4	3/1/0	This course is an introduction to electrical systems. Students will learn how to use DVOMs and their applications. Students will study electrical theory including Ohm's law and its application to electrical systems. The course also introduces service procedures necessary to repair charging and starting system components. Electrical principles are applied to test and troubleshoot complete circuits as well as components of each. Fundamental rebuilding principles and system analysis are emphasized. Safe battery testing and service are performed.			
The lecture portion of this course introduces the student to the disciplines and basic principles of dental public health, epidemiological methods and biostatistical measurement and analysis. The lab portion of this course enables the student to plan, implement and evaluate a community dental hygiene research project and participate in a community dental service project and screening.				Prerequisite: None			
Prerequisite: None				Corequisite: None			
Corequisite: None				DSET 1132 Introduction to Engine Theory	2	2/0/0	
DNHY 2232	Dental Hygiene Review	1	1/0/0	This course introduces the theory of today's diesel engines, including operation, repair and maintenance. Students will learn the proper industry procedures for removing, replacing, diagnosing, troubleshooting, rebuilding and assembling diesel engines.			
This course is designed to assist students in reviewing content in preparation to write the National Board Dental Hygiene Examination.				Prerequisite: None			
Prerequisite: DNHY2213				Corequisite: None			
Corequisite: None							

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
DSET 1134	Introduction to Engines This course teaches students how to disassemble, analyze, rebuild, measure and adjust diesel engines and their components. Prerequisite: None Corequisite: None	3	0/3/0	DSET 2242	Advanced Engines and Fuel Systems This course is designed to give students an understanding of medium- and heavy-duty diesel engines manufactured by, but not limited to, Caterpillar, Cummins, Detroit Diesel, Navistar, Volvo and Mercedes Benz. Areas of study include base engine components, intake and exhaust systems, emission control devices, lubrication systems, cooling systems and fuel systems. Prerequisite: DSET1134 AND DSET1132 Corequisite: None	6	2/4/0
DSET 1140	Supervised Occupational Experience I Students will apply skill sets previously learned related to truck and/or other diesel-powered equipment and may be introduced to curriculum skill sets to be delivered in future semesters. Skill sets will be identified in a training plan developed by industry and instructor. Prerequisite: None Corequisite: None	7	0/0/7	Diesel Equipment Technology - Truck Option			
DSET 1144	Electrical Troubleshooting This course is a hands-on troubleshooting course that allows students to apply knowledge of DSET 1130. Students will be required to troubleshoot and repair a variety of equipment and vehicles. Prerequisite: DSET1130 Corequisite: None	3	1/2/0	DTRK 1140	Supervised Occupational Experience 1 Students will apply skill sets previously learned related to medium- and heavy-duty trucks at a sponsoring dealer or fleet shop. Students may be introduced to curriculum skill sets to be delivered in future semesters. Skill sets will be identified in a training plan developed by industry and instructor. Prerequisite: None Corequisite: None	7	0/0/7
DSET 2204	Advanced Electrical and Equipment Systems This course covers failure analysis of electrical systems, the recognition of causes of failures and how to interpret a wiring diagram. Lab activities include the troubleshooting of heavy-duty electrical components, testing, inspecting and repair. Electrical meters will be used to diagnose, locate and repair failures. Lab work may include diagnosis, disassembly, inspection, repair, assembly and testing of program and customer-owned equipment. Prerequisite: DSET1100 AND DSET1130 Corequisite: None	3	1/2/0	DTRK 2214	Suspension and Alignment This course will cover the procedures used in repair, inspection, rebuilding and alignment of steering and suspension systems. Vehicle Department of Transportation inspections will also be covered. Prerequisite: TRNS1102 OR DSET1100 Corequisite: None	3	1/2/0
DSET 2206	Electronic Controls This course covers electronic components used to control engines, transmissions, brakes and hydraulics used in modern equipment. The coursework will include system analysis, testing, troubleshooting and replacement of components used in electronic control systems. Prerequisite: DSET1130 AND TRNS1102 OR DSET1100 AND DSET1130 Corequisite: None	3	1/2/0	DTRK 2230	Advanced Engines I This course is designed to give the student an understanding of the theory, operation, troubleshooting and repair of modern medium- and heavy-duty truck diesel engines. Areas of study include intake and exhaust systems, emission control devices and fuel systems on but not limited to the following manufacturers: Caterpillar, Cummins, Detroit, Navistar, Mack and Volvo truck diesel engines. Prerequisite: None Corequisite: None	3	1/2/0
DSET 2210	Mobile Hydraulics This course covers the hydraulic components used in farm and heavy equipment and trucks. This will include hydrostatic transmission, electric over hydraulic control valves and electronic control components. It will also include troubleshooting of live units with proper testing equipment used in up-to-date service centers. Prerequisite: DSET1112 AND DSET1100 Corequisite: None	4	2/2/0	DTRK 2238	Transmissions and Drive Systems This course is designed to give the student an understanding of the theory, operation, troubleshooting and repair of modern medium- and heavy-duty truck transmission, differential and driveline components. Areas of study include the operation, inspection, disassembly and assembly of various manufacturers including but not limited to Allison, Eaton, Meritor, Rockwell and Mack. Prerequisite: DSET1110 Corequisite: None	4	1/3/0
DSET 2214	Suspension and Alignment This course will cover the procedures used in repair, inspection, rebuilding and alignment of steering and suspension systems. Vehicle Department of Transportation inspections will also be covered. Prerequisite: DSET1100 Corequisite: None	3	1/2/0	DTRK 2240	Supervised Occupational Experience II Students will apply skill sets previously learned related to medium- and heavy-duty trucks at a sponsoring dealer or fleet shop. Skill sets will be identified in a training plan developed by industry and instructor. Prerequisite: None Corequisite: None	4	0/0/4
DSET 2218	Advanced Fuels This course covers the application of the electronic fuel systems used on today's diesel engines. Coursework covers fuel systems used on engines manufactured by Caterpillar, Cummins, Detroit, John Deere, CNH and others. Prerequisite: DSET1106 Corequisite: None	3	1/2/0	DTRK 2242	Advanced Engines and Fuel Systems This course is designed to give the student an understanding of the theory, operation, troubleshooting and repair of modern medium- and heavy-duty truck diesel engines. Areas of study include base engine components, intake and exhaust systems, emission control devices, lubrication systems, cooling systems and fuel systems on but not limited to the following manufacturers: Caterpillar, Cummins, Detroit, Navistar, Mack and Volvo truck diesel engines. Prerequisite: DSET1132 AND DSET1134 Corequisite: None	6	2/4/0
DSET 2220	Internship This course is designed by the student and advisor in cooperation with industry to provide a job site training experience. The student will prepare an internship training plan reflecting skills to be developed on the internship site. Prerequisite: TRNS1102 AND TRNS1106 AND TRNS1110 OR DSET1100 Corequisite: None	3	0/0/3	Circuits			
DSET 2230	Adv Engines and Fuel Systems I This course is designed to give the student an understanding of the theory, operation, troubleshooting and repair of diesel engine intake, exhaust and fuel systems including but not limited to Caterpillar, Cummins and Detroit diesel engines. Prerequisite: None Corequisite: None	3	1/2/0	ECE 1201	Circuit Analysis I This course covers circuit variables and elements, resistive circuits, voltage and current laws, techniques of circuit analysis, network theorems, RL (Resistance Inductance), RC (Resistance-Capacitance) and RLC (Resistance- Inductance-Capacitance) circuits and computer-aided analysis. Prerequisite: MATH1135 AND PHYS1411 Corequisite: ENG 1203, Circuit Analysis Lab will cover the laboratory component of this course.	3	3/0/0
DSET 2238	Transmissions and Drive Systems This course covers procedures to test, troubleshoot and rebuild power shift and other specialized transmissions used on agricultural, industrial and diesel trucks. This course also includes final drives and related components including removal, repair, installation and adjustment of major units and components. Prerequisite: DSET1110 Corequisite: None	4	1/3/0	ECE 1202	Circuit Analysis II This course covers sinusoidal steady-state analysis, AC power, magnetically coupled circuits, Laplace transform methods, frequency response, basic filters, two-port networks and computer-aided analysis. Prerequisite: ECE 1201 Corequisite: ECE 1203	3	3/0/0
DSET 2240	Supervised Occupational Experience II Students will apply skill sets previously learned related to truck and/or other diesel-powered equipment. Skill sets will be identified in a training plan developed by industry and instructor. Prerequisite: None Corequisite: None	3	0/0/3				

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
ECE 1203	Circuit Analysis Lab	1	0/1/0	ED 2206	Early Field Experience	1	0/0/1
This is a laboratory course that covers various experiments that illustrate the concepts learned in Circuit Analysis I and II. Prerequisite: None Corequisite: ECE 1202.				This course is an early educational field experience. Students will be placed on a K-12 educational site and be supervised by an experienced instructor. The student's primary role is as an observer of the classroom, but students may be asked to provide assistance in the classroom setting under the instructor's supervision. Prerequisite: None Corequisite: ED2205			
ECE 1220	Digital Logic Design	3	2/1/0	ED 2294	Educational Psychology	3	3/0/0
This course covers number systems, Boolean algebra, logic gates and combinational and sequential circuits. It incorporates basic concepts of computer-aided design (CAD) tools, MSI-based design, programmable logic and memory devices to clearly show the way digital circuits are designed today using VHDL and CAD tools, computer-aided analysis and simulation. This course has a lab component with design emphasis. Prerequisite: PHYS1411 Corequisite: None				This course is intended to provide an overview of the theories and principles from psychology that are applicable to the teaching profession. The course addresses motivation, learning, development, instruction, assessment and classroom management, and it is designed to be a foundation for future methods and issues courses in education. Prerequisite: None Corequisite: None			

Economics

ECON 1150	Essentials of Economics	3	3/0/0
Meets MnTC Goal Areas 2 and 5. This course is an introductory study of economics and exposes the student to a variety of economic concepts. In order to enjoy a successful career, people need to understand how economics impacts the environment in which they live and work. This course helps satisfy those needs by exploring the principles of microeconomics, macroeconomics and international economics. At the microeconomic level, students will learn how the choices they make affect particular markets. They will examine resource allocation and pricing structure by analyzing demand and supply applications. Students will survey the competitive environment by exploring the market structures of perfect competition, monopolistic competition, monopoly and oligopoly. At the macroeconomic level, students will learn about the business cycle by analyzing the gross domestic product (GDP), the inflation rate, the unemployment rate, deficit spending, the national debt and other economic indicators. They will also investigate the debate over activism and non-activism in monetary and fiscal policies. Finally, the student will examine international issues including tariffs/quotas, foreign exchange, the concept of comparative advantage and trends in globalization. This course is not intended for business or economics majors. Prerequisite: None Corequisite: None			
ECON 2210	Macroeconomics	3	3/0/0
This course provides the student with a means to study economic principles as they relate to determinants of national income, national income accounting, business cycles, unemployment, inflation and aggregate expenditures. The course also examines macroeconomic policy and provides information to gain further understanding in the areas of fiscal policy, financial markets, money and banking, monetary policy, international policy and the varying viewpoints that have evolved throughout history, including the Keynesian and Monetarist schools of thought. Prerequisite: None Corequisite: None			
ECON 2222	Microeconomics	3	3/0/0
Microeconomics stresses the concepts of scarcity, production possibilities, supply and demand curves, elastic and inelastic goods and services, competition, monopolies, oligopolies, poverty and income distribution in the United States. In general, microeconomics examines the functioning of individual industries and the behavior of the individual. Prerequisite: None Corequisite: None			
ECON 2500	Environmental Economics	3	3/0/0
This course aims to equip students with the economic methods and tools to analyze basic environmental issues. It combines theoretical analysis with discussions on specific environmental policies as applied to water, air pollution, energy, climate change and human health issues. Within these examples, topics that will be covered include the microeconomic analysis of environmental regulation, the problem of social cost, policy instrument choice, enforcement of regulations and estimating benefits of environmental improvements. Prerequisite: ECON2210 OR ECON2222 Corequisite: None			

Education

ED 2205	Introduction to Education and Technology	2	2/0/0
This course is an introduction to the career of teaching, along with the development of technology skills. Specific variables related to teaching as a profession are explored including professional roles and responsibilities, students, curriculum and the structure of schools. Prerequisite: None Corequisite: ED2206			

EDUC 1112	Job Search Skills	1	1/0/0
This course is designed to develop the successful job search, application, resume writing, interviewing and job maintenance skills needed to conduct an effective job search. Prerequisite: None Corequisite: None			
EDUC 1113	Career Life Planning	2	2/0/0
This course is designed to assist students to develop career exploration skills and strategies through self-exploration, cultural perceptions, and career and major identification. Students will identify potential major/career possibilities. Prerequisite: None Corequisite: None			

English Language Learners

ELL 50	English Language Learner Foundations	4	3/1/0
This grammar-based course is for non-native learners of English and is designed to prepare students to succeed in college-level fundamental courses. The course supports progress toward fluency in the English skill areas of speaking, listening, reading and writing through intensive study of grammatical structures. Content is chosen especially to provide sound models for needed basic written forms. Prerequisite: None Corequisite: None			
ELL 60	English Language Learner Reading	3	3/0/0
This reading course is for non-native learners of English. Students will learn the skills and vocabulary necessary to read college-level materials with emphasis given to effective note taking and summarizing. Students will engage in frequent large and small group discussions of reading material and be exposed to a variety of reading strategies. Prerequisite: None Corequisite: None			
ELL 1120	English Language Learner Writing	4	4/0/0
This writing course is for non-native learners of English and is designed to prepare students to succeed in college-level fundamental writing courses. Students will learn short essay form for summary and interpretation. Longer five-paragraph form will be studied for essays in a variety of rhetorical modes. Prerequisite: None Corequisite: None			
ELL 1175	English Language Learner Listening Comprehension and Speaking	3	3/0/0
This course for non-native learners of English continues the development of listening and speaking skills necessary for participating in college-level classroom discussion, incorporates oral presentation and fosters critical listening skills needed for taking notes and understanding lectures. Prerequisite: None Corequisite: None			

Electrical Lineworker

ELWT 1102	Electrical Line Worker Theory I	4	2/2/0
This course provides the student with basic electrical theory involved in the production and use of electrical energy. In addition, the student practices basic direct current circuitry calculations and rigging skills including basic knots and splices pertaining to the electrical industry. Prerequisite: None Corequisite: None			
ELWT 1104	Electrical Structure Installation	5	2/3/0
This course provides the student with the introductory knowledge and skills necessary to properly install electrical structures with hand tools and with mechanized structure installation machinery. Prerequisite: None Corequisite: None			

Course #	CourseTitle	CR	Lec/Lab/OJT
ELWT 1106	Climbing Electrical Structure	4	0/4/0
This course provides the student with the knowledge and skills to safely climb and frame various electrical structures to heights of 50 feet. Topics include free-hand and safety-strap climbing, and installation and removal of pole line hardware.			
Prerequisite: None			
Corequisite: None			
ELWT 1108	Construction of Overhead Structures	3	0/3/0
This course provides the student with the technical understanding and skill necessary to construct overhead high voltage structures. Topics include interpretation of industry specification manuals, identification of overhead hardware, construction techniques and tool use.			
Prerequisite: None			
Corequisite: None			
ELWT 1110	Line Worker Theory II	4	2/2/0
This course provides the study of the principles of alternating current high voltage distribution circuitry. Included in this course are mathematical computation of AC power, conductor application including practice at armor rodding, hand and performed ties, overvoltage and overcurrent installations, and street lighting circuits.			
Prerequisite: ELWT1102			
Corequisite: None			
ELWT 1112	Transformers	2	0/2/0
This course provides the student with the knowledge and skills necessary for mounting and connecting transformers to primary and secondary systems. The course will also cover paralleling of closed and open banks.			
Prerequisite: ELWT1108			
Corequisite: ELWT1110			
ELWT 1114	Line Construction Reports	2	2/0/0
This course provides the student with an understanding of the design of line work construction drawings and equipment installation orders.			
Prerequisite: ELWT1108 AND ELWT1110			
Corequisite: None			
ELWT 1116	Pole Top and Bucket Rescue	1	0/1/0
This course provides the student with an understanding of procedures necessary to complete a rescue of a line worker disabled while on a pole or in an aerial device.			
Prerequisite: ELWT1106			
Corequisite: None			
ELWT 1118	Field Construction I	3	0/3/0
This course covers the installation of single-phase high voltage systems under actual field conditions. The overhead construction component of the course includes structural assembly, including grounding requirements, guying, conductor installation including stringing and tying, single-phase transformer, capacitor and regulator installation. The second component of the course is underground installation, covering trencher operation, primary and secondary cable termination, services, pad mount transformers and sectionalizing cabinets, and street lighting.			
Prerequisite: ELWT1106			
Corequisite: None			
ELWT 1120	Field Construction II	3	0/3/0
This course covers the installation of multi-phase high voltage systems under actual field conditions. The overhead section will cover structure assembly including grounding, structural guying, conductor installation including stringing and tying, multi-phase transformer installation, capacitor installation, regulator installation, and the use of protective cover-up material and hot sticks. The underground section will cover multiple cable installation, primary and secondary cable termination, three-phase pad mount transformer installation and multi-phase sectionalizing cabinet installation.			
Prerequisite: None			
Corequisite: None			
ELWT 1122	Field Construction III	3	0/3/0
This course gives the student a basic understanding of overhead transmission structure construction and installation requirements for 69KV systems. Students will also participate in two industry hot line schools, one sponsored by the Minnesota Municipal Utilities Association and the other by the Minnesota Rural Electric Cooperatives.			
Prerequisite: ELWT1120			
Corequisite: None			
ELWT 1130	Electrical Line Worker Internship	2	0/0/2
This course will concentrate on the student receiving apprentice line work skills under the supervision of an appropriate industry representative.			
Prerequisite: Instructor approval			
Corequisite: None			
ELWT 1132	Electrical Line Worker Internship	3	0/0/3
In this course, the student will learn apprentice line work skills under the supervision of an appropriate industry representative.			
Prerequisite: Instructor approval			
Corequisite: None			

Engineering

ENG 1101 Ethics and the Engineering Profession **3** **3/0/0**
This course covers ethical theories, professional responsibilities and social impacts as they relate to engineering teamwork skills, design and engineering careers.
Prerequisite: None
Corequisite: None

English

ENGL 0040 Reading Strategies **3** **3/0/0**
This developmental reading course is designed to provide students with a foundation in more advanced reading and study skills. Students will develop increased proficiency in reading and understanding college-level texts. Students will learn to recognize the main ideas in articles and chapters, summarize content and read actively and critically. In addition, the course will concentrate on reading-related study skills such as effective note-taking from texts, proper annotation of texts and reading skills for effective test taking. An emphasis on building college-level vocabulary will also be stressed.
Prerequisite: None
Corequisite: None

ENGL 0050 Writing Fundamentals **3** **3/0/0**
This basic course in mechanics, usage, sentence patterns, paragraphing and essay development is designed to provide a foundation for essential writing skills. Students will begin the process of close reading in preparation for college English courses.
Prerequisite: None
Corequisite: None

ENGL 0096 Academic Literacy **6** **6/0/0**
This hybrid course integrates college-level reading and writing. Students will practice various reading strategies appropriate to different types of texts, including a book-length text. In actively reading the material, students will summarize, interpret and analyze text, and they will respond to these readings through class discussion, journals and group work. Students will also practice all stages of the writing process as they create paragraphs, essays and other types of writing.
Prerequisite: Placement by assessment.
Corequisite: None

ENGL 1101 College Writing **3** **3/0/0**
Meets MnTC Goal Area 1. This is an introductory writing course designed to prepare students for later college and career writing. The course focuses on developing fluency through a process approach, with particular emphasis on revision. Students will consider purpose and audience, read and discuss writing and further develop their own writing processes through successive revisions to produce polished drafts. Course work will include an introduction to argumentative writing, writing from sources and a short research project.
Prerequisite: Completion of ENGL0050 with a grade of C or higher and completion of ENGL0040, OR ENGL0096 with a grade of C or higher OR placement in ENGL1101. (because of entrance examination score)
Corequisite: None

ENGL 1205 Writing About Literature **3** **3/0/0**
Meets MnTC Goal Area 1. This course builds on the foundations of College Writing and provides students with additional opportunities to develop fluency in their writing through a process approach. Students will read critically from a variety of literary genres, explore meaning through research and respond through discussion and writing.
Prerequisite: ENGL1101
Corequisite: None

ENGL 1210 Writing About Current Issues **3** **3/0/0**
Meets MnTC Goal Area 1. This course builds on the foundations of College Writing and provides students with additional opportunities to develop and refine their writing through a process approach. Students will explore current issues by critically reading a variety of texts, conducting research and responding through discussion and writing.
Prerequisite: ENGL1101
Corequisite: None

ENGL 1215 Professional and Technical Writing **3** **3/0/0**
Meets MnTC Goal Area 1. This course provides instruction in writing and designing professional and technical documents, including print and non-print correspondence, descriptions, instructions, reports and proposals, along with promotional material. Analysis, critical thinking and synthesis of sources will be covered, along with the development of presentation skills. Coursework also includes a formally documented, multi-source professional project.
Prerequisite: ENGL 1101
Corequisite: None

ENGL 2200 Introduction to Creative Writing **3** **3/0/0**
This course meets MnTC Goal Area 6F. The creative writing course focuses on the writing of short fiction, poetry and plays. It is a course designed to offer students practice in the composition of these three modes, with room for exploration of each genre's sub-categories. Emphasis will be on writing original work and on learning the skills needed to revise this work in order to achieve a desired response from an audience. This course will emphasize helping students learn to develop their creative

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
	voice and incorporate study of published works to aid students in this goal. This course counts as a fine arts course; it places emphasis on the creation of fine arts as opposed to the formal, critical analysis of them. Course delivery will include a traditional class format as well as workshop settings, where students' work will be read, analyzed and critiqued by others in the class. The course may include the following: presenting and submitting manuscripts, analyzing the motivation for writers, editing and criticism, techniques for reading work aloud and analyzing masterpiece models. Evaluation of course competencies may be based on writing journals, portfolios, presentations, large and small group discussions, collaborative tasks, manuscripts (completed or works in progress) and/or public readings of student works. Prerequisite: ENGL1101 Corequisite: None			ENGL 2237	Intro to Literature: Short Prose	3	3/0/0
ENGL 2221	Creative Writing: Poetry	3	3/0/0	Meets MnTC Goal Areas 2, 6 and 9. This literature course will focus on the ethical dimensions of political, social and personal life as conveyed in short prose. The basic elements and concepts of short prose will be studied. Prerequisite: ENGL1101 Corequisite: None			
ENGL 2222	Creative Writing: Fiction	3	3/0/0	ENGL 2239	Nature Writers	3	3/0/0
Meets MnTC Goal Area 6F. This creative writing course focuses on the writing of short fiction. It is designed to offer students practice in the composition of fiction and other narrative modes of writing. Emphasis will be on writing original work and on learning skills needed to write narratives that achieve a desired effect on an audience. The course will emphasize helping students learn to develop their creative voice. This course counts as a fine arts course; it places emphasis on the creation of fine arts as opposed to the formal, critical analysis of them. Prerequisite: ENGL1101 Corequisite: None			Meets MnTC Goal Areas 2, 6 and 10. This course will focus on texts written by great nature writers. While special emphasis will be placed on those works that stress conservation and ecology, others will enable students to see the human struggle with the environment as protagonist. Material may also include travel writing, as well as the more recent directions toward urban nature and nontraditional/multicultural perspectives. Texts may include nonfiction, novels, poetry and plays. Students will gain experience in reading critically and writing logical, sound papers that deal with environmental issues and text analysis. Prerequisite: ENGL1101 Corequisite: None				
ENGL 2223	Creative Writing: Personal Narrative	3	3/0/0	ENGL 2302	American Ethnic Literature	3	3/0/0
Meets MnTC Goal Area 6F. This creative writing course focuses on the writing of memoir. It is a workshop designed to offer students practice in the composition of memoir, from autobiographical vignettes to fully developed personal narratives. Emphasis will be on writing and critiquing original work as well as reading and modeling exemplary memoir writing. This course counts as a fine arts course as it emphasizes the creation of fine arts as opposed to the formal critical analysis of them. Prerequisite: ENGL1101 Corequisite: None			Meets MnTC Goal Areas 6 and 7. This multi-genre literature course is a study of significant writers and selected works presenting diverse groups based on race, ethnicity, gender, class, culture, etc. The origins, contributions and changing dynamics of specific groups in the United States will be studied through reading, analysis and discussion. Prerequisite: ENGL1101 Corequisite: None				
ENGL 2228	A Well Examined Life: Reading and Writing Memoir	3	3/0/0	ENGL 2304	Introduction to Literature, Native American Focus	3	3/0/0
Meets MnTC Goal Areas 6F and 7. This course focuses on the writing of personal memoir as well as an in-depth study of the literary genre of memoir; it may also include creative essay writing. It is a workshop designed to offer students practice in the composition of memoir and other narrative modes of writing, as well as a study of the memoir as literature. This course places emphasis on the creation of fine arts as well as the formal, critical analysis of them. Prerequisite: ENGL1101 Corequisite: None			Meets MnTC Goal Area 2 and 6. This introductory literature course introduces students to the study of poetry, drama, memoir and short fiction through the study of Native North American writings. Students will employ critical reading/thinking skills and analytical and creative writing skills in order to more fully understand the literature. Prerequisite: ENGL1101 Corequisite: None				
ENGL 2230	Environmental Literature	3	3/0/0	ENGL 2310	Introduction to Mythology	3	3/0/0
Meets MnTC Goal Areas 2, 6 and 10. This course will focus on responding to texts that inspire greater awareness of and appreciation for the environment and that explore environmental challenges. Students will gain experience with critical thinking and reading as they examine perspectives, explore attitudes and analyze current problems/solutions through discussions, writings and other activities. Prerequisite: ENGL 1101 Corequisite: None			Meets MnTC Goal Area 6. This course introduces students to the major myths of Greece and Rome. The course will cover myths, mythological and heroic figures, and how mythology influences culture and literature. The course may also include an introduction to other world mythologies (Norse, Celtic, Native American or others). Prerequisite: ENGL1101 Corequisite: None				
ENGL 2234	Introduction to Literature: Short Stories	3	3/0/0	ENGL 2314	Introduction to Shakespeare	3	3/0/0
Meets MnTC Goal Areas 2, 6 and 7. This literature course will increase students' understanding of individual and group differences through a close study of short stories. Issues of race, gender, class, tradition and value will be the focus of the course as illuminated by the literature. The course will also cover the basic elements of short stories. Stories studied may include selections from various ethnic groups, genders or classes. Prerequisite: ENGL0075 OR ENGL0050 OR ENGL1101 Corequisite: None			Meets MnTC Goal Area 6. This course introduces students to William Shakespeare through the study of a selection of plays and poetry. Focus is placed on making Shakespeare's language accessible, interpreting the works from various contexts, and identifying universal and timeless themes. Prerequisite: ENGL1101 Corequisite: None				
ENGL 2235	Intro to Literature: Drama	3	3/0/0	ENGL 2321	Women in Literature	3	3/0/0
Meets MnTC Goal Areas 2, 6 and 8. This literature course will introduce students to the growing interdependence of the people of the world through a close study of drama. Studying drama written by various writers around the world will allow students to develop an understanding of and an appreciation for the human condition and culture. The course will also cover the basic elements and concepts of drama. Prerequisite: ENGL1101 Corequisite: None			Meets MnTC Goal Areas 6 and 7. This course examines the ways in which culture, ethnicity, religion, class and sexuality distinguish literature written by female authors from different countries and historical periods. Texts will cover a variety of authors and genres, as well as themes, issues and theories specific to literature written by women. Prerequisite: ENGL1101 Corequisite: None				
ENGL 2236	Introduction to Literature: Novel	3	3/0/0	ENGL 2322	Banned Literature	3	3/0/0
Meets MnTC Goal Areas 2, 6 and 7. This literature course will involve students in a close reading of selected novels that focus on individual and group differences in both the U.S. and abroad. Attention will be paid to the traditions and values of the writers and as portrayed in the literature. Basic concepts and elements of the novel will also be studied. Prerequisite: ENGL1101 Corequisite: None			Meets MnTC Goal Areas 2, 6 and 7. This course is an in-depth study of literature that has been banned or challenged. The course focuses primarily on the study of literature, but part of the lectures, discussions and student responses will address the topic of censorship. Students will read from a variety of genres. Prerequisite: ENGL1101 Corequisite: None				
				ENGL 2323	Horror and Supernatural Fiction	3	3/0/0
				Meets MnTC Goal Areas 2 and 6. This course is an in-depth study of literary texts that fall under the category of horror and/or supernatural fiction. While the focus is on this genre, the course may also address sub-categories of detective fiction, science fiction and fantasy. Prerequisite: ENGL1101 Corequisite: None			
				ENGL 2324	Travel Literature	3	3/0/0
				Meets Goal Areas 2, 6 and 10. This course is an in-depth study of travel literature. This course will primarily focus on modern travel literature, but some readings of early explorers will establish context for the changes within the genre, for example, from medieval pilgrimages and the Victorian Grand Tour to travelogues and road narratives. The course will also address various purposes for travel such as adventure, exploration and spirituality, as well as trends in modern travel writing such as blogs and eco-tourism. Prerequisite: None Corequisite: None			
				ENGL 2331	American Literature I	3	3/0/0
				Meets MnTC Goal Areas 6 and 7. This course introduces the broad spectrum of American literature and the various contexts that shaped it. Readings include major works from the pre-Colonial era through the Civil War. Prerequisite: ENGL1102 Corequisite: None			

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
ENGL 2332	American Literature II		3 3/0/0				
Meets MnTC Goal Areas 6 and 7. This course introduces the broad spectrum of American literature and the various contexts that shaped it. Readings include major works from the Civil War to the present.							
Prerequisite: ENGL1102							
Corequisite: None							
ENGL 2361	British Literature I		3 3/0/0				
Meets MnTC Goal Areas 6 and 8. This course introduces students to the broad spectrum of British literature and the contexts that shaped it. Readings will include major works from the Anglo-Saxon/Old English, Middle English, Renaissance and Restoration/18th century historical periods.							
Prerequisite: ENGL1102							
Corequisite: None							
ENGL 2362	British Literature II		3 3/0/0				
Meets MnTC Goal Areas 6 and 8. This course introduces students to the broad spectrum of British literature and the contexts that shaped it. Readings will include major works from the mid-18th century to the present.							
Prerequisite: ENGL1102							
Corequisite: None							
ENGL 2372	Children's Literature		3 3/0/0				
Meets MnTC Goal Areas 2, 6 and 7. This course introduces students to children's literature. Students will read and respond to diverse, traditional and contemporary texts. Emphasis will be placed on reading, analyzing, interpreting and evaluating children's literature from various contextual frameworks, such as the development of the genre, cognitive development, censorship and depictions of family, race and gender.							
Prerequisite: ENGL1101							
Corequisite: None							
ENGL 2374	The Poetics of Rock Lyrics		3 3/0/0				
Meets MnTC Goal Areas 2 and 6. This course focuses on the study of poetry and poetic techniques through the lyrics of rock music. Specifically, the course will include studies of artists from the rock 'n' roll era (1950s through today).							
Prerequisite: ENGL1101 AND/OR concurrent enrollment							
Corequisite: None							

Engineering

ENGR 1100	Project Management		1 1/0/0
This course provides an overview of the construction industry and introduces the student to the duties and responsibilities of the construction professional. The emphasis of this course will be on the importance of the industry and career possibilities for successful students.			
Prerequisite: None			
Corequisite: None			
ENGR 1118	Engineering Applications		3 3/0/0
This course covers the application of geometry and trigonometry necessary in the construction and manufacturing industry, architecture, mechanical drafting, construction management and civil engineering.			
Prerequisite: MATH0090 OR MATH0052			
Corequisite: None			
ENGR 1126	Engineering Graphics		3 1/2/0
The course introduces and develops basic skills in drawing, lettering, orthographic projection, sections and dimensioning. This course will also apply the basic fundamentals of pictorial drawing, including isometric, oblique, perspective, shade and shadow, and freehand sketching.			
Prerequisite: None			
Corequisite: None			
ENGR 1132	Office Systems and Equip		2 1/1/0
This course covers the application of Windows software systems in coordination with AutoCAD software as well as general office equipment set-up and use.			
Prerequisite: None			
Corequisite: None			
ENGR 1134	Office Systems and Equipment		3 1/2/0
This course covers the application of Windows software systems in coordination with AutoCAD software as well as general office equipment set-up and use.			
Prerequisite: None			
Corequisite: None			
ENGR 2210	Engineering Mechanics I		3 3/0/0
This course provides an introduction to the principles of mechanics, including equilibrium of particles and rigid bodies; distributed forces, centroids and centers of gravity; moments of inertia of areas; analysis of simple structures and machines; and various types of friction.			
Prerequisite: MATH1134			
Corequisite: None			
ENGR 2220	Engineering Mechanics II		3 3/0/0
This course introduces the theory and application of dynamics of particles and rigid bodies. Topics include the kinematics and kinetics of particles and rigid bodies (translational and			

rotational), principles of work and energy, and principles of impulse and momentum.

Prerequisite: ENGR2210 AND MATH1135

Corequisite: None

ENGR 2230	Mechanics of Materials		3 3/0/0
This course provides an introduction to the study of stress, strain, deformation and failure of elastic bodies subjected to external forces. Topics include the relationships between the applied loads and the resulting stresses and deformations in an elastic body, stress-strain relations and the design of structural members subjected to known loads.			
Prerequisite: ENGR2210			
Corequisite: None			

ENGR 2970	Internship Experience		1 - 3 None
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This course is designed to provide students with a monitored meaningful work experience related to their field of interest. This experience will increase their employability and enhance their life skills. Completion of this course requires a written report and an evaluation from the student's supervisor. Each internship is an individualized experience, therefore this course is offered with variable credits. The student may choose from 1, 2 or 3 credits as prearranged with the internship site supervisor and corresponding faculty. Each credit will require a minimum of 45 hours of on the job learning. This course will be graded pass/fail only.

Prerequisite: Instructor approval

Corequisite: None

Electrical Lineworker

ENST 2001	Fundamentals of Utilities		4 4/0/0
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This course provides a general overview of the electric, gas and telecommunications industries. The course will cover fossil fuel and renewable energy sources for electric power generation, its history and projected needs for the future. The course also covers the natural gas utility from the ground to the consumers, its history and projected needs for the future. Also covered are the telecommunications industry and how the land phone and cell phone systems operate.

Prerequisite: None

Corequisite: None

ENST 2002	Energy Safety Principles		1 1/0/0
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This course is designed to explore the principles and practices of health and safety in an energy services-related construction environment. Topics covered in this course include personal protective equipment, safe work practices, hazardous materials, employee protection and regulations of the Environmental Protection Agency (EPA), Occupational Safety and Health Act (OSHA) and pertinent safety codes/standards.

Prerequisite: None

Corequisite: None

ENST 2222	Blueprint Reading for Energy Industry		2 2/0/0
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This course will introduce students to reading and interpreting system and strand maps for the gas, electric and communication industry. Students will also be introduced to reading building blueprints and staking and pole framing sheets.

Prerequisite: None

Corequisite: None

ENST 2223	GPS Mapping		2 1/1/0
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This course covers basic information to help the student understand GPS uses in the utility industries, data collection options, processing the collected data and field procedures used to plan a utility distribution route.

Prerequisite: None

Corequisite: None

Entrepreneurship

ENTR 1100	Introduction to Entrepreneurship		3 3/0/0
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This course is designed to introduce students to the entrepreneurial process from conception to birth of a new venture. Students will examine elements in the entrepreneurial process - personal, sociological and environmental - that give birth to a new enterprise. Critical factors for starting a new enterprise such as alternative career prospects, family, friends, role models, the state of the economy and the availability of resources will be explored. Students will be introduced to practical tools they can use to further their careers in business, both in entrepreneurship and in more traditional company environments. This course simulates the experiences that entrepreneurs undergo in conceiving, launching and operating new businesses. The course enables students to evaluate an entrepreneurial career for themselves. In doing so, it provides aspiring entrepreneurs with a framework for selecting, funding and starting their own new ventures.

Prerequisite: None

Corequisite: None

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
ENTR 1400	Opportunity Analysis	3	2/1/0	EQSC 1131	Stable Operations II	2	1/1/0
<p>In this course, students will assess their individual or organization's skills, talents, education, and work experiences for potential business opportunities. They will also examine their external environment to identify trends and needs in the marketplace for potential business opportunities. Students will then screen potential business ideas by practicing primary and secondary research methods.</p> <p>Prerequisite: None Corequisite: None</p>				<p>Students will have hands-on experience working in an operational equine facility such as training, boarding, riding and lessons. Students will help with day-to-day care and will share the responsibilities of the horse's health and well-being including feeding, parasite control and medical attention. This advanced section may also include first aid, vaccinations and foaling procedures. The program capstone project, including a business plan, and the program portfolio project will be completed in this course.</p> <p>Prerequisite: None Corequisite: None</p>			
ENTR 1800	Business Internship	3	0/0/3	EQSC 1140	Western Horsemanship	3	1/2/0
<p>This course is designed to provide the student with a purposeful occupational experience in a business environment related to his or her program of study. A training plan is created for each student in conjunction with the training site to provide experience related to the skills and knowledge acquired in the program. Each internship is an individualized experience. Therefore, this course offers a flexible, variable credit experience. The student may choose from 1, 2 or 3 credits, depending on the number of hours pre-arranged with the internship site supervisor. Each credit will require 45 hours of on-the-job learning.</p> <p>Prerequisite: Advisor consent Corequisite: None</p>				<p>The student will learn safety, grooming, handling, tack identification and its uses, tacking, showing techniques, correct body position and riding in western disciplines. A large emphasis will be on horse and rider body communication through balance and coordination.</p> <p>Prerequisite: None Corequisite: None</p>			
ENTR 2200	Entrepreneurial Field Studies	3	0/3/0	EQSC 1150	Fundamentals of Riding Instruction	2	1/1/0
<p>This course exposes students to business owners and practicing entrepreneurs currently managing on-going entrepreneurial enterprises. The purpose of the course is to develop mentor relationships with successful practicing business owners and to gain first-hand experience about the knowledge, skills and abilities necessary to be a successful entrepreneur. Students will submit reports throughout the semester addressing questions that integrate entrepreneurship and other business coursework with their work experience.</p> <p>Prerequisite: None Corequisite: None</p>				<p>The student will be provided training in how to give clear, practical and comprehensible instruction. Varied instruction styles will be covered, as well as developing lesson plans, executing lesson plans, problem solving and instruction management.</p> <p>Prerequisite: None Corequisite: None</p>			
ENTR 2220	Business Ethics/Professionalism	3	3/0/0	EQSC 1160	English Equitation	3	1/2/0
<p>This course examines issues related to ethics in business and their impact upon society, the economy and the environment. Students will increase their awareness in making decisions based on ethical judgments. Students will examine the roles, responsibilities and conflicts of business management in the context of organizational ethics. Students will analyze case studies of workplace behavior and define appropriate professional conduct in various workplace scenarios including dress, language and other emerging trends.</p> <p>Prerequisite: None Corequisite: None</p>				<p>The student will learn safety, grooming, handling, tack identification and its uses, tacking, showing techniques, correct body position and riding in hunt seat, dressage and jumping disciplines. A large emphasis will be on horse and rider body communication through balance and coordination.</p> <p>Prerequisite: None Corequisite: None</p>			
ENTR 2222	Business Plan Development	3	2/1/0	EQSC 1170	Introduction to Horse Training	1	0/1/0
<p>This course covers the steps in creating a business plan. Areas that will be addressed and developed are industry analysis, strategic positioning, marketing and sales strategy, operations, management and organization, and financials.</p> <p>Prerequisite: None Corequisite: None</p>				<p>Students will learn through demonstration how to work with an untrained young horse or an older horse to correct problems and maintain the horse. Training theories, safety, grooming, handling, tacking, identifying tack and its uses, artificial and natural aids and their uses, grooming and showing techniques will also be included.</p> <p>Prerequisite: None Corequisite: None</p>			
Equine Science				EQSC 1180	Equine Evaluation	2	2/0/0
				<p>This course focuses on equine judging including conformation, breed characteristics and type and their importance in evaluation. Also covered are performance evaluation, criteria and scoring methods, as well as preparation and delivery of oral reasons.</p> <p>Prerequisite: None Corequisite: None</p>			
EQSC 1001	Introduction to Equine Science	1	1/0/0	EQSC 1190	Farrier Science	2	1/1/0
<p>This course introduces the student to the basics of equine breeds, types of horses, including characteristics and uses, and husbandry practices. It will also cover aspects of the equine industry such as career paths and necessary job skills.</p> <p>Prerequisite: None Corequisite: None</p>				<p>This course will introduce the student to the basics of horse handling, hoof and leg anatomy and physiology from a farrier's perspective. The course will include theory and demonstrations of proper trimming and shoeing. The student will demonstrate correct trimming and shoeing on cadaver feet. The concept of corrective farrier work will also be introduced and demonstrated.</p> <p>Prerequisite: None Corequisite: None</p>			
EQSC 1050	Equine Anatomy	3	2/1/0	EQSC 1200	Equine Events Management	1	1/0/0
<p>This course provides an overview of equine anatomy, physiology and disease management. This course allows students to learn basic anatomy and physiology using a systems approach specific to the equine. The student will apply this knowledge to the subjects relevant to equine health management such as equine diseases, disease prevention (vaccination and husbandry), lameness, performance and parasite control.</p> <p>Prerequisite: None Corequisite: None</p>				<p>This course provides an experience in the planning, marketing, facility preparation and horse show management necessary to run a successful nationally sanctioned equine event. In partnership with the Red Horse Ranch Arena, students will be involved in all aspects of hosting a selection of breed, cutting, reining and barrel racing shows throughout the semester. This will include all aspects of planning and marketing an equine event, record keeping, facility preparation, set-up and tear-down, and day-of-horse show management. This course is repeatable for credit.</p> <p>Prerequisite: None Corequisite: None</p>			
EQSC 1060	Equine Reproduction and Nutrition	3	3/0/0	EQSC 2200	Recognition and Management of Equine Disorders	3	3/0/0
<p>This course introduces the student to the management of the breeding stallion, reproducing mare and newborn foal. It will discuss the anatomy and endocrinology of the reproductive system, the mare estrus cycle, spermatogenesis and cooled and frozen semen insemination techniques. Fundamentals of equine nutrition, feed selection, digestive anatomy and ration evaluation will also be covered.</p> <p>Prerequisite: None Corequisite: None</p>				<p>This course will cover the practical aspects of recognizing and managing equine infectious and metabolic disease, lameness and performance problems and breeding issues. Vaccination protocols and parasite prevention will be included. This course will build on the knowledge gained in EQSC 1050 and 1060 and be custom fitted to each student's specific discipline relevant to his or her internship site.</p> <p>Prerequisite: EQSC1050 AND EQSC1060 Corequisite: None</p>			
EQSC 1130	Stable Operations I	1	0/1/0	EQSC 2300	Applied Stable Operations	3	3/0/0
<p>Students will have hands-on experience working in an operational equine facility including training, boarding, riding and lessons. Students will help with day-to-day care and will share the responsibilities of the horse's health and well-being, including feeding, parasite control and medical attention.</p> <p>Prerequisite: None Corequisite: None</p>				<p>This course will build on the knowledge from EQSC 1130 and 1131. Caring for horses, their environment, nutrition including feeds and feeding, behavior and disease management within a holistic stable/farm/ranch environment will be explored and analyzed. The course will be customized to be relevant to the student's internship experience and will include a capstone project consisting of an in-depth analysis and evaluation of the student's internship facility and business.</p> <p>Prerequisite: EQSC1130 AND EQSC1131 Corequisite: None</p>			

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
EQSC 2500	Equine Internship	15	0/0/15	FIRE 1140	Fire Inspection and Code Enforcement	3	1/2/0
<p>This course will provide the student practical experience and on-the-job training relevant to the equine industry. The internships will take place at sites throughout the country or world. These sites are all working farms, ranches, clinics, breeding facilities, stables, etc. All disciplines (English, western, ranch, breeding, veterinary, riding, training, showing, etc) are represented in order to meet a student's specific area of interest. Students will be required to meet written goals and objectives and undergo evaluations from their host supervisor. Student academic progress will also be monitored via the M State online learning platform.</p> <p>Prerequisite: EQSC1001 AND EQSC1050 AND EQSC1060 AND EQSC1130 AND EQSC1131 AND EQSC1140 AND EQSC1150 AND EQSC1160 AND EQSC1170</p> <p>Corequisite: None</p>				<p>This course will cover basic fire inspection practices based on National Fire Protection Association (NFPA) 1031, Standards for Professional Qualifications for Fire Inspectors and Plan Examiner.</p> <p>Prerequisite: FIRE1100 AND FIRE1106 AND FIRE1108</p> <p>Corequisite: None</p>			
EQSC 2501	Equine Internship	6	0/0/6	FIRE 1150	HazMat Operational	3	2/1/0
<p>This course will provide the student practical experience and on-the-job training relevant to the equine industry. The internships will take place at sites throughout the country or world. These sites are all working farms, ranches, clinics, breeding facilities, stables, etc. All disciplines (English, western, ranch, breeding, veterinary, riding, training, showing, etc) are represented in order to meet a student's specific area of interest. Students will be required to meet written goals and objectives and undergo evaluations from their host supervisors. Student academic progress will also be monitored via the M State online learning platform.</p> <p>Prerequisite: EQSC1001 AND EQSC1050 AND EQSC1060 AND EQSC1130 AND EQSC1131 AND EQSC1140 AND EQSC1150 AND EQSC1160 AND EQSC1170</p> <p>Corequisite: None</p>				<p>This course is designed to teach the necessary skills to protect yourself, your fellow responder and the public from exposure in a hazardous materials incident. The course meets the requirements of the OSHA (Occupational Safety and Health Administration) 1910.120 for the First Responder Operation level. The student will learn how to recognize and identify the presence of hazardous materials, the proper protective clothing to use, how to decontaminate properly, how to establish an Incident Command System and the proper standard operating procedures to maintain safety at the incident scene. The course follows the NFPA (National Fire Protection Association) Standard 472 requirements for the First Responder Operational level.</p> <p>Prerequisite: None</p> <p>Corequisite: None</p>			
Esthetist				FIRE 1152	Building Construction	3	2/1/0
				<p>This course will cover basic building construction techniques. It will also address safety features of today's buildings in relation to firefighter safety, fire behavior and building behavior when subjected to fire conditions.</p> <p>Prerequisite: FIRE1100 AND FIRE1106 AND FIRE1108</p> <p>Corequisite: None</p>			
ESTH 1801	Advanced Skin Treatments	1	1/0/0	FIRE 1180	Building Construction for Fire Protection	3	3/0/0
<p>In this course students learn about advanced skin care techniques including lymph drainage, chemical peels, microdermabrasion and spa body treatments.</p> <p>Prerequisite: None</p> <p>Corequisite: None</p>				<p>This course provides the components of building construction related to firefighter and life safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, pre-planning fire operations and operating at emergencies.</p> <p>Prerequisite: None</p> <p>Corequisite: None</p>			
ESTH 1808	Advanced Skin Treatments	3	1/2/0	FIRE 2020	Fire and Emergency Services Administration	3	3/0/0
<p>In this course students will learn advanced skin care techniques including lymph drainage, peels, microdermabrasion and spa body treatments.</p> <p>Prerequisite: None</p> <p>Corequisite: None</p>				<p>This course introduces the student to the organization and management of a fire and emergency services department and the relationship of the government agencies to the fire service. Emphasis is placed on fire and emergency service, ethics and leadership from the perspective of the company officer as described in the National Fire Protection Association's (NFPA) 1021 Fire Officer Professional Qualifications 2009 Edition for state certification for Fire Officer I and Fire Officer II.</p> <p>Prerequisite: None</p> <p>Corequisite: None</p>			
Fire Department Company Officer				FIRE 2030	Fire Instructor I	2	2/0/0
				<p>This course introduces students to the various objectives of the National Fire Protection Association (NFPA) 1041 Fire Service Instructor Professional Qualifications 2009 Edition for state certification for Fire Instructor I. This will prepare the student to function at the minimum level of training for a fire service instructor.</p> <p>Prerequisite: None</p> <p>Corequisite: None</p>			
FIRE 1100	Introduction to Fire Service	2	2/0/0	FIRE 2040	Fire Protection Systems	3	3/0/0
<p>This course covers the basic information that the student will need to understand the fire protection career field. It will provide an overview of the firefighter selection process and assist in preparing the student for the competitive selection process. It will also provide additional information on fire protection careers other than firefighter. This course will cover the history of public fire protection; basic terminology; the chemistry, physics and behavior of fire; fire suppression; fire-based emergency medical services; hazardous materials response; fire prevention; and physical fitness training requirements.</p> <p>Prerequisite: None</p> <p>Corequisite: None</p>				<p>This course provides information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers.</p> <p>Prerequisite: None</p> <p>Corequisite: None</p>			
FIRE 1106	Firefighter I and II	3	3/0/0	FIRE 2050	Fire Prevention	3	3/0/0
<p>This course covers the objectives of the Minnesota State Fire Chiefs Association (MSFCA) for certification as a Firefighter I and Firefighter II. The MSFCA objectives are based on the National Fire Protection Association's (NFPA) 1001: Standard for Fire Fighter Professional Qualifications. This will prepare the student to function at or above the minimum level of training for entry into a fire protection career field.</p> <p>Prerequisite: None</p> <p>Corequisite: None</p>				<p>This course provides fundamental knowledge relating to the field of fire prevention. Topics include history and philosophy of fire prevention; organization and operation of a fire prevention bureau; use and application of codes and standards; plans review; fire inspections; fire and life safety education; and fire investigation.</p> <p>Prerequisite: None</p> <p>Corequisite: None</p>			
FIRE 1108	Firefighter I and II Skills	4	0/4/0	FIRE 2060	Strategy and Tactics	2	2/0/0
<p>This course covers the objectives of the Minnesota State Fire Chiefs Association (MNFCA) for certification as a Firefighter I and II. The MNFCA objectives are based on National Fire Protection Association (NFPA) 1001 Standard for Fire Fighter Professional Qualifications. This will prepare the student to function at or above the minimum level of training for entry into a fire protection career field.</p> <p>Prerequisite: None</p> <p>Corequisite: None</p>				<p>This course provides the principles of fire ground control through utilization of personnel, equipment and extinguishing agents.</p> <p>Prerequisite: None</p> <p>Corequisite: None</p>			
FIRE 1130	Technical Rescue	3	1/2/0	FIRE 2080	Fire Service Leadership and Management	3	3/0/0
<p>This course will cover the basic technical rescue techniques required from National Fire Protection Association (NFPA) 1670, Standard on Operations and Training for Technical Search and Rescue Incidents.</p> <p>Prerequisite: FIRE1100 AND FIRE1106 AND FIRE1108</p> <p>Corequisite: None</p>				<p>This course will explore the skills necessary to function as a supervisor within a tight-knit, family-like setting. Topics will include motivating employees; group dynamics; managing change; organizational behavior; organizational culture; performance evaluations; leadership theories; group cohesiveness; generational considerations; and personal leadership styles.</p> <p>Prerequisite: None</p> <p>Corequisite: None</p>			

College Success

FYE 1101 First Year Experience 3 3/0/0
 This course is designed to help M State students strengthen and develop critical and creative thinking skills associated with a college academic experience, make social adaptations to a new environment and make connections with faculty, staff and resource offices. Topics include an understanding of individual risks and barriers, multiculturalism, life and career planning and personal responsibility. This course is also designed to help students develop the basic skills necessary for academic success in college. Additional topics to be discussed may include but are not limited to time management, study skills, note- and test-taking skills, motivation, and community and campus resources.
Prerequisite: None
Corequisite: None

Graphic Design Technology

GDTC 1100 Macintosh Production Processes 3 2/1/0
 This course covers general processes, workflow methods and utilization of the Macintosh Operating System features in a graphic design or production environment.
Prerequisite: None
Corequisite: None

GDTC 1113 Design and Layout I 3 2/1/0
 As the first of three layout courses in a series, this course introduces students to the basic elements and principles of design. Students will produce a variety of projects that will familiarize them with basic design theories, branding philosophies and production techniques. In addition to hand-rendered projects, students will also begin to learn technical layout skills in Adobe InDesign.
Prerequisite: None
Corequisite: None

GDTC 1115 Design and Layout II 3 2/1/0
 As the second of three layout courses in a series, students will expand upon their basic design knowledge by learning advanced methods of style, typography, layout grids, identity development and branding. Increasingly complex projects will require students to employ more sophisticated methods of research, concept development, design strategy and assessment. Students will create a variety of projects in Adobe software.
Prerequisite: GDTC1113
Corequisite: None

GDTC 1126 Digital Photography 3 2/1/0
 In this course students will develop basic photographic skills and knowledge using a digital camera for a variety of assignments.
Prerequisite: None
Corequisite: None

GDTC 1134 Electronic Drawing I 3 2/1/0
 This course covers fundamental functions of Adobe Illustrator or other vector-based equivalent instructor-designated software to create basic illustrations and layout.
Prerequisite: None
Corequisite: None

GDTC 1144 Electronic Drawing II 3 2/1/0
 This course covers the use of Adobe Illustrator or equivalent instructor-designated vector-based software using the Macintosh computer to create and manipulate electronic illustrations, logos and artwork.
Prerequisite: GDTC1134
Corequisite: None

GDTC 1150 Process Printing Theory 3 3/0/0
 This course provides foundational theory on print process as well as printing terminology. Focus is on theory and not on application of technology, using books, lectures and industry tours, if available.
Prerequisite: None
Corequisite: None

GDTC 2203 Electronic Image Manipulation 3 2/1/0
 This course covers the fundamental functions of Adobe Photoshop or other raster-based equivalent software to manipulate and combine digital images.
Prerequisite: None
Corequisite: None

GDTC 2212 Design and Layout III 3 2/1/0
 As the third of three layout courses in a series, this course focuses on brand and identity development. Each student develops his or her own fictitious company that will include a visual identity and supporting brand materials. Additional applications of these concepts are explored in the form of self-promotional projects. Special emphasis is placed on research, marketing techniques, rationale and presentation.
Prerequisite: GDTC1113 AND GDTC1115
Corequisite: None

GDTC 2214 Integrated Graphic Design 3 2/1/0
 This course focuses on the advanced integration of Adobe software technology and graphic design application. Coursework will include a continuation of brand development and design of grid systems, advanced typographic application, color theory application and development of written and verbal design rationale.
Prerequisite: GDTC2278 AND GDTC2244
Corequisite: None

GDTC 2238 Layout and Design Studio 3 1/2/0
 Students will produce design projects with content and media of their particular interest. Work will be completed on a contractual basis between the student and instructor. Additional projects and activities will be assigned to gain experience in industry and client processes. Specific emphasis will be placed on refining skills and producing professional-level projects for student portfolios.
Prerequisite: GDTC2203 AND GDTC1115 AND GDTC2242 AND GDTC2212
Corequisite: None

GDTC 2240 Lighting Techniques 2 1/1/0
 In this course students will develop an understanding of natural and indoor lighting. They will also demonstrate the capabilities of flash-mount lighting; demonstrate their ability to effectively use multiple flash functions, settings and techniques; and demonstrate proper use and settings of strobe lighting components. Students will also learn how to use settings for box and umbrella lighting techniques, critique lighting methods used in different venues and demonstrate soft box lighting techniques for product photography.
Prerequisite: None
Corequisite: None

GDTC 2242 Electronic Publishing 3 2/1/0
 Students will learn in-depth technical skills necessary for page layout design. A variety of assigned design projects will teach students to effectively incorporate type and imagery in single- and multiple-page documents. These projects will involve simple to complex tasks that will reinforce students' basic design skills.
Prerequisite: GDTC1113
Corequisite: None

GDTC 2244 Advanced Electronic Imaging 3 2/1/0
 This course covers digital image creation, manipulation and preparation for output using a variety of advanced functionality Adobe PhotoShop or equivalent instructor-designated raster-based software.
Prerequisite: GDTC2203
Corequisite: None

GDTC 2246 Advanced Photography and Imaging 4 2/2/0
 In this course students will learn how to photograph in Raw File Format (RAW). Students will demonstrate setting components for Raw File Format and develop a clear understanding of the different computer file formats, file sizes, resolution, pixels per inch (PPI) and mega pixels. They will also demonstrate color correction; red, green, blue (RGB), cyan, magenta, yellow and black (CMYK). Students will identify CMYK profiles, develop a high degree of competency in manipulating photographs using Photoshop, and understand the importance of computer monitor calibration for color quality. Additionally, students will demonstrate advanced photography framing techniques and focus on how various lenses, aperture settings and film speeds work together.
Prerequisite: GDTC1126
Corequisite: None

GDTC 2258 Graphic Design Professional Practices 3 2/1/0
 This course addresses the professional practice of graphic design technology. The course will cover interviewing skills, presentation techniques, freelance business operation, proposals and management, resume and cover-letter writing, job research/ job offer and portfolio preparation.
Prerequisite: GDTC2212 AND GDTC2278
Corequisite: None

GDTC 2276 Graphic Design Internship 3 0/0/3
 Students are placed temporarily in a partnering graphic industry establishment where they are able to utilize their graphic design technology skills in a real-world experience.
Prerequisite: GDTC2203 AND GDTC2212
Corequisite: None

GDTC 2278 Digital Preflight 3 2/1/0
 Students will create and analyze electronic files to identify and resolve potential conflicts that may arise in different production processes. A variety of design projects will be produced using Adobe applications, with an emphasis on file construction and production preparation.
Prerequisite: GDTC2242
Corequisite: None

Geography

GEOG 1110 World Geography 3 3/0/0
Meets MnTC Goal Areas 5 and 8. Students will gain an understanding and appreciation of the spatial relationship of the physical and human elements of our world with an emphasis on the interdependence of nations and peoples. Geography describes the earth's environments and gives character to places through words, maps and graphics, and this course will explore these elements and their contributions to the diversity of world geographics. Students will become aware of how the world and the earth's people interact in local regions and in patterns around the globe.
Prerequisite: None
Corequisite: None

GEOG 1160 Global Physical Geography 3 3/0/0
Meets MnTC Goal Areas 8 and 10. This course emphasizes the interactions of biological, geographical and climatic systems in the development of the patterns of regional environments on the surface of the earth and their interactions with human activities.
Prerequisite: None
Corequisite: None

Global Studies

GLST 1121 Humanities Italy 3 3/0/0
Meets MnTC Goal Areas 6 and 8 and is taken in conjunction with Humanities 1120: Culture of Italy and includes travel abroad to Italy. The content of this course aligns with curriculum materials studied in the corequisite course and will serve as a reinforcement of the Italian culture and provide an understanding of the integration of the arts within the culture.
Prerequisite: None
Corequisite: None

GLST 1126 Cultures of Italy and Greece II 3 3/0/0
Meets MnTC Goal Areas 6 and 8. This course is taken in conjunction with Humanities 1125: Cultures of Italy and Greece and includes travel abroad to Italy and Greece. The content of this course aligns with curriculum materials studied in the corequisite course and will serve to reinforce the student's understanding of the integration of the arts in the cultures of Italy and Greece.
Prerequisite: None
Corequisite: None

GLST 1510 Global Studies: Natural Science 3 3/0/0
Meets MnTC Goal Areas 3 and 8. This travel-abroad course combines a classroom component with a travel experience which includes scheduled academic activities in international locations as determined by the instructor. Students will study and experience unique ecosystems and biodiversity, as well as cultural and societal differences of the travel abroad location. This course includes field or lab-like activities, including a field notebook and ecosystem analysis.
Prerequisite: Permission of the instructor is required
Corequisite: None

GLST 2291 Humanities British Isles 3 3/0/0
Meets MnTC Goal Areas 6 and 8. This course is taken in conjunction with Humanities 2281: Culture of the British Isles and includes travel abroad to Ireland, Wales and England. The content of this course aligns with curriculum materials studied in the prerequisite course and will serve as a reinforcement of the culture of the British Isles and an understanding of the integration of the arts within the cultures.
Prerequisite: None
Corequisite: HUM2281

Golf Management

GOLF 1100 Rules of Golf 1 1/0/0
This course reviews the rules of golf in detail. Students develop a clear understanding of how to navigate the rule book by studying The Rules of Golf and The Decisions on the Rules of Golf. Emphasis is placed on practical hands-on application of the rules and decisions on the golf course. Proper course set-up and marking a golf course for an official USGA event are also discussed. The course prepares students to take the USGA Rules Exam.
Prerequisite: None
Corequisite: None

GOLF 1101 Golf Club Repair 1 0/1/0
This course introduces students to the art of golf club design and repair. Focus is on the technology and techniques involved, the correct processes by which clubs are properly designed and repaired, and the equipment currently available to custom design and repair in today's industry. Custom design and repair lab setup and establishing a successful design and repair business are also discussed.
Prerequisite: None
Corequisite: None

GOLF 1102 Tournament Operations 1 1/0/0
The course provides an overview of golf tournament operations. Students establish, facilitate, design and operate a golf tournament. Emphasis is on the checklist required to operate a successful golf tournament. Calligraphy, tournament types and tournament marketing are also discussed.
Prerequisite: None
Corequisite: None

GOLF 1200 Introduction to Golf Fundamentals and Methods 3 2/1/0
This course discusses the fundamentals of golf necessary to play at the beginning recreational level. It includes discussion of rules, etiquette, equipment and terminology. The course will be a combination of classroom lecture and golf course experience.
Prerequisite: None
Corequisite: None

GOLF 2100 Pro Shop Operations and Management 3 3/0/0
This course introduces students to the role of management in golf facility operations. Emphasis is on the administration of course procedures, tee times and retail space. Pro shop operations and the impact on customer and player relations are analyzed. Player performance analysis and instructional methodology are also discussed.
Prerequisite: None
Corequisite: None

GOLF 2200 Turf Management 3 3/0/0
This course introduces students to the management of golf course turfgrass and landscaping. Focus is on the ecology of turf, maintenance operations, irrigation and the equipment necessary for course care. Pest and weed control management, chemical handling and the environmental impact of golf are also discussed.
Prerequisite: None
Corequisite: None

GOLF 2402 Golf Internship 1-3 None
This course provides students with the opportunity to apply knowledge and skills in an operational golf environment. Students will perform activities in an employer-supervised industry setting that are consistent with program outcomes. This course will emphasize the duties golf professionals face in industry regarding communication, decision-making, professional and ethical behavior, organizational policies, time and resource management, and customer service. This course may be repeated for credit.
Prerequisite: None
Corequisite: None

GOLF 2500 Fundamentals of Golf Instruction 3 3/0/0
This course provides the student with the materials and means to teach the fundamentals of the golf swing. Emphasis is on the skills it takes to be an instructor of golf lessons. These skills include but are not limited to communication, patience, coordination, knowledge of the golf swing, troubleshooting an individual's swing, and the ability to instruct both individuals and groups.
Prerequisite: None
Corequisite: None

Heating

HEAT 2218 Gas Heating 2 1/1/0
This course covers gas heating units, primarily furnaces. Emphasis is placed on understanding the operating systems and the operating sequence as it exists within the furnace, including mechanical, electrical and combustion. Diagnosis and repair of malfunctioning furnaces is a significant portion of this course.
Prerequisite: None
Corequisite: None

HEAT 2220 Oil Heating 2 1/1/0
This course covers the use of oil as a means used to heat various media including air and water.
Prerequisite: CONE1102 AND PLBG1128
Corequisite: None

History

HIST 1110 Western Civilization: Ancient-1400s 3 3/0/0
Meets MnTC Goal Areas 5 and 8. This course provides a discussion of the political, economic, cultural and social factors which have shaped the history of the Western world. Topics include Mesopotamia, the Hebrews, the Greeks, the Romans, the rise of Christianity, feudalism and manorialism, the rise of Islam, the Merovingians and the Carolingians.
Prerequisite: None
Corequisite: None

HIST 1111 Western Civilization: 1400s-1600s 3 3/0/0
Meets MnTC Goal Areas 5 and 8. This course provides a discussion of the political, economic, cultural and social factors which have shaped the history of the Western world. Topics include the Renaissance, the rise of capitalism, the Reformation, the

emergence of nation states and the Age of Absolutism.

Prerequisite: None

Corequisite: None

HIST 1112 Western Civilization: 1600s-1800s 3 3/0/0

Meets MnTC Goal Areas 5 and 8. This course provides a discussion of the political, economic, cultural and social factors that have shaped the history of the Western world. Topics include the English Revolution, the Intellectual Revolution, the French Revolution and the Industrial Revolution.

Prerequisite: None

Corequisite: None

HIST 1113 Western Civilization: 20th Century 3 3/0/0

Meets MnTC Goal Areas 5 and 8. This course provides a discussion of the political, economic, cultural and social factors which have shaped the history of the Western world. Topics include Marxism, the Industrial Revolution, the Age of Progress, World War I, the rise of fascism, World War II and the Cold War.

Prerequisite: None

Corequisite: None

HIST 1500 European Experience 3 3/0/0

Meets MnTC Goal Areas 5 and 8. This course combines an on-campus component with a trip to Europe. During the on-campus portion of the course students will learn about major events in British and French history such as the French Revolution, the Napoleonic era, the War of the Roses and the reign of Henry VIII. After the on-campus component is completed, students embark on a 10-day trip to Paris and London, where they visit historical sites they studied during the on-campus portion of the course.

Prerequisite: None

Corequisite: None

HIST 1600 History of Baseball 3 3/0/0

Meets MnTC Goal Area 5. This course deals with the history of baseball in America. The course examines the origin of baseball, the development of professional baseball, the creation of baseball leagues, the business of baseball, baseball scandals, labor relations, great moments in baseball history, baseball curses and the steroids era. The course not only examines the history of the game itself, but also emphasizes the ways in which baseball has shaped American society and American society has shaped baseball.

Prerequisite: None

Corequisite: None

HIST 2211 American History: the Colonial Period 3 3/0/0

Meets MnTC Goal Areas 5 and 7. The course content is the colonial period in American history. Topics include the Age of Exploration, early American settlements, the rise of colonial regions in America, the clash of cultures and races, the American Revolution and the Articles of Confederation.

Prerequisite: None

Corequisite: None

HIST 2212 American History 19th Century 3 3/0/0

Meets MnTC Goal Areas 5 and 7. This is the second course in an American history sequence. The course content is America's 19th century, defined as the 1780s to 1877. Consideration is given to the Constitution of 1787, the Washington administration, Jeffersonian policies, the War of 1812, the slavery controversy, the Civil War and Reconstruction.

Prerequisite: None

Corequisite: None

HIST 2213 American History: 20th Century 3 3/0/0

Meets MnTC Goal Areas 5 and 7. This course covers the history of the United States during the 20th century. Topics covered include the Progressive Era, World War I, the Roaring 20s, the Great Depression, the New Deal, World War II, the Cold War, the Korean Conflict, scientific advancements of the 1950s and 1960s, the Civil Rights Movement, the Cuban missile crisis, the Vietnam War and Watergate.

Prerequisite: None

Corequisite: None

Health Information Technology

HITM 1150 Introduction to Health Care Delivery 3 3/0/0

This course is a study of the historical development of the health care delivery system. The student is given an opportunity to learn about the role of the health information professional and how this role is integrated into the health care delivery system.

Prerequisite: None

Corequisite: None

HITM 1152 Health Information Systems 3 2/1/0

This course is a study of numbering systems, master patient index, filing systems, microfilming and retention considerations for health records. Basic concepts of information systems will be introduced including electronic data collection, storage, retrieval and other health information applications.

Prerequisite: None

Corequisite: None

HITM 1153 Introduction to Electronic Health Records 1 1/0/0

This course introduces the student to the evolution of paper health records to the electronic version. The stages of preparation of electronic health record development will be identified. Students will be given the opportunity to research the technologies that support the electronic health record. Also, the challenges of electronic health record implementation will be discussed.

Prerequisite: Permission of instructor

Corequisite: None

HITM 1155 Medicolegal Aspects 3 3/0/0

This course focuses on the application of legal principles, policies, regulations and standards for the control and use of health information. Emphasis is placed upon the proper release of patient information and legal procedures involved in court disclosure of health record information.

Prerequisite: HITM1150

Corequisite: None

HITM 1156 Health Information Systems and Statistics 3 2/1/0

This course is a study of the basic health information systems as they move from the paper record to the hybrid version and the electronic health record implementation. Primary and secondary records will be defined. Other areas to be covered are documentation requirements, retention, record destruction, computing and interpreting health care statistics, and the appropriate display of statistical data.

Prerequisite: None

Corequisite: None

HITM 1159 Professional Practice Experience Functions 2 0/0/2

This course provides the student with practical applications of theories in the field of Health Information Technology. Under the supervision of a qualified health information professional, the student gains professional practice experience in basic health record functions.

Prerequisite: Permission of instructor

Corequisite: None

HITM 1160 Health Information Systems and Statistics 3 2/1/0

This course is a study of the basic health information systems as they move from the paper record to the hybrid version and the electronic health record implementation. Primary and secondary records will be defined. Other areas to be covered are documentation requirements, retention, record destruction, computing and interpreting health care statistics, and the appropriate display of statistical data.

Prerequisite: None

Corequisite: None

HITM 2202 Computer Applications in Healthcare 3 2/1/0

This course develops the health information technology student's knowledge of computer theory and application in the areas of system collection, storage and retrieval.

Prerequisite: None

Corequisite: None

HITM 2204 Fundamentals of Electronic Health Records 3 3/0/0

This course focuses on systems, policies, regulations and standards for the implementation and use of electronic records within the health care delivery system.

Prerequisite: CPTR1104

Corequisite: None

HITM 2211 Basic Pharmacology for Coders 2 2/0/0

This course introduces the coding student to basic pharmacology concepts and drug categories as related to current coding guidelines. Emphasis is placed on commonly used drugs and their effects on body systems. Drug reference utilization is included.

Prerequisite: HLTH1116

Corequisite: None

HITM 2214 Introduction to ICD Coding 3 2/1/0

This course covers an in-depth study of the International Classification of Diseases (ICD). This includes ICD-9 and an overview of ICD-10.

Prerequisite: BIOL2230 AND HLTH1106 AND permission of instructor

Corequisite: None

HITM 2216 Introduction to CPT Coding 3 2/1/0

This course covers an in-depth study of the Physician's Current Procedural Terminology (CPT-4) coding system.

Prerequisite: HLTH1106 AND permission of the instructor

Corequisite: None

HITM 2236 Advanced ICD Coding 2 1/1/0

This course is a continuation of the in-depth study of the International Classification of Diseases (ICD) coding and reimbursement in the health care delivery system. Coursework in ICD-10 is included.

Prerequisite: Permission of instructor

Corequisite: None

HITM 2238 Advanced Coding CPT 2 1/1/0

This course is a continuation of the in-depth study of the Physician's Current Procedural Terminology (CPT) coding system.

Prerequisite: HLTH1106 AND permission of instructor

Corequisite: None

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
HITM 2250	Supervisory Leadership in Health This course is a study of the basic principles of management, communication and working relationships in a health care setting. The role of the health record technician as a supervisor is discussed. Prerequisite: None Corequisite: None	3	3/0/0	HLTH 1108	Introduction to Anatomy and Physiology This course is an introduction to the structure and function of the human body. Focus will be on the study of each individual organ system and the interaction of each system with the rest of the body. Prerequisite: None Corequisite: None	3	3/0/0
HITM 2252	Quality Management and Statistics This course covers the components of quality improvement systems, including quality assessment, utilization review and risk management. This course is also a study of collecting, computing, analyzing, interpreting and presenting numerical data relating to health care services. Prerequisite: HITM1152 Corequisite: None	3	2/1/0	HLTH 1110	Introduction to Anatomy and Physiology This course is an introduction to the structure and function of the human body. Focus will be on the study of each individual organ system and the interaction of each system with the rest of the body. Prerequisite: None Corequisite: None	3	3/0/0
HITM 2253	Quality Management Studies This course covers the components of quality improvement systems, such as quality assessment, performance improvement, utilization management, risk management and credentialing. Also included is preparation for licensing and accreditation surveys. Prerequisite: None Corequisite: None	3	2/1/0	HLTH 1111	Personal and Community Health This course studies the dimensions of wellness and how each dimension is affected by personal health choices. It also studies how the personal choices of society affect the community. This course is designed to help the student maintain good physical, mental and social well-being. Some of the topics covered include anatomy and physiology, emotional and mental health, drug use and abuse, and nutrition and fitness. We will examine the importance of communities in providing access to personal health choices and health care, and how as a society we restrict personal health choices socioeconomically, racially and by gender. Prerequisite: None Corequisite: None	3	3/0/0
HITM 2262	Reimbursement Systems This course is an introduction to the current reimbursement systems that are used in inpatient and outpatient settings in the health care industry. Prerequisite: Permission of the instructor Corequisite: None	2	2/0/0	HLTH 1112	Introduction to Home Health This course builds on the nursing assistant course to introduce the concepts of home care services and the goals and responsibilities of a home health aide. Topics of food and meal management, nutrition, basic emergency care procedures, documentation and reporting, ethics and confidentiality, and homemaking skills make up the foundation of this course. Care needs of special populations such as chemically dependent, developmentally delayed, pediatrics and the handicapped are also discussed within this course. This course meets the requirements of the Minnesota Department of Health Home Health Aide course, and successful completion makes the student eligible to take the State Nursing Assistant/Home Health Aide registry exam. Prerequisite: HLTH1115 Corequisite: None	1	1/0/0
HITM 2270	Professional Practice Experience Management This course provides the student with practical application of classroom theories and coursework. Under the supervision of a qualified health record professional, the student gains professional practice experience in supervisory and management functions. Prerequisite: Permission of the instructor Corequisite: None	1	0/0/1	HLTH 1115	Introduction to Nursing in Long Term Care This course provides an introduction to the concepts of infection control, safe and clean environment, communication, lifespan issues, basic human care needs and special population care needs. The primary focus is on basic nursing care and the skills needed to safely and competently perform personal holistic care under the supervision of a registered nurse to clients in long-term and acute-care settings. It meets the requirements for the Minnesota Department of Health Nursing Assistant course, and successful completion allows the student to be eligible to take the State Registry Exam for Nursing Assistant. Prerequisite: None Corequisite: None	3	1/2/0
HITM 2272	Professional Practice Experience Coding This course provides the student with practical application of classroom theories and coursework. Under the supervision of a qualified supervisor, the student gains professional practice experience in coding and reimbursement. Prerequisite: Permission of the instructor Corequisite: None	2	0/0/2	HLTH 1116	Medical Terminology This course covers prefixes, suffixes and root words used to compose medical terms. The student learns to spell, pronounce, define, analyze and formulate terminology related to body structure, disease, diagnosis and treatment. Medical abbreviations are also included. Prerequisite: None Corequisite: None	3	3/0/0
HITM 2275	Health Record Documentation This course allows students to review and apply the applicable accreditation standards for health record documentation. Students also will review and apply payer requirements and professional practice standards. The policies of uniform content and format will be applied. Prerequisite: Permission of the instructor Corequisite: None	1	1/0/0	HLTH 1121	Nursing Assistant-Home Health Aide This course provides introductory training for those who want to work as a nursing assistant/home health aide. It introduces the concepts of infection control, safe and clean environment, communication, lifespan issues, basic human care needs, home care services, goals and responsibilities of a nursing assistant/home health aide, food and meal management, nutrition, basic emergency care procedures, documentation and reporting, ethics and confidentiality, and homemaking skills. The primary focus is basic nursing care and the skills needed to safely and competently perform personal holistic care under the supervision of a registered nurse. This course meets the requirements for the Minnesota Department of Health Nursing Assistant/Home Health Aide course, and students who successfully complete the course are eligible to take the State Registry Exam for Nursing Assistant/Home Health Aide. Prerequisite: None Corequisite: None	4	2/2/0
HITM 2280	Registered Health Information Technology Exam Review This course will assist students in preparing to write the American Health Information Management Association's Registered Health Information Technology exam. Students will systematically review the content of the exam according to the American Health Information Management Association's curriculum comprised of the defined domain, subdomains and tasks. Discussions will assist students in locating published study aids and practice exams. Prerequisite: Permission of the instructor Corequisite: None	1	1/0/0	HLTH 1122	CPR-First Aid This course teaches basic life support using American Heart Association or American Red Cross guidelines and first aid using American Academy of Orthopaedic Surgeons(AAOS) or American Red Cross guidelines. Prerequisite: None Corequisite: None	1	0.5/0.5/0
HITM 2282	Introduction to the International Classification of Diseases, Tenth Edition This course covers an in-depth study of the International Classification of Diseases, 10th Edition. Prerequisite: HLTH2208 AND HLTH1116 AND BIOL2230 Corequisite: None	3	2/1/0	HLTH 1130	Transcultural Health Concepts This course will provide students with the opportunity to examine their own values, beliefs, attitudes and behaviors and to integrate this analysis in understanding cultural awareness while recognizing the significance that culture has on health beliefs and practices. This course will illustrate concepts across the continuum from cultural awareness to culturally competent care in relationship to providing holistic health care to a diverse group of patients. While this course has an emphasis on health care, other disciplines could apply cultural awareness with diverse populations in a variety of settings. Prerequisite: None Corequisite: None	1	1/0/0
HITM 2284	Advanced International Classification of Diseases, Tenth Edition This course is a continuation of the in-depth study of the International Classification of Diseases, 10th Edition. Prerequisite: HITM2282 Corequisite: None	2	1/1/0				
Health							
HLTH 1100	Introduction to Nutrition This course is designed to introduce the student to the science of nutrition and the study of food nutrients and other substances, their action, interaction and balance. Special emphasis is placed on the interrelationship between diet, nutrition, health and disease. Prerequisite: None Corequisite: None	2	2/0/0				

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HLTH 2208	Pathophysiology	3	3/0/0	HRES 1130	Benefits Administration	3	3/0/0
This course presents information related to pathophysiology of various body systems. The nature, cause, diagnosis and treatment of common disease conditions will be emphasized.				This course covers basic knowledge and information about the various types of benefits that are typically offered by employers for their employees.			
Prerequisite: HLTH1110 OR BIOL2230				Prerequisite: None			
Corequisite: None				Corequisite: None			
HLTH 2212	Social Seminar Drug Education	3	3/0/0	HRES 1134	Training and Development	3	3/0/0
This course is designed to cover the use, abuse and dependency of legal and illicit drugs. Included are the physical and psychological effects and the problems related to drug use. It may include guest lecturers, small discussions, videos, student presentations covering topics related to all forms of drugs and drug use including intervention, and available sources to help deal with drug abuse.				This course covers basic information about the characteristics of effective orientation programs and the scope of organizations, training and continuing development programs in building an effective work force.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
HLTH 2213	Emergency Responder	3	2.5/0.5/0	HRES 2204	Policy Administration	3	3/0/0
The first responder-level course covers regular and more advanced first aid practices and procedures including extrication and transportation, professional-level CPR, oxygen administration, long bone splinting, blood pressure monitoring, emergency childbirth, patient assessment, backboarding and stress management.				This course covers basic information and understanding of the need for human resources policies in an organization, types of policies, the process of policy formulation and how policies are used.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
HLTH 2214	Emergency Responder	3	3/0/0	HRES 2212	Wage/Salary Administration	3	3/0/0
The first responder-level course covers regular and more advanced first aid practices and procedures including extrication and transportation, professional-level CPR, oxygen administration, long bone splinting, blood pressure monitoring, emergency childbirth, patient assessment, backboarding and stress management.				This course covers basic knowledge and understanding of employee compensation and related federal laws.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
HLTH 2215	EMT Basic	6	4/2/0	HRES 2224	Employee/Labor Relations	3	3/0/0
This course follows the current National Standard Curriculum and will include all skills and classroom information necessary to provide emergency care at the basic life support level. Modules presented include preparation of the EMT-B, airway, patient assessment (medical and trauma), medical/behavioral emergencies and OB/GYN, trauma, infants and children, ambulance operations and interventions (medications and semi-automatic defibrillation). Upon successful completion of the EMT-B course, the student will be eligible to take the state/national registry computer and practical examinations.				This course covers basic information about the history of labor unions, current labor laws, the current role of labor unions, workers compensation laws and the rights of employees.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
HRES 2245 Human Resources Internship 1 - 4 None							
This course is designed to provide the student with a purposeful occupational experience in the human resources field. Each internship is an individualized experience. A training plan is created for each student in conjunction with the training site to provide experience related to the skills and knowledge acquired in the program. One credit of internship is equal to 45 hours of internship.							
Prerequisite: None							
Corequisite: None							
HRES 2252 Human Resources Competency and Portfolio Evaluation 2 1/1/0							
This course reviews and reinforces the principles covered in the Human Resource program through the development of a comprehensive student portfolio and simulated activities related to program outcomes. The course also develops knowledge of career processes and the skills needed in conducting an effective job search.							
Prerequisite: None							
Corequisite: None							
HRES 2254 Human Resource Systems and Portfolio Evaluation 3 2/1/0							
This course reviews and reinforces the principles covered in the Human Resource program through the development of a comprehensive student portfolio and simulated activities related to program outcomes and systems found in Human Resources. Students will apply basic concepts, terminology, functions and outputs needed to maintain and utilize human resource information systems in operations and strategic planning. The course also develops knowledge of career processes and the skills needed in conducting an effective job search.							
Prerequisite: None							
Corequisite: None							
HRES 2254 Human Resource Systems and Portfolio Evaluation 3 2/1/0							
This course reviews and reinforces the principles covered in the Human Resource program through the development of a comprehensive student portfolio and simulated activities related to program outcomes and systems found in Human Resources. Students will apply basic concepts, terminology, functions and outputs needed to maintain and utilize human resource information systems in operations and strategic planning. The course also develops knowledge of career processes and the skills needed in conducting an effective job search.							
Prerequisite: None							
Corequisite: None							

Honors

HONS 1101	Introduction to Honors	1	1/0/0
Meets MnTC Goal Area 2. This course is intended to be taken by students within the Honors Program during the first semester of the program. This is a variable content reading course which will emphasize critical thinking but be directed toward the academic interests of faculty and students. Each student will present a proposal for a capstone honors project at the end of the course.			
Prerequisite: None			
Corequisite: None			
HONS 2900	Honors Capstone Seminar	1	1/0/0
Meets MnTC Goal Area 2. This course is intended to be taken by students within the Honors Program during the final semester of the program. The course is a variable content reading course which will emphasize critical thinking but be directed toward the academic interests of faculty and students. Each student will present a capstone honors project at the end of the course.			
Prerequisite: None			
Corequisite: None			

Human Resources

HRES 1122	Human Resource Management	3	3/0/0
This course covers an introduction to the basic principles of human resource functions and services. It provides a background and understanding for further human resource courses.			
Prerequisite: None			
Corequisite: None			
HRES 1126	Employee Processes	3	3/0/0
This course covers basic knowledge of the factors to be considered and the strategies used in the employment process. Topics included in this course include job analysis, job description, job postings, employment ads and interviewing.			
Prerequisite: None			
Corequisite: None			

Humanities

HUM 1105	Religion in the Humanities	3	3/0/0
Meets MnTC Goal Areas 6 and 8. This course is an exploration and study of religious expression and experience as well as an introduction to the world's major religions. The focus of the course will be on human expression of religious belief and philosophy in literature, film, music and art, and it will cover a variety of world religions including Buddhism, Hinduism, Islam, Judaism and Christianity. Throughout the course, students will explore diversity and human religious expression as a way of enhancing their global perspective.			
Prerequisite: None			
Corequisite: None			
HUM 1110	Native American Culture	3	3/0/0
Meets MnTC Goal Areas 2, 6 and 7. This course is an interdisciplinary study of the social and cultural life of Native Americans, primarily the Plains Indians. Students consider traditional and contemporary expressions of Native peoples as well as the history from which these expressions spring, especially the impact that contact with European peoples had and continues to have on Native American ways of life.			
Prerequisite: None			
Corequisite: None			
HUM 1120	Culture of Italy	3	3/0/0
Meets MnTC Goal Areas 6 and 8. This multidisciplinary course will introduce students to a close study of the art, drama and music of Italy. Students will develop an appreciation of			

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	the Italian culture and an understanding of the integration of the arts within the culture. Upon completion of HUM 1120, students will be eligible for GLST 1121 Humanities Italy. Prerequisite: None Corequisite: None						
HUM 1132	Women in the Humanities	3	3/0/0				
	Meets MnTC Goal Areas 6 and 7. This course is a study of the contributions of women in the humanities as writers, artists and social reformers with emphasis on 20th century women. The course will incorporate individual studies of Quaker women, frontier women, African American women and Native American women. Prerequisite: None Corequisite: None						
HUM 1134	Global Perspectives for Women	3	3/0/0				
	Meets MnTC Goal Areas 6 and 8. This course is a multi-disciplinary study designed to enhance international perspective on women in the humanities with emphasis on 21st-century women's cultural contributions as composers, artists and social reformers. The course will incorporate studies on women of China, Latin America and Europe. Prerequisite: None Corequisite: None						
HUM 1201	Religion and the American Experience	3	3/0/0				
	Meets MnTC Goal Areas 6 and 7. This course will explore the relationship between religion and the ongoing development of American culture, especially as it relates to the role diversity plays in American history, arts, entertainment and institutions. Students will explore the variety of religious traditions that have been a part of the American experience and how they impacted and adapted to a changing national identity. Topics may include Native American thought and colonialism, the part played by Protestantism in the development of American ideals, the role of race and immigration in American religious identity, and the contemporary struggle among traditional Christian thought, secularism, reclaimed primal religions and modern world religions. Prerequisite: None Corequisite: None						
HUM 2210	Introduction to Film	3	3/0/0				
	Meets MnTC Goal Areas 2 and 6. This course offers students an overview of the elements that comprise telling stories on film. Students will study shot, angle, lighting, mise en scene, movement, editing, sound, etc. The course will also consider how film elements work to present various ideologies. Students will become familiar with open and closed forms and the distinctions between realism, classicism and formalism. Students will participate in film analysis using the concepts above. Prerequisite: None Corequisite: None						
HUM 2230	World Cinema	3	3/0/0				
	Meets MnTC Goal Areas 6 and 8. This course will introduce students to films from non-English speaking countries around the globe. The course will study stories and societies through cinema, readings and lecture. Students will consider their own worldview while they screen films and analyze multiple themes and ideas as a means of enriching their global perspective. Prerequisite: None Corequisite: None						
HUM 2236	Technology in the Humanities	3	3/0/0				
	Meets MnTC Goal Areas 2, 6 and 8. Developments in the arts, architecture, science, philosophy and education and studies in human interaction are often provoked by changes in technology. Early changes in military technology made it possible for civilizations to take charge of various places on the world's stage. However, over time, changes in how the world was understood, motivated by general advances in global exploration, astronomy and other sciences as well as specific inventions such as movable type, proved even more instrumental in driving people to new and different understandings of what it means to be human. This course explores how technology impacts developments in a culture's world view and tries to anticipate how future changes in technology might alter the course of otherwise established ways of life. Prerequisite: None Corequisite: None						
HUM 2281	Culture of the British Isles	3	3/0/0				
	Meets MnTC Goal Areas 6 and 8. This multidisciplinary course will introduce students to a close study of the art, literature and music of the British Isles with an emphasis on England, Ireland and Wales. Students will develop an appreciation of the Irish, English and Welsh cultures and an understanding of the integration of the arts within each culture. Registering for Humanities 2281 will make each student eligible for GLST 2291: Humanities British Isles. Prerequisite: None Corequisite: None						
HUM 2293	Field Experience: Europe	3	3/0/0				
	Meets MnTC Goal Areas 6 and 8. This course provides a travel-abroad experience taken to encourage studies in the humanities involving visits to sites that are often discussed in the traditional classroom. The course includes scheduled academic activities in preparation for the trip. Students continue their studies in cities such as London, Paris, Rome, Munich or other locations as determined by the instructor. Prerequisite: None Corequisite: None						
HUM 2295	Field Experience: The East	3	3/0/0				
	Meets MnTC Goal Areas 6 and 8. A travel abroad experience taken to encourage studies in the humanities involving visits to sites that are often discussed in the traditional						
	classroom. The course includes scheduled academic activities in preparation for the trip. The students continue their studies in countries in the East, Middle East and Eastern Europe as determined by the instructor. Prerequisite: None Corequisite: None						
HUM 2301	Heroes, Moral and Cultural	3	3/0/0				
	Meets MnTC Goal Areas 2 and 6. The term hero is sometimes used synonymously with the term role model, and in this class we will identify what characteristics are present in the heroic figure as well as explore the motives of the hero. Why do we expect our heroes to suffer? The vast majority of heroes are single; why? Is it related to the notion of incorruptibility, or is it to spare them the hard decisions (to save a spouse or three other strangers)? Are there links or analogies to the story of Jesus? What do we admire about heroes? Is it the chameleon property? What kinds of things can be considered superpowers and what do they represent figuratively, metaphorically, mythically, symbolically, morally and culturally? Are heroes archetypically different according to gender, or are heroes gender-neutral? Are heroes representatives of the culture they originate in, or are they products of that culture, or both? Are heroes representatives of a particular moral position, or are they a generic good? These are the types of questions we will explore in this class. Prerequisite: None Corequisite: None						
HUM 2302	Science, Class and Culture - Conceptual Wars	3	3/0/0				
	Meets MnTC Goal Areas 2 and 6. Choose one: (A) Science gives us objective knowledge of an independently existing reality. (B) Scientific knowledge is always provisional and tells us nothing that is universal, necessary or certain about the world. If you're having trouble deciding which option seems the most plausible, then you are a part of a long-running battle over the status of scientific knowledge that began in ancient Greece, raged furiously among scientists, social scientists and humanists during the 1990s, and has re-emerged in today's conflict between science and religion over issues such as evolution. The battle, at least for our purpose, is being waged on the conceptual front. To put it another way, in a world where exaggeration, hyperbole and, unfortunately, falsehoods are the norm and rarely corrected, the war seems to be against conceptual clarity. While this can take many different forms, it seems to manifest itself most often as a kind of rabid skepticism where nothing is considered knowledge and all opinions are considered equally valid. Thus, we have an inchoate skeptical position that can be applied to science, culture, politics, ethics, language, medicine, etc. Prerequisite: None Corequisite: None						
HUM 2303	A Conceptual Mingling, Love and Sex	3	3/0/0				
	Meets Goal Areas 2 and 6. This course will introduce a methodological approach topics that most people seem inclined to emote, rather than reason, about: love and sex. Our goal will be to demystify these subjects by critically examining the ideology that surrounds them. Conceptual, ethical, psychological and social dimensions of these subjects will be explored. A possible place to start is with a definition of the term love. From this definition we'd want to determine if the term love entails or implies other concepts, or if those relations are connotative terms dependent upon the intended use of the term. Other questions might revolve around whether or not love is inherently irrational or conditional. Prerequisite: None Corequisite: None						
HUM 2304	Rhetoric, Sophistry and the Truth	3	3/0/0				
	Meets MnTC Goal Areas 2 and 6. Since ancient Greece there have been debates about the distinction between sophistry and philosophy. This debate has traditionally been defined by the ideas that sophistry is aligned with rhetoric and that rhetoric is broadly defined as the art of persuasion on the one hand. On the other is the philosophical tradition which aligns itself with logic and its attempts to seek out the truth, broadly defined by either a correspondence or coherence theory of truth. At its most heated, the debate seems to come down to the difference between persuading someone (by whatever means) to adopt a position versus a rigorous analysis of evidence, using logical techniques to produce the most plausible solution (even if it's not the solution we had hoped). In contemporary academia, one might argue that the division between rhetoric and a strictly logical approach has grown wider since the two disciplines are housed in separate departments. One generally finds courses in rhetoric in English departments, but courses in logic are usually found in philosophy departments, so our approach will be interdisciplinary. Prerequisite: None Corequisite: None						
Heating, Ventilation and Air Conditioning							
HVAC 1102	Duct Fitting Construction	3	1/2/0				
	Standard sheet metal fittings will be constructed in this class. Familiarity with sheet metal shop equipment and various tools will be gained through the layout and construction of sheet metal projects. All fittings in this class will be found in standard duct applications. Prerequisite: None Corequisite: None						
HVAC 1103	Electricity for HVAC	4	2/2/0				
	This course explains DC and AC theory, beginning with mathematically solving and hooking up series DC circuits and advancing into solving and hooking up AC resistance in series, parallel and combination circuits. HVAC relays and contactors and furnace safety devices are studied and wired in the lab. There is a dual emphasis on reading and then hooking up and troubleshooting schematic drawings. Magnetism and the generation of AC transformers as applied to HVAC, inductors and inductance-resistance						

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	parallel and series combination circuits are solved using trigonometry. Capacitance is introduced and applied as a function in understanding AC motors. Prerequisite: None Corequisite: None						
HVAC 1104	Heating, Ventilating, and Air Conditioning Electrical Controls	3	1/2/0				
	This course covers the wiring of typical heating and cooling circuits, along with the hook-up and installation of air conditioning. Prerequisite: None Corequisite: None						
HVAC 1128	Heating, Ventilating, and Air Conditioning Design and Installation	5	2/3/0				
	This course includes an overview of various heating controls and appliances. Topics will include blueprints as applied to estimating heating and cooling loads; gas piping as installed in residential and light commercial jobs; safe heating, ventilating and air conditioning practices; various venting codes and requirements; and the sizing of furnaces, duct work and piping. Prerequisite: None Corequisite: None						
HVAC 1224	Gas and Oil Heating	3	1/2/0				
	This course covers residential gas and oil heating units, primarily forced air furnaces. Emphasis is on understanding the sequence of operation, proper adjustment, efficiency measurement and safety. Diagnosis and repair of malfunctioning furnaces is part of this course. Prerequisite: None Corequisite: None						
HVAC 2202	Air Handling	2	1/1/0				
	The dynamics of handling fluid masses of air will be studied. The focus will be on moving and replacing air at given velocities, quantities and temperatures. Prerequisite: None Corequisite: None						
HVAC 2204	Advanced Duct Fitting Construction	3	1/2/0				
	This course deals with standard transitional sheet metal fittings usually found in ductwork or on commercial roofing projects. The triangulation method is used to create fittings for which exit configurations differ from entry configurations. Prerequisite: None Corequisite: None						
HVAC 2205	Advanced Duct Fitting Construction	2	1/1/0				
	This course deals with standard transitional sheet metal fittings usually found in ductwork or on commercial roofing projects. The triangulation method is used to create fittings for which exit configurations differ from entry configurations. Prerequisite: None Corequisite: None						
HVAC 2212	Hot Water Heating	3	2/1/0				
	This course covers both hot water baseboard and in-floor heating, with emphasis on calculations involved in hydronic heating. Prerequisite: CONE1102 AND HVAC1128 Corequisite: None						
HVAC 2220	Heat Pump Theory	1	1/0/0				
	This course will cover the various methods by which mechanical processes are used to move heat from different sources into residential housing. Some attention to commercial methods will be offered. An example of this would be using the compression cycle of refrigeration to extract heat from the outside air. Prerequisite: REFR1102 Corequisite: None						
HVAC 2221	Heat Pump Theory and Operation	3	2/1/0				
	This course will cover the various methods by which mechanical processes are used to move heat from different sources into residential housing. Some attention to commercial methods will be offered. An example of this would be use of the compression cycle of refrigeration to extract heat from the outside air. Prerequisite: None Corequisite: None						
HVAC 2250	Heating, Ventilating, and Air Conditioning Applications	1	0/1/0				
	This course will involve as much interaction with the community as possible, working with customers on their job sites. Students will also be hooking up split-system air conditioners in the lab. Prerequisite: HVAC1104 AND REFR1110 AND REFR1112 Corequisite: None						
HVAC 2254	Heating, Ventilating, and Air Conditioning Interrelated Topics	1	1/0/0				
	This course will add to the student's electrical knowledge regarding circuits and schematics. Prerequisite: None Corequisite: None						
HVAC 2260	Refrigerant Certification	1	1/0/0				
	This course covers the content necessary to achieve an EPA Certification rating. Prerequisite: None Corequisite: None						
				HVAC 2290	Heating, Ventilating, and Air Conditioning Internship	1	0/0/1
					This course will add to the student's electrical knowledge regarding circuits and schematics. Prerequisite: None Corequisite: None		
				Integrative Learning Seminar			
				ILS 1100	Integrative Learning Seminar I	1	1/0/0
					This course meets MnTC Goal Area 2. Students will begin to develop collegiate-level, transferable skills as they are introduced to the M State core abilities and liberal arts and sciences shared values. Students will begin to learn how to critically evaluate information and ideas, how to determine the ethical implications that come with decision making, and how to communicate effectively as they develop an understanding of course materials through written and oral exercises. Students will establish a digital folio, which will allow them to demonstrate their growing understanding and mastery of the shared values and core abilities. Prerequisite: Assessment into ENGL1101 Corequisite: None		
				ILS 2100	Integrative Learning Seminar II	2	2/0/0
					Meets MnTC Goal Area 2. This course provides a cohesive, integrative learning experience for the liberal arts and sciences student. The student will integrate skills and knowledge developed and acquired throughout his or her course of study in the disciplines. The course requires the student to embark on a comprehensive interdisciplinary academic quest designed to demonstrate research, oral and written communication, and critical thinking skills. Prerequisite: Completion of 40 credits AND ILS1100 Corequisite: None		
				Industrial Maintenance			
				IMMA 1110	Intro Power and Mechanical Systems	3	1/2/0
					This course will provide an overview of the design, operation and maintenance principles of basic mechanical system components. The terminology, theory, application and construction of mechanical components dealing with power transfer found within the typical factory will be discussed. The course is designed to provide an understanding of the basic physics principles that govern mechanical power transmission through the use of belt, chain and gear drives, clutch and braking mechanisms, coupling devices, linear actuators and bearings. Prerequisite: None Corequisite: None		
				IMMA 1112	Mechanical Blueprint Reading	2	2/0/0
					This course will teach the fundamentals of blueprint reading and will include the interpretation of geometric construction, multi-view projection, dimensioning, auxiliary and sectional views. The course will also include the identification of drafting symbols and conventional methods of presentation. Prerequisite: None Corequisite: None		
				IMMA 2223	Fluid Power Lab	2	1/1/0
					This class teaches the skills of construction, control and operation of hydraulic and pneumatic systems coupled with electrical/electronic controls. Participants will perform hands-on experiments to construct circuits that teach the operation of individual components as well as complete systems used in real-world applications. Assemblies involving fluid power and the modern control components used to regulate it will be emphasized. Prerequisite: MATH0052 AND an Accuplacer arithmetic score of 57 or completion of MATH0052 Corequisite: None		
				Web Development			
				INTD 1000	Foundations of Web Development	3	2/1/0
					In this course, students will be introduced to the foundational concepts necessary for a career in Web Development. Students will explore the Web Development program, research career paths and review technical skills needed to succeed in the field. Prerequisite: None Corequisite: None		
				INTD 1108	HTML	3	2/1/0
					In this hands-on course, students will learn the basics of creating Web pages using up-to-date techniques with HTML, CSS and XHTML. Students will learn to create standards-		

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	based Web pages that are cross-browser compliant and to make their websites available on the Web by uploading pages to a Web server. Prerequisite: None Corequisite: None			INTD 2231 Emerging Technologies		1	0/1/0
INTD 1111 Hands-On Programming	This course introduces fundamental programming concepts in an exciting, hands-on learning environment. Using the LEGO MindStorms system, students will implement code to control a robot's senses, actions and reactions. This course will also focus on 21st century skill sets like time management, teamwork, problem solving and communications. Prerequisite: None Corequisite: None	3	2/1/0	Computer professionals are constantly learning new technologies. Students will explore the exciting world of social media while researching new technologies. After instructor approval, the student will research the selected emerging Web-related topic using Web resources and prepare a research paper. Prerequisite: None Corequisite: None			
INTD 1113 Dreamweaver	The focus of this course is designing websites using Dreamweaver. The emphasis will be on learning the Dreamweaver software application and on applying graphic design concepts. Prerequisite: None Corequisite: None	3	2/1/0	INTD 2236 Advanced Web Programming		3	2/1/0
INTD 1117 Photoshop	Students will develop fundamental skills in developing Web graphic images using Photoshop. The course will concentrate on the design of graphics as it pertains to the delivery over the Internet. Prerequisite: None Corequisite: None	3	2/1/0	In this class, students will utilize the knowledge learned in previous classes to create server-side PHP programs used to manipulate Web applications, files, email and databases. Students will utilize project planning skills, as well as utilize problem-solving techniques to write effective applications. Prerequisite: INTD2226 AND INTD2246 Corequisite: None			
INTD 1124 Cascading Style Sheets	This course focuses on the use of Cascading Style Sheets in the creation of Web pages. Students will create and utilize CSS to provide sophisticated page layout and design for Web pages and websites. The course emphasizes standards-based design with CSS and testing sites for maximum browser compatibility. Prerequisite: INTD1108 Corequisite: None	3	2/1/0	INTD 2238 Web Portfolio		3	1/2/0
INTD 1130 Electronic Commerce	This course introduces emerging online technologies and trends and their influence on the electronic commerce marketplace. Students will learn various revenue models and how to market on the Web. The course introduces online auctions and various legal and ethical issues. Students will learn about important security issues, such as spam and phishing. Students will learn how to plan for electronic commerce and develop an online marketing plan. Prerequisite: None Corequisite: None	3	2/1/0	In this course, students will plan, design and create a professional portfolio using Web technologies. The purpose of the portfolio is to showcase the student's accomplishments in the student's major field and provide the student with a concrete representation of his or her skills and abilities. Prerequisite: INTD2210 OR consent of instructor Corequisite: None			
INTD 1140 JavaScript	In this course, students will be given a brief introduction to the technologies of the Internet and the World Wide Web as well as the context in which the various Web programming technologies fit into this framework. Students will learn the basics of Web programming using JavaScript. Students will apply programming concepts to client-side Web development. Prerequisite: None Corequisite: None	3	2/1/0	INTD 2246 PHP		3	2/1/0
INTD 1150 Databases on the Server	This course is an introduction to server-based database systems. It introduces the students to the following topics: relational database design, administering enterprise-level databases systems, structured query language and normalization. This class will be taught using an enterprise-level database system in MySQL. Prerequisite: None Corequisite: None	3	2/1/0	Students will learn how to develop dynamic websites using PHP. Topics covered will include basic syntax, deploying PHP Web pages and database connections. Prerequisite: INTD1140 Corequisite: None			
INTD 2210 Interface Design	Students will learn the concepts and skills necessary for designing websites for the targeted user. This course is focused on the interface design process, with emphasis on the important topics of visual design, writing for the Web and accessibility. Prerequisite: INTD1124 OR concurrent enrollment in INTD1124 OR consent of instructor Corequisite: None	3	2/1/0	Sign Language Intrepreting			
INTD 2213 Flash	Students will learn how to design and deliver cross-platform, low-bandwidth animations, presentations and Web applications using Flash and Actionscript. Prerequisite: None Corequisite: None	3	2/1/0	IPP 1111 Introduction to Interpreting		3	3/0/0
INTD 2226 Web Programming	In this class, students will utilize the knowledge learned in previous classes to create client-side programs used to manipulate Web applications. Students will utilize project-planning skills, as well as utilize problem-solving techniques to write effective applications. The use of Ajax, rich Internet applications and frameworks will also be introduced. Prerequisite: INTD1140 OR INTD1110 Corequisite: None	3	2/1/0	This course introduces the field of interpreting and the role of a sign language interpreter. It covers interpreting as a field of professional practice, the current nature of the field, the variety of employment opportunities, interpreter training, interpreter certification and professional ethical standards. Prerequisite: ASL1114 AND grade of C or better in ASL1114 Corequisite: None			
INTD 2228 Web Projects	In this class, students will utilize the knowledge learned in previous classes to create Web applications using both client- and server-side technologies. The focus of this course is a top-down approach whereby students are assigned a project, they assess the needs of the project, and they develop a project plan. Then they will identify what it will take to complete that Web project. Students will participate in group-based programming activities, learn about project management and implement technologies as needed to create a working system. Prerequisite: INTD2246 Corequisite: None	3	2/1/0	IPP 1112 Beginning ASL to English		3	3/0/0
				This course focuses on the process of interpreting, provides practice of necessary skills and procedures, and applies aptitude and theory to the translation process. This course focuses on lexical development, syntactical language comparisons, voice production techniques, interpreting process analysis and diagnostic assessment. The course content centers on techniques for sign-to-voice interpreting. Prerequisite: ASL1114 AND grade of C or better in ASL1114 Corequisite: None			
				IPP 1113 Beginning English to American Sign Language		3	3/0/0
				This course focuses on the development of consecutive and simultaneous interpreting skills from English to American Sign Language. This course will initiate language analysis along with theoretical and practical skills related to the interpreting process. The course content centers on techniques for voice-to-sign interpreting. Prerequisite: ASL1114 AND grade of C or better in ASL1114 Corequisite: None			
				IPP 2112 Advanced ASL to English		3	3/0/0
				This course provides additional practice in specific skill areas related to sign-to-voice interpreting. This course focuses on advanced lexical development, syntactical language comparisons, voice production techniques, interpreting process analysis and diagnostic assessment. The course content is at an intermediate to advanced level of speed and complexity along with voice production techniques for simultaneous sign-to-voice interpreting for increasingly complex language exchanges. Prerequisite: IPP1112 AND grade of C or better in IPP1112 Corequisite: None			
				IPP 2113 Advanced English to American Sign Language		3	3/0/0
				This course provides additional practice in specific skills related to voice-to-sign interpreting. This course focuses on advanced development of simultaneous interpreting skills. This course centers on critical thinking and processing skills at an intermediate level with determining language needs within a variety of interpreting settings. The course content is an intermediate to advanced level of speed and accuracy along with translation techniques for simultaneous English -to-American Sign Language interpreting. Prerequisite: IPP1113 AND grade of C or better in IPP1113 Corequisite: None			
				IPP 2114 Educational Interpreting		2	2/0/0
				This course introduces the role and responsibilities of an interpreter in a mainstream educational environment. This course focuses on increasing the awareness of current techniques, issues and ethics in mainstreaming education practices. Prerequisite: IPP1111 AND grade of C or better in IPP1111 Corequisite: None			

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
IPP 2215	Topics in Interpreting	2	2/0/0	MATH 1000	Technical Mathematics	3	3/0/0
<p>This course focuses on continued development of interpreting skills. The course content consists of special topics in the area of interpreting including team interpreting, athletics, religion, medical, legal, deaf/blind and video interpreting. This course also focuses on preparation for certification exams.</p> <p>Prerequisite: IPP1111 AND grade of C or better in IPP1111 Corequisite: None</p>				<p>This course presents basic mathematical topics as they are applied in a technical program. The course includes a review of basic mathematical operations and continues with the development of algebraic and trigonometric skills in a technical setting. Most concepts will be applied through course-specific problems. This course is not an MnTC Goal Area 4 mathematics course, nor does it prepare students for taking an MnTC Goal Area 4 mathematics course. This course shall not be used as a replacement for either MATH 0090 or MATH 1020, or their transfer equivalents. This course may be taken only by students enrolled in the following programs: Carpentry, Construction Electricity, HVAC, Refrigeration and Air Conditioning, Telecommunications Engineering Technology, Industrial Maintenance and Alternative Energy Manufacturing.</p> <p>Prerequisite: MATH0052 OR by placement exam Corequisite: None</p>			
IPP 2216	Practicum	1	0/0/1	MATH 1020	Intermediate Algebra	3	3/0/0
<p>This course is designed to introduce various models and experiences of interpreting and to prepare for the tasks required for functioning as a professional interpreter. This course includes practical workplace experience by observation of an interpreter at work. Students are expected to observe working interpreters in a variety of field settings.</p> <p>Prerequisite: IPP1111 AND grade of C or better in IPP1111 Corequisite: None</p>				<p>This course includes equations of lines; systems of equations; rational expressions and equations; functions; radical expressions and equations; complex numbers; absolute value equations and inequalities; and solving quadratic equations using factoring, completing the square and the quadratic formula.</p> <p>Prerequisite: : Completion of Math 0090 with a grade of C or higher or by placement exam Corequisite: None</p>			
IPP 2217	Interpreting Internship	6	0/0/6	MATH 1100	World of Math	3	3/0/0
<p>This course is a supervised interpreting opportunity in an educational, community, service agency or other setting. This course includes completion of documentation, assignments for portfolio, problem solving, site orientation, student performance evaluations, observation of certified interpreters, collaboration with certified interpreters, professional job expectations and actual interpreting experience. This internship abides by the National Association of the Deaf (NAD)-Registry of Interpreter for the Deaf (RID) Code of Professional Conduct.</p> <p>Prerequisite: IPP2216 AND instructor approval Corequisite: None</p>				<p>Meets MnTC Goal Areas 2 and 4. This liberal arts mathematics course provides an introduction to several areas and concepts in mathematics including problem solving, numerical sequences, methods of counting, probability and statistics. The course is appropriate as general education for those who do not intend to pursue the regular college mathematics courses.</p> <p>Prerequisite: MATH1020 Corequisite: None</p>			
IPP 2218	Internship Seminar	1	1/0/0	MATH 1102	Finite Math	3	3/0/0
<p>This course provides an open forum to discuss situations arising from interpreter assignments during the internship. This course focuses on final preparations for entering the interpreting field.</p> <p>Prerequisite: IPP2216 Corequisite: None</p>				<p>This course is an introduction to systems of linear equations and inequalities, matrices, linear programming, mathematics of finance and elementary probability and statistics. This course is intended for all liberal arts and science students, but is highly recommended for students in areas of management, health sciences and other applied technologies.</p> <p>Prerequisite: MATH1020 Corequisite: None</p>			
Information Technology							
ITSS 1100	Information Technology Help Desk	3	2/1/0	MATH 1114	College Algebra	4	4/0/0
<p>This course is an introduction to information technology user support. Important skill sets involving customer service, troubleshooting, user support management, product evaluation, user support management and user training are introduced. This course also emphasizes teamwork and technical writing.</p> <p>Prerequisite: None Corequisite: None</p>				<p>Meets MnTC Goal Areas 2 and 4. This course includes rational, polynomial, exponential, logarithmic, inverse and quadratic functions. The course also includes equations, inequalities, complex numbers and systems of linear equations. Additional topics may include matrices and determinants.</p> <p>Prerequisite: MATH1020 AND/OR by placement exam Corequisite: None</p>			
ITSS 1120	Information Technology Research and Documentation	3	1/2/0	MATH 1115	Functions/Trigonometry	4	4/0/0
<p>Using the World Wide Web, students will research current trends and technical issues in information technology. Research topics will include software applications, hardware products, security issues, and technical problems and solutions. Students will develop technical documentation and training materials for the purpose of supporting end users. Emphasis will also be placed on refining Web searching skills to locate vendor documentation, trade journals, white papers and other useful IT resources.</p> <p>Prerequisite: None Corequisite: None</p>				<p>Meets MnTC Goal Areas 2 and 4. This course includes trigonometric functions, right triangle trigonometry, radian measure and circular functions, identities, equations, inverse functions, oblique triangles, complex numbers, vectors, polar coordinates and conic sections.</p> <p>Prerequisite: MATH1114 Corequisite: None</p>			
ITSS 2100	Supporting End-User Applications	3	2/1/0	MATH 1116	College Trigonometry	3	3/0/0
<p>This course emphasizes the knowledge, skills and abilities necessary to improve the productivity of the computer user. Students will learn about providing support for the user's computer, including the operating system and the software applications installed on the computer.</p> <p>Prerequisite: ITSS1100 Corequisite: None</p>				<p>Meets MnTC goal areas 2 and 4. Topics include trigonometric functions, right triangle trigonometry, radian measure and circular functions, identities, equations, inverse functions, laws of cosines and sines. Optional topics may include complex numbers, vectors and polar coordinates.</p> <p>Prerequisite: MATH1114 Corequisite: None</p>			
Mathematics							
MATH 0052	Foundations of Math	3	3/0/0	MATH 1118	Precalculus	5	5/0/0
<p>This course presents basic mathematical operations. The course concepts cover operations on whole numbers, integers, fractions and decimals, as well as the applications of percents, ratios, proportions, measurements and basic geometry.</p> <p>Prerequisite: None Corequisite: None</p>				<p>Meets MnTC goal areas 2 and 4. This course includes trigonometric identities and polynomial, exponential, logarithmic, rational and trigonometric functions, their inverses and their graphs. Optional topics may include matrices and determinants, conic sections, vector concepts and polar coordinates.</p> <p>Prerequisite: MATH1020 AND Math 1020 with a C or better or by placement score Corequisite: None</p>			
MATH 0090	Introductory Algebra	3	3/0/0	MATH 1122	Applied Calculus and Linear Algebra	3	3/0/0
<p>This course is an introduction to basic algebraic concepts including the use of expressions, solving equations, manipulating and graphing linear equations and inequalities in two variables, utilizing rules for exponents, performing operations on polynomials, factoring polynomials and solving equations using factoring.</p> <p>Prerequisite: Completion of MATH 0052 with a grade of C or higher or by placement exam Corequisite: None</p>				<p>Meets MnTC Goal Areas 2 and 4. This course is an introduction to optimization, the simplex method, differential and integral calculus with an emphasis on application in the areas of business and the life and social sciences. This course is intended for all liberal arts and science students but is highly recommended for students pursuing business careers.</p> <p>Prerequisite: MATH1114 Corequisite: None</p>			
				MATH 1134	Calculus I	5	5/0/0
				<p>Meets MnTC Goal Areas 2 and 4. This course includes limits and continuity, derivatives, definite and indefinite integrals of algebraic, trigonometric, exponential and logarithmic functions, and applications of the derivative and definite integral.</p> <p>Prerequisite: MATH1115 AND or by placement exam OR MATH1116 OR MATH1118 Corequisite: None</p>			
				MATH 1135	Calculus II	5	5/0/0
				<p>Meets MnTC Goal Areas 2 and 4. This course includes integration of logarithmic,</p>			

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
	exponential, trigonometric and hyperbolic functions and their inverses. Students will apply techniques of integration. Polar coordinates, conic sections, indeterminate forms, improper integrals and infinite series are also included. Prerequisite: MATH1134 Corequisite: None						
MATH 1207	Elementary Statistics	3	3/0/0				
	Meets MnTC Goal Areas 2 and 4. This course will investigate descriptive and inferential statistical concepts including measures of central tendency, measures of variation, measures of position, frequency tables, statistical graphs, probability distributions, hypothesis tests, confidence intervals, regression and correlation. TI calculators, MINITAB or EXCEL may be used for data analysis. Prerequisite: MATH1114 OR MATH1118 OR by placement Corequisite: None						
MATH 1213	Introduction to Statistics	4	4/0/0				
	Meets MnTC Goal Areas 2 and 4. Topics include data summary, frequency distributions, plots, graphs, measures of central tendency, variation, probabilities, probability distributions and confidence intervals. Hypothesis testing of means, proportions and variances will be conducted using the z-test, t-test, chi-square-test, F-test and ANOVA. Optional topics may include nonparametric statistics, sampling and simulation. Prerequisite: MATH1114 AND or by placement exam OR MATH1118 Corequisite: None						
MATH 2200	Principles of Arithmetic	3	3/0/0				
	Meets MnTC Goal Areas 2 and 4. This is primarily a mathematics rather than a methods course. Concepts covered include arithmetic as a system of thought, number and sets, basic number operations and their underlying formal logic, number structure and basic geometry concepts. Prerequisite: MATH1114 OR MATH1100 Corequisite: None						
MATH 2231	Calculus III	4	4/0/0				
	Meets MnTC Goal Areas 2 and 4. The course content includes a study of vectors in the plane and space, differentiation and integration of vector-valued functions, and partial differentiation, multiple integrals, including line and surface, in rectangular, polar, cylindrical, spherical and other systems, and a study of Stokes' Theorem, Green's Theorem, and the Divergence Theorem. Prerequisite: MATH1135 Corequisite: None						
MATH 2257	Linear Algebra	3	3/0/0				
	Meets MnTC Goal Areas 2 and 4. The course focuses on systems of linear equations, matrices, determinants, vector spaces, linear transformations, eigenvalues and eigenvectors. Prerequisite: MATH1134 Corequisite: None						
MATH 2259	Differential Equations	4	4/0/0				
	This course includes first and second order differential equations with applications in physics, electrical engineering and chemistry. It also includes Laplace transforms, matrices, series solutions and systems of differential equations. Prerequisite: MATH2231 Corequisite: None						
Mechanical Drafting and Design							
MCDD 1102	Mechanical Engineering Drawing I	3	1/2/0				
	The objective of this course is to develop the student's use and knowledge of machine drafting, lettering, line identity and application, orthographic projection, dimensioning practices, section and auxiliary drawings. Prerequisite: None Corequisite: None						
MCDD 1106	Mechanical Engineering Drawing II	4	0/4/0				
	The objective of this course is to develop the student's use and knowledge of pictorial drawings, sheet metal, pattern layout and welding drawing. Mechanical fasteners will be identified. Prerequisite: MCDD1102 Corequisite: None						
MCDD 1114	Manufacturing Process	2	2/0/0				
	The objective of this course is to develop the student's understanding of material processing, casting, molding, forming, separating operations, assembling, finishing and automation. Prerequisite: None Corequisite: None						
MCDD 1120	Drafting Practices	2	2/0/0				
	The objective of this course is to develop the student's knowledge of engineering change orders, engineering communications, attitudes, workforce diversity and finances. Prerequisite: None Corequisite: None						
MCDD 1124	Mechanical Drafting Applications I	3	1/2/0				
	The objective of this course is for the student to develop a set of working drawings of an existing machine project. A genealogy chart, final and sub-assembly drawings, detail drawings, parts lists and part numbering system will be completed. Prerequisite: CADD1102 AND MCDD1102 Corequisite: None						
MCDD 1212	Geometric Dimensioning and Tolerancing	3	2/1/0				
	The objective of this course is to develop the student's understanding and application of a self-defined set of symbols, rules, definitions and conventions used to describe the size, form, orientation and location of part features. Prerequisite: CADD1114 AND MCDD1106 Corequisite: None						
MCDD 2204	Mechanical Engineering Drawing III	4	1/3/0				
	The objective of this course is to explore advanced applications of various industry drawing methods. The student will be introduced to and will construct drawings related to multiple drafting and engineering disciplines. Prerequisite: MCDD1106 Corequisite: None						
MCDD 2230	Rapid Prototyping	2	1/1/0				
	This course covers the basic concepts of rapid prototyping for manufacturing utilizing a three-dimensional printer. Prerequisite: CADD1114 Corequisite: None						
MCDD 2246	Tool Design	3	1/2/0				
	The objective of this course is to develop an understand of jigs, fixtures, dies and their function in mass production, starting at the basic levels of component pieces through to design and implementation. Prerequisite: CADD1114 AND MCDD1106 Corequisite: None						
MCDD 2248	CNC Application	3	1/2/0				
	The objective of this course is to develop the student's knowledge of computer numerical control components and basic programming codes. Prerequisite: CADD1114 AND MCDD1106 Corequisite: None						
MCDD 2252	Mechanical Drafting Applications II	4	1/3/0				
	The objective of this course is to develop the student's knowledge of the processes involved in design development and scheduling. Gearing, shafts, chains, belts and bearings, along with part, sub-assembly and assembly representations are applied to the student's capstone project. Prerequisite: CADD2214 AND MCDD2122 Corequisite: None						
MCDD 2260	Mechanical Drafting Internship	3	0/0/3				
	The objective of this course is to develop and apply the student's drafting skills in his or her desired career field. Projects and discussions are coordinated to relate to the student's employment situation in an approved drafting occupation. Training verification and evaluation are required of each student. A maximum of three internship credits will apply toward graduation. Prerequisite: CADD2214 Corequisite: None						
Mass Communication							
MCOM 1122	Introduction to Mass Communication	3	3/0/0				
	Meets MnTC Goal Areas 5 and 9. This course provides an introductory overview and history of the rapidly growing world of mass communication, with an emphasis on the United States. There will be specific analysis of the media industry including newspapers, radio, television, film, books, magazines, advertising, public relations and new media technology. Topics will include public relations, the role of government, values and ethics, and media effects. Prerequisite: Assessment into ENGL 1101 Corequisite: None						
MCOM 1140	Popular Culture and Social Media	3	3/0/0				
	This course explores various mediums including books, magazines, newspapers, radio, film, television and Internet and the implications of each on society. The ever-changing social mediums will be explored, along with the impact they have on communication. Topics may include social networking sites, implications of advertising and the evolution of reality television. Prerequisite: Assessment in ENGL 1101 Corequisite: None						

Multicultural Studies

MCS 2230 Multicultural America 3 3/0/0
Meets MnTC Goal Area 7. This course provides an introduction to multicultural perspectives on American education. Given that the United States is becoming more culturally diverse and operates within an increasingly globalized world, citizens need to be equipped to understand the diverse cultures with which they work and interact. This course exposes students to the experiences and challenges of African Americans, American Indians, Chicano/Latinos and Asian Americans in the U.S. educational system from historical and contemporary perspectives.
Prerequisite: None
Corequisite: None

MCS 2231 Multicultural America: Service Learning 1 1/0/0
This course provides an introduction to multicultural perspectives on American education via a hands-on experience working and interacting with diverse cultures in an educational setting. The nature of the service learning necessitates that students may meet outside of regular class hours (20-25 hours) and may need their own transportation to service learning sites.
Prerequisite: None
Corequisite: MCS2230

Manufacturing

METC 1112 Manufacturing Processes 4 2/2/0
This course teaches the fundamentals of traditional and non-traditional manufacturing processes including mass reducing, mass conserving, joining, material treatment and surface treatment processes. Hands-on experiences in laboratories provides class participants with basic skills in machining, welding and wood processing technologies.
Prerequisite: None
Corequisite: None

METC 1152 Safety and Accident Prevent 3 3/0/0
This course is designed to explore the principles and practices of health and safety in the industrial environment. Topics covered include regulations of the Environmental Protection Agency (EPA), Occupational Safety and Health Act (OSHA and MNOSHA), legal considerations, current legislation, product safety, hazard materials, infection control and employee protection.
Prerequisite: None
Corequisite: None

METC 2208 Basic Electricity and Electronics 3 2/1/0
This course surveys the fundamentals of electricity and electronics including electrical/electronic components, AC/DC circuits, electronic devices and applications, basic electronic circuits, and electronic communication and data systems.
Prerequisite: None
Corequisite: None

METC 2222 Fluid Power Systems 3 2/1/0
This course teaches fundamental skills in hydraulic and pneumatic systems. Participants will perform hands-on experiments wherein they construct circuits that teach the operation of components and circuits as used in real-world applications. At the completion of this course, participants will be able to install, start up and operate basic systems.
Prerequisite: CPTR1104 AND MATH0090
Corequisite: None

METC 2254 Quality Measurement and Controls 3 3/0/0
This course focuses on the production and improvement of making quality products and producing quality services. Participants will discuss the philosophy of a quality organization and methods to create a culture of quality. Participants will also be introduced to the planning and implementation of this organizational methodology utilizing best practices to secure the commitment of employees at all levels. Quality tools covered are value stream map, standard work, visual controls and A-3. Course includes discussions about both qualitative and quantitative points of view.
Prerequisite: MATH0052 AND METC1112
Corequisite: None

Marketing

MKTG 1050 Direct Selling 3 3/0/0
The success of an entrepreneurial venture is directly related to entrepreneur's ability to constantly and consistently sell. The student will learn the three vital aspects of small-business selling, including one-on-one selling, presentation selling and creating win/win negotiations. Even if the student has never sold before, he or she will become proficient at all aspects of the sales, presentation and negotiation process. Students will have the opportunity to practice multiple aspects of direct selling in a safe classroom environment. In addition, the student will

develop specific sales strategies with other members of the class.

Prerequisite: None
Corequisite: None

MKTG 1106 Professional Selling 3 3/0/0
This course covers a fundamental sales approach that can be used as a foundation for future sales courses. The content covers steps used to plan a sales presentation and methods of determining and filling prospect needs or wants.
Prerequisite: None
Corequisite: None

MKTG 1110 Customer Service 3 3/0/0
Customer service can determine both a company's and an employee's success or failure. This course covers the skills necessary for an individual to build and maintain customer loyalty. Strategies needed to sustain a positive work environment will be identified. Evaluating and improving customer service systems, from traditional customer satisfaction measurement tools to technology-based customer relationship management systems (CRM), will be explored.
Prerequisite: None
Corequisite: None

MKTG 1116 Advertising and Promotion 3 3/0/0
This course focuses on the role of promotion within the marketing plan of an organization. Students will study advertising trends that influence an organization's promotional strategy. Emphasis will be placed on current advertising media, costs, budgeting, ad development and evaluation. This course will have an active learning environment. Students will create and present a promotional campaign.
Prerequisite: None
Corequisite: None

MKTG 1120 Supervisory Leadership 3 3/0/0
The methods and techniques of leadership and supervision and their applications are emphasized in this course. The content covers such topics as delegation, motivation, training, orienting, evaluating and effectively increasing productivity.
Prerequisite: None
Corequisite: None

MKTG 1128 Business Insights 1 0/1/0
Examination of the marketing industry from manufacturing to the final product is covered in this course. Students analyze the impact of current trends, the economy and technology in the marketplace.
Prerequisite: None
Corequisite: None

MKTG 1130 Leadership Ethics 3 3/0/0
This course is designed to help the individual determine what constitutes ethical issues and gain insight into how an individual can cope with conflicts between personal values and those of the organization where he or she works.
Prerequisite: None
Corequisite: None

MKTG 1138 Leadership Development I 1 0/1/0
This course encourages the personal and professional growth of the student. Emphasis is placed on the development of skills in decision making, problem solving, communications, professionalism and leadership.
Prerequisite: None
Corequisite: None

MKTG 1140 Leadership Development II 1 0/1/0
This course covers the personal and professional growth of the student. Emphasis is placed on the usage of skills in decision making, problem solving, communications and leadership.
Prerequisite: None
Corequisite: None

MKTG 1200 Introduction to Social Media 3 3/0/0
This course provides students with an introduction to several popular social media sites. Emphasis is on how to use social media platforms to successfully market your business and/or products. Special attention will be paid to when this type of marketing is most effective, how to select the most effective social media outlet for your particular target demographic and tracking results.
Prerequisite: None
Corequisite: CPTR1104

MKTG 1210 InDesign 3 3/0/0
This course introduces students to digital page layout using Adobe InDesign. This course is for anyone who has to prepare professional business publications. Students will learn how to set type and use digital images to produce effective printed business publications including newsletters, advertising flyers, business forms, brochures, manuals, posters and Catalogs. Students will learn how to create and modify pdf files for electronic distribution of publications.
Prerequisite: CPTR1104
Corequisite: None

MKTG 1280 Search Engine Optimization 3 3/0/0
This introductory class will focus on the Internet marketing strategy of Search Engine Optimization (SEO). It will cover how search engines work, what people search for, the actual search terms or keywords typed into search engines and which search engines are preferred by their targeted audience. Optimizing a website may involve editing its content and HTML and associated coding to both increase its relevance to specific

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
	keywords and to remove barriers to the indexing activities of search engines. Prerequisite: INTD1108 AND CPTR1104 Corequisite: INTD1108 AND CPTR1104						
MKTG 2204	Advanced Professional Selling	3	2/1/0				
	This course provides opportunity for the student to apply the steps of a sales presentation by planning and performing sales presentations in role-playing situations. The student applies strategies in sales communications, customer-oriented selling and sales management. Prerequisite: MKTG1106 Corequisite: None						
MKTG 2206	Sales Management	3	2/1/0				
	This is an advanced management course that focuses on sales force planning, implementation and control. This course covers the managerial topics of sales planning, staffing, training and directing, as well as analyzing and evaluating the sales force. Prerequisite: MKTG1106 Corequisite: None						
MKTG 2212	Retail Management	3	3/0/0				
	Class emphasis is on the strategic decisions made by retailers and how those decisions impact how, when, where and in what quantities customers will buy. Emphasis is also on hands-on application of the theories and principles introduced in class. Topics include using professional retailing terminology, analyzing environmental influences and identifying how retailers can appropriately respond to those influences as they make operational decisions such as site selection, determining merchandising practices, managing inventory and determining pricing strategies. Prerequisite: ACCT1012 OR ACCT2211 Corequisite: None						
MKTG 2214	E-Marketing	3	3/0/0				
	This course examines emerging electronic technologies and their impact on a firm's marketing strategy. Emphasis is placed on trends in e-marketing as well as the unique opportunities and challenges faced in the electronic environment. Students will apply the components of the traditional marketing mix to an electronic marketing strategy. Prerequisite: MKTG1100 OR MKTG2206 Corequisite: None						
MKTG 2218	Retail Management	3	3/0/0				
	Class emphasis is on the strategic decisions made by retailers and how those decisions impact how, when, where and in what quantities customers will buy. Emphasis is also on hands-on application of the theories and principles introduced in class. Topics include using professional retailing terminology, analyzing environmental influences and identifying how retailers can appropriately respond to those influences as they make operational decisions such as site selection, determining merchandising practices, managing inventory and determining pricing strategies. Prerequisite: ACCT1012 OR ACCT2211 Corequisite: None						
MKTG 2222	Human Resource Management	3	3/0/0				
	The purpose of this course is to acquaint the student with the importance of human resource management in contributing to the achievement of an organization's objectives. The content addresses techniques and legal aspects of recruiting, hiring, firing, promotion, documentation, evaluation and other areas essential to the personnel function. Prerequisite: None Corequisite: None						
MKTG 2230	Marketing Research	3	2/1/0				
	This course covers market research principles and procedures that are necessary for marketing professionals to be successful. Topics covered include survey methods and techniques, problem identification, data collection techniques, sample type and size, presentation of findings and using the Internet as a source. Prerequisite: None Corequisite: None						
MKTG 2234	Computer Marketing Applications	3	2/1/0				
	This course challenges students to produce computer projects using spreadsheets, databases, graphics and word processing. The emphasis is on documents produced by marketing departments and marketing firms. The student plan, creates, prints and evaluates projects individually and with a team. Prerequisite: None Corequisite: None						
MKTG 2236	Small Business Management	3	3/0/0				
	This course provides a summary of many of the major issues faced by anyone starting a small business. The course teaches the fundamentals of small business management by blending basic management principles with tested and proven real world techniques for planning, organizing and operating a small business successfully. The course utilizes a variety of learning tools including the textbook, PowerPoint, lectures, written assignments, cases, websites and hands-on activities. Prerequisite: ACCT1012 OR ACCT2211 Corequisite: None						
MKTG 2250	Strategic Selling and Account Management	3	2/1/0				
	This is an advanced sales course designed to explore and apply proven business practices that are currently being used in the field by sales professionals. Its focus is business-to-business, face-to-face personal selling. Key elements include strategic planning to prepare for sales calls, making sales calls, communicating proposed						
	solutions, overcoming objections and closing sales. Other elements include understanding organizational structure, business-to-business buying behavior, and understanding and influencing multiple decision makers. Prerequisite: MKTG1106 AND MKTG2204 Corequisite: None						
MKTG 2290	Supervised Occup Exp I	3	0/0/3				
	For this course, projects, reports and discussions are coordinated to relate to the student's employment situation. Employment in an approved wholesale/retail marketing occupation, training verification and evaluation are required of each student. A maximum of six SOE credits will apply toward graduation. Prerequisite: None Corequisite: None						
MKTG 2292	Supervised Occup Exp II	3	0/0/3				
	For this course, projects, reports and discussions are coordinated to relate to the student's employment situation. Employment in an approved wholesale/retail marketing occupation, training verification and evaluation are required of each student. A maximum of six SOE credits will apply toward graduation. Prerequisite: None Corequisite: None						
MKTG 2298	Small Business Plan Development	2	1/1/0				
	This course covers the steps in preparing a business plan. Each student creates a business plan based on a personal business selection. Prerequisite: None Corequisite: None						
MKTG 2400	Marketing Management	4	3/1/0				
	This is a capstone course designed to be taken near the end of the completion of the marketing required courses. This course is designed to integrate learning acquired in prior marketing courses with an emphasis on strategic marketing planning. This class will involve all aspects of developing a comprehensive marketing plan for a product or service. Students will work in teams to research, develop, and present a marketing strategy for a new product. Prerequisite: BUS2206 Corequisite: None						
MKTG 2404	Management Strategy	3	3/0/0				
	From a management perspective, students will study strategic management concepts and analytical techniques. Students will learn how to improve managerial decision-making by using a case study format to assess business opportunities and formulate effective strategies which will enhance the long-term performance of the organization. The course is intended to integrate previous program coursework. This capstone course should be taken during the student's final semester. Prerequisite: (ACCT1012 AND MKTG1100 AND MKTG2200) OR (ACCT2211 AND MKTG1100 AND MKTG2200) OR (ACCT1012 AND BUS2204 AND MKTG1100) OR (ACCT1012 AND BUS2206 AND MKTG2200) OR (ACCT1012 AND BUS2204 AND BUS2206) OR (ACCT2211 AND BUS2204 AND MKTG1100) OR (ACCT2211 AND BUS2206 AND MKTG2200) OR (ACCT2211 AND BUS2204 AND BUS2206) Corequisite: None						

Medical Laboratory Technician

MLT 1110	Prin/Proc Phlebotomy	2	1/1/0
	This course is designed for phlebotomy and medical laboratory technician students. The course covers knowledge and performance of venipuncture, micro (capillary) and arterial blood, body fluid collection, specimen handling and storage. Strict adherence to the safety techniques for pathogen is stressed. The course also covers point-of-care (bedside) analysis and electrocardiography. Prerequisite: None Corequisite: None		
MLT 1112	Clinical Phlebotomy	3	0/3/0
	This course provides clinical phlebotomy experience for phlebotomy technician students in an affiliate hospital/clinic laboratory under the supervision of qualified technicians and technologists. Training includes blood and body fluid collection, processing and storage. Prerequisite: None Corequisite: MLT1110		
MLT 1113	Basic Laboratory Techniques I	1	0/1/0
	This is an introductory course for Medical Laboratory Technician students covering the techniques, interpretation and correlation of results in chemistry, immunology and microbiology. Other topics included in the course are instrumentation, calculations, preparations of reagents, quality assurance and quality control, specimen collection, transportation, analysis and result reporting. Prerequisite: Assessment into or successful completion of ENGL 1101 or college-level reading and writing equivalent Corequisite: None		
MLT 1114	Basic Laboratory Techniques II	1	0/1/0
	This is an introductory course for Medical Laboratory Technician students covering the techniques, interpretation and correlation of results in urinalysis, hematology, and immunohematology. Other topics included in the course are instrumentation,		

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
	calculations, preparation of reagents, quality assurance and quality control, specimen collection, transportation, analysis and result reporting. Prerequisite: MLT1113 Corequisite: None						
MLT 2217	Clinical Hematology	3	0/3/0				
	This course is a clinical experience at an affiliate hospital laboratory under the supervision of qualified laboratory personnel. Students perform tests on cells in the blood and body fluids. The course also covers principles and procedures for coagulation studies. Prerequisite: ZOO1122 AND ZOO1123 AND ZOO1126 AND CHEM1104 AND BIOL2257 Corequisite: None						
MLT 2218	Clinical Urinalysis and Phlebotomy	1	0/1/0				
	This course provides a clinical experience in performing routine and special urinalysis and seminal fluid testing under the supervision of laboratory personnel. The course also includes experience in phlebotomy under the supervision of laboratory personnel. Prerequisite: CHEM1104 AND ZOO1122 AND ZOO1123 AND ZOO1126 AND BIOL2257 Corequisite: None						
MLT 2219	Clinical Chemistry and Special Chemistry	3	0/3/0				
	This course provides a clinical experience in the chemistry laboratory at an affiliate hospital. Students learn to perform body chemistry methods on automated and semi-automated instruments under the supervision of qualified laboratory personnel. The course also includes clinical experience in special chemistry testing including hormones, vitamins, therapeutic drug monitoring and drugs of abuse testing. Prerequisite: CHEM1104 AND ZOO1122 AND ZOO1123 AND ZOO1126 AND BIOL2257 Corequisite: None						
MLT 2220	Clinical Blood Bank	2	0/2/0				
	This course is a clinical experience in a blood bank department of an affiliate hospital. Students perform blood typing and compatibility testing as well as other immunohematology routine testing with supervision. Prerequisite: BIOL1125 AND ZOO1123 AND ZOO1122 AND ZOO1126 AND BIOL2257 Corequisite: None						
MLT 2221	Clinical Microbiology	3	0/3/0				
	This course provides a clinical experience at an affiliate hospital that covers bacterial identification methods with laboratory personnel supervision. The course also covers immunological and serological testing of body fluids. Prerequisite: CHEM1104 AND ZOO1122 AND ZOO1123 AND ZOO1126 AND BIOL2268 AND BIOL2267 Corequisite: None						
MLT 2222	Clinical Chemistry and Special Chemistry	2	0/2/0				
	This course is a clinical experience in the chemistry department of an affiliate hospital under the supervision of qualified laboratory personnel. Students will learn to perform body fluid chemistry methods on automated and semi-automated instruments. The course also includes clinical experience in special chemistry testing including hormones, vitamins, therapeutic drug monitoring and drugs of abuse. Prerequisite: ZOO1122 AND ZOO1123 AND ZOO1126 AND BIOL1125 AND BIOL2265 Corequisite: None						
MLT 2230	Clinical Applications	1	1/0/0				
	This is a didactic course offered during the medical laboratory technician clinical experience consisting of new information and pertinent information. The course includes case studies, new methods and correlation of test results to diseases/disorders. Prerequisite: CHEM1104 AND BIOL2257 AND ZOO1122 AND ZOO1123 AND ZOO1126 AND ENGL1101 Corequisite: None						
Marine Engine Technology							
MRNT 1104	Drive System Theory	3	3/0/0				
	This course covers the operational theory of the stern-mounted vertical drives and outboard gear cases. Gear ratios, upper housings, lower housings, inputs and outputs will be investigated. Common drive systems from outboard and stem drive are covered in this course. Identification, theory of disassembly, measurement, shimming and assembly procedures will be outlined in this course. Failure analysis is emphasized during this course. Prerequisite: None Corequisite: None						
MRNT 1105	Introduction to Marine	2	1/1/0				
	This course covers information on laws governing the use of public waterways as administered by both state and federal agencies as well as the National Marine Manufacturer's Association regulations. Students will learn the history of marine systems along with the identification of each type. The course also covers the manufacturers' service and parts literature used in the operation of marine businesses, emphasizing the service department. Prerequisite: None Corequisite: None						
MRNT 1106	Drive System Service	3	0/3/0				
	This course teaches the repair procedures for the common stern-mounted vertical drive systems built by MerCruiser and outboards built by Mercury Marine and OMC. Complete drive disassembly, measurement, analysis, shimming and rebuilding will be performed. Failure analysis of components will be covered in detail. Prerequisite: None Corequisite: None						
MRNT 1114	Introduction to Boat Rigging	2	1/1/0				
	This course provides training in the procedures necessary to prepare boats for showroom and/or customer delivery. Motor mounting, controls, instrumentation and accessories are discussed. Students will perform rigging and adjustment procedures on boats, along with lake testing. Prerequisite: None Corequisite: None						
MRNT 1120	Marine Starting and Charging Systems	3	2/1/0				
	This course teaches the service procedures necessary for off-road products (2-cycle/4-cycle) to repair charging and starting system components. Electrical principles are applied to test and troubleshoot complete circuits as well as components of each. Fundamental rebuilding principles and system analysis are emphasized. Safe battery testing and service are performed. Prerequisite: None Corequisite: None						
MRNT 2203	Marine Advanced Fuel Systems	4	2/2/0				
	This course covers the many types of fuel systems used on current 2- and 4-cycle higher-end marine products. Most training will be on horsepower ranges above 70hp in outboard and sterndrive engines. The main focus is on larger carbureted and fuel-injected systems along with fuel distribution and associated parts of those systems. Prerequisite: None Corequisite: None						
MRNT 2207	EFI and Advanced Electrical Systems	4	2/2/0				
	This course teaches the theory of operation and service of the EFI/DFI (electronic fuel injection/direct fuel injection) systems used on sterndrive and outboard applications. The student will also gain a strong grasp of high-tech ignition systems and propulsion control. Engine service will be outlined along with seasonal service, engine preparation and inspection. Students will also focus on diagnostic procedures to increase their troubleshooting skills with the aid of laptops and scan tools. Prerequisite: None Corequisite: None						
MRNT 2210	Engine Service	3	1/2/0				
	This is a capstone course that will emphasize the perfection of skills acquired by the student during previous training in the marine program. While some new material will be covered, a majority of this course will be a review of earlier information attained but to a much deeper level than previously experienced. The student will focus on troubleshooting, repair and servicing product based upon simulated customer requests and complaints. Prerequisite: None Corequisite: None						
MRNT 2212	Performance Testing	1	1/0/0				
	This course will provide instruction in boat performance improvement. Students will study propeller construction and applications. Performance analysis for dynamometer testing and test wheels will be emphasized. Students will conduct performance tests of varied marine products. Prerequisite: None Corequisite: None						
MRNT 2214	Marine Internship	3	0/0/3				
	This course is designed to provide the student with a purposeful occupational experience in the marine field. Each internship is an individualized experience. A training plan is created for each student in conjunction with the employer to provide experience related to the skills and knowledge acquired in the student's training program. Procedures necessary for new boat preparation, motor mounting, accessories, controls and instrumentation are practiced at the internship site. Additional skills from completed courses will be included in the training plan. Prerequisite: None Corequisite: None						
MRNT 2218	Adv Electrical Diagnosis	3	1/2/0				
	This course covers the highly technical electrical system used on higher horsepower marine products. Student will perform adjustments and normal service procedures on live units. System troubleshooting procedures will be stressed in this course. Prerequisite: None Corequisite: None						
MRNT 2221	Advanced Drive Systems and Testing	4	2/2/0				
	This course teaches the service procedures for advanced technology drive systems used in sternmounted vertical drives and outboards. Dual-propeller drive systems, high-speed designs and heavy-duty drive systems will be covered in this course. Complete disassembly, measurement, analysis, shimming and rebuilding procedures will be taught and performed. Prerequisite: None Corequisite: None						

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
MRNT 2222	Transom and Mid-Section Service	4	2/2/0	MUSC 1118	Rock and Pop Music	3	3/0/0
This course teaches the various methods used to couple the engine to the vertical drive on sterndrive applications. On outboards this course covers the mid-sections. Removal and replacement, failure analysis, measurements, disassembly and assembly procedures are performed.				Meets MnTC Goal Area 6. This survey of rock and pop music for all students provides a comprehensive history of pop music in the United States from its origins leading up to Elvis Presley to the Beatles to the current sounds of today. Emphasis is placed on the music itself through analysis and critique and covers all styles of rock and pop music such as pop, RandB, country western, soul, Motown, folk, folk rock, heavy metal, rap and hip hop and beyond.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
MRNT 2224	Marine Independent Study Lab	1	0/1/0	MUSC 1120	Introduction to Music Technology	3	3/0/0
This course is designed by the student and the instructor to provide an opportunity for the student to gain proficiency in selected competency areas and integrate the skills, knowledge and concepts gained in previous coursework. The student, with instructor approval, will prepare a Lab Activity Plan consistent with 30 hours of lab time. The plan should reflect the following course goals: student knowledge, prior coursework and student skill level. The student will complete a Daily Activity Lab worksheet that will represent work completed and prepare a Lab Activities Outcomes worksheet to determine student efforts and success at completing the Lab Activity Plan and the course.				Meets MnTC Goal Area 6. This course introduces the principal topics of music technology: acoustics, computers, MIDI, digital audio, and tools for music production and scoring. Hands-on experience will be used extensively to enhance understanding. This course will serve as a springboard to further study and exploration of hardware and software tools for music creation.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
MRNT 2231	Engine Performance Rebuild and Diagnostics	5	2/3/0	MUSC 1121	Basic Theory and Musicianship I	3	3/0/0
This course covers the disassembly, inspection of serviceability and the return of the equipment to the manufacturer's specifications or to a higher performance level. Included in this course is the analysis/diagnosis of the reason for failure and the prevention of future like failures. Students are welcome to bring in their own engines for this course.				Meets MnTC Goal Areas 2 and 6. This course provides basic approaches to the study of music in the Western notated tradition from the 17th century to the present day. It clarifies the fundamental musical elements of melody, harmony, rhythm and form, with emphasis in the tonic-dominant harmony. The course involves analysis and composition.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: MUSC1123			
MRNT 2238	Marine four-stroke outboard engine service	2	1/1/0	MUSC 1122	Basic Theory and Musicianship II	3	3/0/0
This course focuses on the tuning, maintenance, diagnosis and adjustment of four-stroke outboard engines. Training will include multiple brands of four-stroke outboards and their related components. This is an excellent course to build upon for complete understanding of the four-stroke outboard.				Meets MnTC Goal Areas 2 and 6. This course provides basic approaches to the study of music in the Western notated tradition as the organization and interaction of musical elements: melody, harmony, rhythm, form and color, with emphasis in the tonic-dominant harmony. Involves analysis and composition.			
Prerequisite: None				Prerequisite: MUSC1121			
Corequisite: None				Corequisite: MUSC1124			
Music				MUSC 1123			
<hr/>				Sight Singing and Ear Training I			
				1 1/0/0			
				Meets MnTC Goal Area 6F. This course is designed to improve skills in two areas: 1) to recognize and notate tonal melodies and rhythmic patterns, and 2) to reproduce at sight what is notated.			
				Prerequisite: None			
				Corequisite: MUSC1121			
MUSC 1111				MUSC 1124			
Fundamentals of Music				Sight Singing and Ear Training II			
3 3/0/0				1 1/0/0			
Meets MnTC Goal Area 6. This course focuses on the fundamentals of music and music notation with skills developed through listening, writing music and in-class performances. Assumes no previous training in music.				Meets MnTC Goal Area 6F. This course is designed to improve skills in two areas: 1) to recognize and notate tonal melodies and rhythmic patterns, and 2) to reproduce at sight what is notated.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: MUSC1122			
MUSC 1112				MUSC 1131			
Beginning Class Guitar				Civic Orchestra			
1 1/0/0				1 1/0/0			
Meets MnTC Goal Area 6F. Group guitar lessons are designed for students with no guitar experience. Includes emphasis on solo and ensemble playing as well as technique and theory.				The Civic Orchestra is a community orchestra that performs one concert each semester. The group meets one evening per week on a regularly scheduled basis. May be repeated for credit.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
MUSC 1113				MUSC 1135			
Begginging Class Voice				Voice Ensemble			
1 1/0/0				1 1/0/0			
Meets MnTC Goal Area 6F. This course provides class instruction in the healthy use of the voice in singing and speaking and practical application of vocal techniques. Recommended for beginning voice students, for non-signers who would like to learn to sing, for anyone who uses his/her voice but especially for music, theater, speech, speech therapy and elementary education majors. A maximum of two semesters may be taken for a credit.				Meets MnTC Goal Area 6F. The voice ensemble is an auditioned choir (from the M State Concert Choir) meeting two hours per week on a regularly scheduled basis. This group will study and prepare music from various musical periods and geographic regions and performs a minimum of one concert each semester. This group also participates in campus life venues as they arise, MCC Fine Arts Festival and occasional area tours. May be repeated for credit.			
Prerequisite: None				Prerequisite: MUSC1141			
Corequisite: None				Corequisite: None			
MUSC 1114				MUSC 1141			
Beginning Class Piano				Concert Choir			
2 2/0/0				1 1/0/0			
Meets MnTC Goal Area 6F. Group piano lessons are designed for students with no piano experience. The course includes an emphasis on solo and ensemble playing as well as improvisation, technique and theory.				Meets MnTC Goal Area 6F. The M State choir is a non-auditioned group that meets four times per week on a regularly scheduled basis. The group will study and prepare music from various musical periods and geographic regions and performs a minimum of one concert each semester. The group will also participate in campus life venues as they arise, the MCC Fine Arts Festival and occasional area tours.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
MUSC 1115				MUSC 1145			
America's Musical Heritage				Chamber Chorale			
3 3/0/0				1 1/0/0			
Meets MnTC Goal Areas 6 and 7. This survey course for the general college student introduces the elements, structural designs and historical styles of music. Emphasis is placed on expansion of listening skills, musical experiences, field research and cultural contexts of American music styles, including jazz, country, RandB, hip hop, rap, salsa, reggae and urban folk styles.				Meets MnTC Goal Area 6F. The M State Chamber Chorale is an auditioned community chorus that performs one concert of choral/orchestral music each semester. The group meets one evening per week on a regularly scheduled basis. May be repeated for credit.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
MUSC 1116				MUSC 1150			
World Music				History of Jazz			
3 3/0/0				3 3/0/0			
Meets MnTC Goal Areas 6 and 8. This survey course for the general college student introduces the elements, structural designs and historical styles of music. Emphasis is on expansion of listening skills and musical experiences with music of the Western notated tradition (classical music), Native America, Africa, India, Latin America, Asia and Eastern Europe.				Meets MnTC Goal Area 6. Through jazz music itself, students will learn about the styles within jazz and the prominent performers from the birth of the blues and ragtime through jazz-rock fusion to the new age, smooth, acid and hip-hop jazz styles of today. Jazz music is uniquely American in origin, and the effects that society and jazz music have had on each other will be explored.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
MUSC 1151	Ind Voice Lessons	1	1/0/0	MUSC 2232	Advanced Theory and Musicianship IV	3	3/0/0
Meets MnTC Goal Area 6F. Students interested in individual voice lessons should contact the music department so that instruction can be arranged. There is an additional fee. May be repeated for credit.				Meets MnTC Goal Areas 2 and 6. This course provides continued study and application of concepts from MUSC 1121 and 1122, including functional harmony, basic style and form analysis, chromatic harmony and an introduction to 20th century harmonic practices. Course includes comparisons of music from various stylistic periods and beginning studies in counterpoint.			
Prerequisite: None				Prerequisite: MUSC2231			
Corequisite: None				Corequisite: None			
MUSC 1160	Makings of a Rock Band	3	3/0/0	MUSC 2251	Individual Voice Lessons	2	2/0/0
Meets MnTC Goal Area 6. Students study and prepare music in the various styles of pop, rock, metal, blues and jazz. The group(s) will perform each semester. Special emphasis will be given to song writing, improvisation and performing. May be repeated for credit.				Meets MnTC Goal Area 6F. Individual voice lessons of one hour per week are open to advanced students with instructor's consent. The course is required of voice performance or voice pedagogy majors and includes required performances. Students interested in this course should contact the music department so that instruction may be arranged. There is an additional fee, and it may be repeated for credit.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
MUSC 1162	Jazz Ensemble	1	1/0/0	MUSC 2281	Private Instrumental Lessons	2	2/0/0
Meets MnTC Goal Area 6F. The Jazz Ensemble meets on a weekly basis, studies and prepares music in the various styles of jazz and performs one concert each semester. Special emphasis will be given to jazz improvisation as an integral part of this music. Enrollment is open to any instrumentalist at the discretion of the instructor. May be repeated for credit.				Meets MnTC Goal Areas 2 and 6. Individual woodwind, brass, percussion and guitar lessons of one hour per week are open to advanced students with instructor's consent. Course is required of instrumental performance or education majors and includes required performances. Students should contact the music department to arrange instruction. There is an additional fee. May be repeated for credit.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
MUSC 1164	Concert Band	1	1/0/0	MUSC 2285	Advanced Music Composition	2	2/0/0
Meets MnTC Goal Area 6F. The M State Concert Band is an instrumental group that meets three times per week on a regularly scheduled basis. The group will study and prepare music from a wide range of composers and styles and performs a minimum of one concert each semester. This ensemble will participate in campus life venues, festivals and occasional area tours. Small ensemble performances will also be included in this experience. May be repeated for credit.				Meets MnTC Goal 6. Individual advanced music composition and advanced theory discussion and lessons. Subject to instructor availability. Students should contact the music department to arrange instruction. Additional fee. May be repeated for credit.			
Prerequisite: None				Prerequisite: MUSC1185			
Corequisite: None				Corequisite: None			
MUSC 1168	Pep Band	1	1/0/0	MUSC 2291	Individual Piano Lessons	2	2/0/0
Meets MnTC Goal Area 6F. The M State Pep Band is an instrumental group that meets two times per week on a regularly scheduled basis. The group will study and prepare music from a wide range of composers and styles and performs a minimum of one concert each semester. This ensemble will participate in sporting events, campus life venues and other events. May be repeated for credit.				Meets MnTC Goal Area 6F. Individual piano lessons of one hour per week are open to advanced students with instructor's consent and required of piano performance or piano pedagogy majors. Course includes additional studio classes and required performances at the instructor's discretion. Interested students should contact the music department to arrange instruction. There is an additional fee. May be repeated for credit.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
MUSC 1181	Private Instrumental Lessons	1	1/0/0	Nursing			
Meets MnTC Goal Area 6F. Individual woodwind, brass, percussion, string and guitar lessons are offered, subject to instructor availability. Students should contact the music department to arrange instruction. There is an additional fee. May be repeated for credit.				<hr/>			
Prerequisite: None				NURS 1400			
Corequisite: None				Introduction to Professional Nursing			
MUSC 1185	Private Music Composition Lessons	1	1/0/0	2			
Meets MnTC Goal 6. Individual music composition and advanced theory discussion and lessons are offered, subject to instructor availability. Students should contact the music department to arrange instruction. There is an additional fee, and the course may be repeated for credit.				2/0/0			
Prerequisite: None				This course will introduce the student to the concepts of professional nursing to include the evolution of nursing practice, professional behavior, scope of practice, therapeutic communication, nursing process, evidence-based practice, medical terminology, care plan and documentation, physiologic adaptation health care delivery system, spirituality and death and dying.			
Corequisite: None				Prerequisite: CSC11101 AND MATH0090 OR CPTR1100 AND MATH0090 OR CPTR1104 AND MATH0090			
MUSC 1191	Ind Piano Lessons	1	1/0/0	Corequisite: None			
Meets MnTC Goal Area 6F. Students should contact the music department to arrange individual piano lessons. There is an additional fee. May be repeated for credit.				NURS 1406	Nursing Fundamentals I	3	2/1/0
Prerequisite: None				This course begins to prepare students to provide safe, therapeutic nursing care to diverse patient populations across the lifespan. Content includes aseptic techniques and infection control; holistic assessment; basic pharmacological principles and concepts; safe medication administration; pain management; complementary/alternative therapies; and perioperative nursing care. This course also integrates the content and skills necessary to promote and maintain health and wellness of the neurological, integumentary, sensory and musculoskeletal systems.			
Corequisite: None				Prerequisite: CSC11101 AND MATH0090 OR CPTR1100 AND MATH0090 OR HLTH1115			
MUSC 1192	Piano Pedagogy	2	2/0/0	Corequisite: None			
This course is a general survey of current piano methods, teaching repertoire and curriculum for piano teachers of beginning and intermediate students.				NURS 1415	Nursing Clinical I	2	0/2/0
Prerequisite: None				This course will promote the application of fundamental skills while providing holistic nursing care to a diverse group of patients. This course incorporates but is not limited to application of the nursing process, critical thinking, reporting and recording, physical assessment, medication administration as well as other fundamental nursing skills within the role of the professional nurse.			
Corequisite: None				Prerequisite: NURS1400 AND NURS1406			
MUSC 2223	Sight Singing and Ear Training III	1	1/0/0	Corequisite: None			
Meets MnTC Goal Area 6F. This course is designed to improve skills in two areas: 1) to recognize and notate tonal melodies and rhythmic patterns, and 2) to reproduce at sight what is notated. Must be taken concurrently with MUSC 2231.				NURS 1416	Nursing Fundamentals II	4	2/2/0
Prerequisite: MUSC1124				This course is designed to prepare students to apply teaching and learning principles in promotion, maintenance and restoration of health to diverse patient populations across the lifespan and integrates the content and skill necessary to promote and maintain health and wellness of the gastrointestinal, metabolic, immune, hematologic, cardiovascular, respiratory and urinary systems, as well as fluid and electrolyte balance.			
Corequisite: None				Prerequisite: NURS1400 AND NURS1406			
MUSC 2224	Sight Singing and Ear Training IV	1	1/0/0	Corequisite: None			
Meets MnTC Goal Area 6F. This course is designed to improve skills in two areas: 1) to recognize and notate tonal melodies and rhythmic patterns, and 2) to reproduce at sight what is notated. It must be taken concurrently with MUSC 2232.							
Prerequisite: MUSC2223							
Corequisite: None							
MUSC 2231	Advanced Theory and Musicianship III	3	3/0/0				
Meets MnTC Goal Areas 2 and 6. This course offers continued study and application of concepts from MUSC 1121 and 1122, including functional harmony, basic style and form analysis, chromatic harmony and an introduction to 20th century harmonic practices. Course includes comparisons of music from various stylistic periods and beginning studies in counterpoint.							
Prerequisite: MUSC1122 AND MUSC1124							
Corequisite: None							

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
NURS 1426	Reproductive Health	2	2/0/0				
<p>This course introduces the student to antepartal, intrapartal and postpartal nursing care for mother and infant. Holistic care and wellness promotion is emphasized. Student will plan nursing care for diverse clients across the lifespan to maintain and promote reproductive wellness to include normal sexuality, fertility and family planning. Student will plan nursing care to maintain and promote wellness for pediatric patients, to include normal growth and development.</p> <p>Prerequisite: NURS1400 AND NURS1406 Corequisite: None</p>							
NURS 2120	Professional Nursing Pharmacology	2	2/0/0				
<p>This course will provide the nursing student with specific considerations related to medication administration for drug classifications related to disease processes. Actions, therapeutic uses, adverse effects and interactions of drug categories will be discussed. Nursing considerations for categories of common drug classifications will be covered. Legal and ethical considerations for the professional nurse in regard to drug administration will be studied.</p> <p>Prerequisite: BIOL2232 AND NURS1406 OR NURS2410 Corequisite: None</p>							
NURS 2410	Role Transition	2	2/0/0				
<p>This course is designed to help the practical nursing student prepare for his/her transition to the Associate Degree Nursing role. Primary content includes role differentiation, physical assessment, nursing process care planning and teaching and learning.</p> <p>Prerequisite: MATH0090 Corequisite: None</p>							
NURS 2426	Reproductive Disorders	2	2/0/0				
<p>This course is designed to prepare students to plan care to meet basic human needs to assist patients/clients as they adapt to abnormal pregnancy, delivery, post-partum, reproductive conditions and/or newborn illnesses or abnormalities.</p> <p>Prerequisite: NURS1400 AND NURS1406 AND NURS1415 AND NURS1416 AND NURS1426 OR NURS2410 Corequisite: None</p>							
NURS 2437	Nursing Clinical II	4	0/4/0				
<p>The focus of this clinical course is for the student to assess, plan, implement and evaluate care for one to two patients/clients.</p> <p>Prerequisite: NURS2410 OR NURS1404 AND NURS1415 AND NURS1416 AND NURS1426 OR NURS1404 AND NURS1415 AND NURS1416 AND NURS1424 OR NURS1406 AND NURS1415 AND NURS1416 AND NURS1424 OR NURS1406 AND NURS1415 AND NURS1416 AND NURS1426 Corequisite: None</p>							
NURS 2438	Restorative Nursing I	4	4/0/0				
<p>This course is designed to prepare students to plan care to meet basic human needs to assist patients/clients across the lifespan as they adapt to neurological, sensory, musculoskeletal, gastrointestinal, metabolic and immunological dysfunction.</p> <p>Prerequisite: NURS2410 OR NURS1400 AND NURS1406 AND NURS1415 AND NURS1416 AND NURS1426 Corequisite: None</p>							
NURS 2447	Nursing Clinical III	4	0/4/0				
<p>The focus of this course is for the student to assess, plan, implement and evaluate care for groups of patients/clients, to act as a manager of care for a team of patients/clients, to delegate nursing actions and to supervise nursing personnel.</p> <p>Prerequisite: NURS2437 OR NURS2426 Corequisite: None</p>							
NURS 2448	Restorative Nursing II	3	3/0/0				
<p>This course is designed to prepare students to plan care to meet basic human needs to assist patients/clients across the life-span as they adapt to dysfunction of the integumentary, urinary, cardiac, hematologic and respiratory systems, as well as fluid/electrolyte abnormalities.</p> <p>Prerequisite: NURS1400 AND NURS1406 AND NURS1414 AND NURS1415 AND NURS1426 AND NURS2426 AND NURS2435 AND NURS2437 AND NURS2438 AND NURS2464 Corequisite: None</p>							
NURS 2455	Advanced Intravenous Therapy	1	0/1/0				
<p>This lab course will focus on advanced nursing skills performed by the professional nurse. Concepts will include advanced medication calculations and nursing care for patients throughout the life span which include peripheral catheters, central catheters, safe administration of blood products, chemotherapy and parenteral nutrition.</p> <p>Prerequisite: NURS1415 AND NURS2445 OR NURS2410 Corequisite: None</p>							
NURS 2464	Nursing Leadership	1	1/0/0				
<p>This course is designed to prepare students for their role as nurse leaders. Areas of focus include knowledge and skills necessary to make decisions regarding setting priorities, delegation, management, supervision, teaching, continuity of care, legal parameters of nursing practice and ethical issues in nursing.</p> <p>Prerequisite: None Corequisite: None</p>							
NURS 2466	Mental Health Nursing	2	2/0/0				
<p>This course introduces the student to concepts of mental health, mental illness and its theories along with psycho-pharmacology. Emphasis is placed on the holistic nursing care of patients and clients with psychiatric and substance abuse disorders.</p> <p>Prerequisite: None Corequisite: None</p>							
Paralegal							
PARA 1101	Introduction to Paralegal	3	3/0/0				
<p>This course provides an overview of the paralegal profession, the legal office and the legal system.</p> <p>Prerequisite: None Corequisite: None</p>							
PARA 1102	Research and Writing I	3	3/0/0				
<p>This course is a general introduction to recorded sources of law. It will examine where and how it can be found. The course will include discussion of the sources of law and practical writing exercises.</p> <p>Prerequisite: ENGL1101 OR ENGL0095 Corequisite: None</p>							
PARA 1104	Civil Law for Paralegals	3	3/0/0				
<p>This course prepares the paralegal for working with civil litigation and its associated processes. Included in the study are rules for civil procedure, court and non-court processes, applicable appellate procedures, mediation, arbitration and the role of the paralegal as it relates to civil law.</p> <p>Prerequisite: None Corequisite: None</p>							
PARA 1105	Criminal Law for Paralegals	3	3/0/0				
<p>This course prepares the paralegal for working with criminal defense or criminal prosecution. Included in the study is the organization of the criminal justice system, the nature of crimes, constitutional issues, applicable appellate procedures and the role of the paralegal as it relates to criminal law.</p> <p>Prerequisite: None Corequisite: None</p>							
PARA 1106	Wills, Trusts and Probate	3	3/0/0				
<p>This course includes a study of the procedures, documents and other techniques used in the planning for transfer of property after death and the administration of estates.</p> <p>Prerequisite: None Corequisite: None</p>							
PARA 1110	Torts for Paralegal	3	3/0/0				
<p>This course includes the study of the procedures, documents and techniques used in the practice of civil litigation, personal injury and family law. Topics for civil litigation include case intake, discovery, trial preparation, trial practice and post-judgment relief. Topics for family law include marriage, separation, divorce, annulment, adoption and custody.</p> <p>Prerequisite: None Corequisite: None</p>							
PARA 1112	Legal Ethics for the Paralegal	3	3/0/0				
<p>This course covers the attorney-client privilege as it relates to paralegals, unauthorized practice of law, regulation of paralegals, ethical codes and rules.</p> <p>Prerequisite: None Corequisite: None</p>							
PARA 2202	Research and Writing II	3	3/0/0				
<p>This course is a continuation of Research and Writing I. Students will develop skills in identifying, analyzing and researching legal issues. Writing exercises will be more complex, including preparation of legal memoranda.</p> <p>Prerequisite: PARA1102 Corequisite: None</p>							
PARA 2204	Real Property	3	3/0/0				
<p>This course includes the law dealing with interest in, ownership of and title to real estate. Emphasis will be placed on legal descriptions, recording systems, procedures and documents for real property transfer and zoning of real property.</p> <p>Prerequisite: None Corequisite: None</p>							
PARA 2210	Advanced Paralegal Practices	3	3/0/0				
<p>This course provides in-depth study of law using statute and case research. Students will examine legal issues in different areas of law and participate in discussion of these topics. Topics will range from law office structure and finances to procedural law and interviewing techniques. Instructor may include legal topics that are hot at the time of course offering.</p> <p>Prerequisite: None Corequisite: None</p>							
PARA 2212	Family Law	3	3/0/0				
<p>This course will explore and research family law concepts of marriage, divorce, annulment, child custody, property settlements and adoption.</p> <p>Prerequisite: None Corequisite: None</p>							

Personal Development

PDEV 1101 Campus Life- Active Living 3 3/0/0

This course is designed to help M State students strengthen and develop critical and creative thinking skills associated with a college academic experience, make social adaptations to a new environment and make connections with faculty, staff and resource offices. Topics include an understanding of individual risks and barriers, time management and personal responsibility. This class is also designed to develop student awareness of how to live a healthy holistic lifestyle. Students will be able to deepen their understanding with regards to social, emotional, intellectual, vocational and physical elements of self-development. Students will also participate in physical activities that promote a healthy, drug-free on-campus environment. Additional topics to be discussed may include but are not limited to goal setting, stress management, and drug and alcohol use.

Prerequisite: None
Corequisite: None

PDEV 1102 Contemporary Career Search 1 0/1/0

This course covers such contemporary career topics as employer expectations, job market trends and networking, and various aspects of the employment search process including legal and ethical issues. To apply their knowledge of the employment process, students develop resumes, letters and applications, as well as identify and use effective interviewing techniques. This course emphasizes a comprehensive knowledge of career processes that will serve students throughout their working lives.

Prerequisite: None
Corequisite: None

Physical Education

PE 1100 Introduction to Curling 2 1/1/0

This course will focus on the introduction to the fundamentals of play, rules, scoring and equipment of the sport.

Prerequisite: None
Corequisite: None

PE 1109 Wellness Skills 2 1/1/0

This course is designed to introduce wellness concepts and provide the knowledge and skills necessary to develop a healthy physical, mental and social lifestyle. Students will actively seek to develop and maintain a balance of these elements through increased knowledge of appropriate activities including positive and responsible belief systems and choices. Topics may include anatomy, physiology, kinesiology, emotional/mental health, nutrition, fitness, weight management, drug use/abuse, planning and commitment to change. Course includes physical activity participation by students.

Prerequisite: None
Corequisite: None

PE 1130 Beginning Golf 1 0/1/0

The purpose of this course is to cover the fundamentals of golf necessary to play at the beginning recreational level. Topics of discussion include rules, etiquette, equipment and terminology. Students will be taught in the classroom and on the golf course. An additional fee will be assessed.

Prerequisite: None
Corequisite: None

PE 1141 Introduction to Strength Training 1 0/1/0

This course is an introduction to weight lifting, weight room safety, periodization, energy systems, nervous system, muscular system and how this information is used to formulate a weight training program as a means to achieve muscular strength, muscular endurance, tone or size. This class may be repeated once for credit.

Prerequisite: None
Corequisite: None

PE 1190 Varsity Football 1 0/1/0

The course presents students with the opportunity to participate in the sport of football at the college-level. The student will have opportunities in a variety of situations to learn about and develop their self-image, characteristics of high achievement and physical skills in a competitive environment. May be repeated once for credit.

Prerequisite: Permission of head coach
Corequisite: None

PE 1192 Varsity Basketball 1 0/1/0

The course presents students with numerous opportunities in a variety of situations to learn about and develop their self-image, characteristics of high achievement and physical skills in a competitive basketball environment. This class may be repeated once for credit.

Prerequisite: None
Corequisite: None

PE 1193 Varsity Baseball 1 0/1/0

This course presents students with numerous opportunities in a variety of situations to learn and develop the characteristics of high achievement and physical skills in a competitive intercollegiate baseball setting.

Prerequisite: Permission of head coach
Corequisite: None

PE 1194 Varsity Golf 1 0/1/0

This course presents students with numerous opportunities in a variety of situations to learn about and develop their self-image, characteristics of high achievement and physical skills in a competitive golf environment. This class may be repeated once for credit.

Prerequisite: None
Corequisite: None

PE 1197 Varsity Volleyball 1 0/1/0

This course presents students with numerous opportunities in a variety of situations to learn and develop physical skills in a competitive intercollegiate volleyball setting.

Prerequisite: Permission of head coach
Corequisite: None

PE 1199 Varsity Softball 1 0/1/0

This course is for students who want to compete in varsity softball at the collegiate level. The course presents students with numerous opportunities in a variety of situations to learn and develop characteristics of high achievement and physical skills in a competitive environment.

Prerequisite: Permission of head coach
Corequisite: None

PE 2240 Athletic Injury, Care and Prevention 2 2/0/0

This course is offered to coaches interested in sports medicine and students interested in coaching and/or athletic training. It is designed to enhance the student's knowledge and performance in sports medicine. The course will cover athletic injury prevention measures, injury care and management, basic injury assessment, nutrition and specific athletic injuries and related problems.

Prerequisite: None
Corequisite: None

PE 2241 Principles of Coaching 3 3/0/0

This course is designed to introduce students to athletic coaching philosophies, basic coaching concepts in team and individual sports and theories involved in coaching. Emphasis will be on legal issues surrounding coaching, developing coaching philosophies, exploring diversity in coaching, and rules and regulations associated with coaching at different levels.

Prerequisite: None
Corequisite: None

PE 2254 Sports in Society 3 3/0/0

This course involves a discussion of the impact of sports in society and the values we place on sports. The course will explore the values, virtues, consequences, rights and responsibilities of sports in our culture. The course is designed to improve the understanding of legal, racial, academic and moral issues of sports and athletics.

Prerequisite: None
Corequisite: None

PE 2255 Aquatic Outdoor Recreation 2 1/1/0

During this course, four to six days are spent on a wilderness field trip. Major topics covered are camping and camping equipment, camp food and nutrition, canoeing, fishing, nature study and woodlore, safety, map and compass, and outdoor philosophy.

Prerequisite: None
Corequisite: None

Philosophy

PHIL 1130 Critical Thinking 3 3/0/0

Meets MnTC Goal Area 2. This course focuses on studying the structure of argument, the detection of common argument fallacies, the creation of cogent arguments and the acquisition of skills needed to translate clearly constructed arguments into argumentative essays on contemporary topics. Students will study inductive and deductive styles of thinking, valid and invalid argument forms, the differences between facts and values, judgment and belief, and the importance linguistic definition plays in constructing strong arguments.

Prerequisite: None
Corequisite: None

PHIL 1200 Applied and Professional Ethics 3 3/0/0

Meets MnTC Goal Areas 2 and 9. In this course students will explore ethical issues that arise in professional settings including business, medical and technical settings. The course will also look at the philosophical underpinnings of current professional policies and how philosophy can offer insights that can enhance and deepen such policies.

Prerequisite: None
Corequisite: None

PHIL 1201 Ethics 3 3/0/0

Meets MnTC Goal Areas 2, 6 and 9. This course is an introduction to the topic of ethics. In this course, the following questions are examined: What is ethics? How do we make ethical decisions? Are things that are legally right necessarily right? Should we consider our own interests when making ethical decisions? Are things ethically right simply because God says they are right? If our culture says something is ethically right, does that mean it is ethically right? The course also examines numerous topical ethical issues such as racism, terrorism and censorship.

Prerequisite: None
Corequisite: None

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
PHIL 1211	Intro to Philosophy	3	3/0/0	PHIL 2300	Political and Social Philosophy	3	3/0/0
Meets MnTC Goal Areas 2 and 6. This course is an introduction to philosophy. In this course, the following questions are examined: Does God exist? Does God not exist? Can evil and God both exist? Do humans have a free will? Do humans have souls? Is there life after death? What can we know? Why do some people believe that knowing anything is possible? Prerequisite: None Corequisite: None				Meets MnTC Goal Areas 5 and 7. This course addresses issues with regards to a critical examination of some philosophical problems concerning the nature and evaluation of social and political organizations over the course of human history. The course will explore a detailed philosophical analysis of the writings (both classical and contemporary) about social and political concepts such as freedom, democracy, socialism, communism, fascism and anarchy with a particular interest in the evolution of these concepts. Questions concerning the nature, justification and limits of political power will be explored. In addition to this, theories of distributive justice, culpability, causality and responsibility will be examined in connection with the study of important political and social positions. Prerequisite: None Corequisite: None			
PHIL 2200	Philosophy of Communications	3	3/0/0	Pharmacy Technology			
Meets MnTC Goal Areas 1 and 2. This course will be a survey of several 20th century philosophical movements, such as logical positivism, ordinary language philosophy, hermeneutics and semiotics. Representative philosophers in this area agree that careful attention to language is one of the keys to the resolution of philosophical problems. Students will be introduced to theories of meaning and truth and the structure of language. This course will explore the relation of language to thought and the world; semantics and syntax; descriptions and reference; and structuralism and the possibility of objective knowledge. The works of representative thinkers in the analytic tradition could include Frege, Moore, Russell and Wittgenstein, while representatives from the continental traditions could include the likes of Ferdinand de Saussure, Umberto Eco, Hans-Georg Gadamer and Roland Barthes. Prerequisite: ENGL1101 Corequisite: None				PHRM 1001 Fundamental Concepts of Pharmacy 3 3/0/0 This course introduces the student to the organization and function of the institutional, ambulatory and industrial pharmacy. Emphasis is placed upon the duties and responsibilities of the pharmacy technician and the calculations required to accurately prepare patient medications for distribution. Prerequisite: MATH0052 Corequisite: None			
PHIL 2220	Environmental Ethics	3	3/0/0	PHRM 2001 Pharmacy Prin / Prac I 4 2/2/0 This course covers drug names, classifications and mechanisms of action, the use of computers in pharmacy and their practical applications. The student will be introduced to hospital and retail dispensing techniques as well as basic customer service. Prerequisite: PHRM1001 Corequisite: PHRM1001			
Meets MnTC Goal Areas 9 and 10. This course examines the basic positions and concepts within the field of environmental philosophy. A primary emphasis will be placed upon understanding our moral obligations toward the natural environment. Representative course topics may include the following: What is nature? Do humans have direct duties toward the natural world? What is deep ecology? Should we conserve or preserve our natural environment? Do intrinsic values exist in nature? Is a land ethic possible? What is ecofeminism? Prerequisite: None Corequisite: None				PHRM 2002 Pharmacy Prin / Prac II 5 2/3/0 This course covers intravenous drug admixture, TPN compounding, critical care intravenous admixture and unit dose medication dispensing to nursing units. Emphasis is placed upon medication storage and stability, diabetic supplies, and chemotherapy storage and admixture. Prerequisite: PHRM1001 AND PHRM2001 Corequisite: None			
PHIL 2224	Philosophy of Religion	3	3/0/0	PHRM 2004 Drug Properties / Distribution 3 2/1/0 This course provides the student with basic physical and chemical drug properties and the functions related to purchasing and inventory control in the pharmacy. Emphasis is placed upon the theory, stability and safety of drug products, and the procedures required to develop and maintain inventory control. Prerequisite: PHRM1001 AND PHRM2001 Corequisite: None			
Meets MnTC Goal Areas 2, 6 and 8. This course explores proposed answers to the question, What role can religion play when considering questions about the meaning of life? The course will consider the traditional arguments for the existence of God as expressed by Western thinkers as well as non-Western efforts to reconcile order and disorder in the universe. The course will focus on the relationship between faith and reason and will reflect on the nature of religious experience and how diverse cultures express various ways of knowing about the divine. Prerequisite: None Corequisite: None				PHRM 2010 Experiential / Hospital 3 0/0/3 This supervised instructional experience in the clinical setting introduces the student to tasks performed by the pharmacy technologist. Prerequisite: PHRM2002 AND PHRM2004 Corequisite: None			
PHIL 2225	Bioethics	3	3/0/0	PHRM 2012 Experiential / Retail 3 0/0/3 This supervised instructional experience in the clinical setting introduces the student to tasks performed by the pharmacy technologist. Prerequisite: PHRM2002 AND PHRM2004 Corequisite: None			
Meets MnTC Goal Areas 2 and 9. This course explores ethical issues that arise from advancements in science and technology (e.g. genetic engineering, cloning, patent rights) as well as look at the philosophical underpinnings of current scientific research and how philosophy is different from science and the law. Prerequisite: None Corequisite: None				Physics			
PHIL 2230	Existentialism	3	3/0/0	PHYS 1105 Fundamental Concepts in Physics 3 3/0/0 Meets MnTC Goal Area 3. This is a demonstration-based course that provides an introduction to selected topics in classical and modern physics. Topics will include measurement and significant digits, graphing, dimensional analysis, mechanics of motion, vibrations, waves, sound, electricity and magnetism, light and optics, atomic physics and atomic spectra, lasers and optical fibers, nuclear physics and radiation. The course uses active learning techniques with lab-like experiences. It uses many demonstrations and instructor-guided small group problem-solving activities. Simple algebra is used to ensure that students grasp the course concepts. This course is intended for all students but especially designed for non-science majors who want an appreciation of and a limited working knowledge in some major areas of physics. Prerequisite: MATH0090 AND Math 0090 or assessed into a higher math Corequisite: None			
Meets MnTC Goal Areas 2 and 6. This course provides an introduction to existential philosophy, explorations of key existentialist ideas and discussions of how existential thought might be applied to such themes as freedom, existence, despair, authenticity, alienation and death. Existentialism, as the name implies, emphasizes existence (that one is) over essence (what one is). The most famous definition of existentialism was articulated by Jean-Paul Sartre, who called it the theory that existence precedes essence. In other words, you are what you make yourself to be - you create your essence as you go along. The course will look at influential existentialists from Kierkegaard to Sartre and Camus. Prerequisite: None Corequisite: None				PHYS 1106 Fund of Physics - Mechanics 3 2/1/0 Meets MnTC Goal Area 3. This course is an introduction to selected topics in classical physics. The topics covered include measurement and significant digits, dimensional analysis, vectors, motion, force, work and energy, momentum and rotational dynamics. An introductory-level college algebra is used frequently to ensure that students grasp the			
PHIL 2235	Symbolic Logic	3	3/0/0				
Meets MnTC Goal Area 4. This course is designed as an introduction to symbolic logic, as well as the nature of language and multiple methodologies for proving arguments. This course will focus on formal systems of logic and deductive validity and will include proofs, methods and translation in sentential and predicate logic. The course will also have an introduction to meta-theory and the extensions of logic and will explore inductive logic. Prerequisite: None Corequisite: None							
PHIL 2240	Non-Western Philosophical Perspectives	3	3/0/0				
Meets MnTC Goal Areas 6 and 8. This course explores the standard introduction to philosophy-type questions (e.g. does God exist; are humans completely physical beings; can we have knowledge; how can we differentiate between right and wrong; do we have free will; etc.) mainly from the standpoint of non-Western thinkers. We will consider how such questions have been pursued and answered in historically non-dominant cultures (i.e. Asian, Africana, Latin American and indigenous) and compare and contrast our findings with the dominant Western philosophies. After taking this course, students should be better able to place contemporary philosophical issues in a global context and be better able to interact with and understand members of a diverse society. Prerequisite: None Corequisite: None							

principles and retain a working knowledge of them. This course may be taken separately from PHYS 1105 and is intended for all students but especially designed for non-science majors or those who need an introductory-level working knowledge of physics.

Prerequisite: MATH1020

Corequisite: None

PHYS 1107 Physics of Music 3 3/0/0

Meets MnTC Goal Areas 3 and 6. This course is an introduction to physics as it applies to the art and science of music. The course will be a mixture of lecture and lab-like experiences with both elements meeting concurrently. Experiments will be designed with musicians and non-scientists in mind and special care will be taken in the writing of lab reports. Topics include analysis of frequency, overtones, intensity, resonance and beats. Students will design and perform on musical instruments based on these principles.

Prerequisite: None

Corequisite: None

PHYS 1120 Introduction to Astronomy 3 3/0/0

Meets MnTC Goal Area 3. This course includes a description of the universe covering our current understanding of the solar system, lunar and stellar study, interstellar gases and galaxies. It focuses on the development of modern astronomy and its techniques, astronomical coordinates, the use of astronomical instruments and recent discoveries in astronomy and cosmology. This non-lab course with lab-like experiences is designed for science and non-science majors.

Prerequisite: MATH0090 AND Math 0090 or assessed into a higher math

Corequisite: None

PHYS 1401 College Physics I 4 3/1/0

Meets MnTC Goal Area 3. This course gives a theoretical and practical introduction to physics, including kinetics in one and two dimensions, force and dynamics, bodies in equilibrium, work and energy, linear momentum, rotational motion, fluids, waves and sound. Lab equipment is used to illustrate these concepts. A mastery of college algebra and some trigonometry is essential for success in this course. The ability to use computers for creating reports and spreadsheets is needed for lab work. Physics 1401 is intended for all students but especially designed for students majoring in forestry, biological sciences, dentistry, pharmacy, veterinary medicine, physical therapy and other fields related to medicine. Lab is required.

Prerequisite: MATH1115

Corequisite: None

PHYS 1402 College Physics II 4 3/1/0

Meets MnTC Goal Area 3. This course is open to all students and gives a theoretical and practical introduction to physics. It is a continuation of Physics 1401, College Physics I. However, it may be taken without having taken Physics 1401. Topics include thermodynamics, selected topics in electricity and magnetism, DC and AC circuit theory, light and electromagnetic radiation, atomic physics, spectroscopy, lasers and photonics, and nuclear physics. Lab equipment is used to illustrate these concepts. A mastery of college algebra and some trigonometry is essential for success in this course. Lab is required. Physics 1402 is intended for all students but especially designed for students majoring in forestry, biological sciences, dentistry, pharmacy, veterinary medicine, physical therapy and other fields related to medicine.

Prerequisite: MATH1115

Corequisite: None

PHYS 1411 University Physics I 5 3/2/0

Meets MnTC Goal Area 3. This course, which is open to all students but especially suited for engineering students, gives a theoretical and practical introduction to physics for math, science and engineering majors. It is a calculus-based course. Topics include kinetics of one and two dimensions, force and dynamics, bodies in equilibrium, work and energy, linear momentum, rotational motion, fluids, waves and sound. Lab equipment is used to illustrate these concepts. A mastery of college algebra as well as knowledge of calculus and trigonometry is essential for success in this course. The ability to use computers for creating reports and spreadsheets is needed for lab work. Lab is required.

Prerequisite: MATH1134

Corequisite: None

PHYS 1412 University Physics II 5 3/2/0

Meets MnTC Goal Area 3. This course is open to all students but is especially suited for engineering students. The course is a continuation of Physics 1411, University Physics I. However, it may be taken without having taken Physics 1411. Topics include thermodynamics, selected topics in electricity and magnetism, DC and AC circuit theory, optics, light and electromagnetic radiation, atomic physics, spectroscopy, lasers, photonics and nuclear physics. Lab equipment is used to illustrate these concepts. A mastery of college algebra as well as knowledge of calculus and trigonometry is essential for success in this course. Lab is required.

Prerequisite: MATH1134

Corequisite: None

PHYS 2970 Internship Experience 1-3 None

This course is designed to provide the student with a monitored meaningful work experience related to his or her field of interest. This experience will increase employability and enhance life skills. Completion of this course requires a written report and an evaluation from the student's supervisor. Each internship is an individualized experience, therefore this course is offered with variable credits. The student may choose from 1, 2 or 3 credits as pre-arranged with the internship site supervisor and corresponding faculty. Each credit will require a minimum of 45 hours of on-the-job learning. This course will be graded Pass/Fail only.

Prerequisite: Instructor approval

Corequisite: None

Plumbing Technology

PLBG 1102 Piping Trades and Job Safety 2 2/0/0

This course introduces the student to the plumbing profession. Topics will include history, safety, plumbing tools, plumbing terminology, plumbing system components, basic plumbing principles and fundamentals of rigging.

Prerequisite: None

Corequisite: None

PLBG 1104 Building Sewers and Drainage Systems 3 1/2/0

This course will introduce the student to basic proper techniques and procedures for the installation of plumbing systems. Topics will include drain, waste and vent systems, potable water systems, gas piping systems and system testing.

Prerequisite: None

Corequisite: None

PLBG 1106 Piping Grades, Elevations and Calculations 3 2/1/0

This course covers the application of mathematics to plumbing calculations in applying code regulations pertaining to proper installation procedures of horizontal drainage piping. The student will use formulas common to the piping industry.

Prerequisite: None

Corequisite: None

PLBG 1108 Plumbing/Piping Drawings 2 1/1/0

This course provides the student with a technical understanding and skills in blueprint reading needed by plumbers. Topics will include floor plans, elevation plans, detail drawings and interpretation of isometric drawings.

Prerequisite: None

Corequisite: None

PLBG 1110 Copper Pipe Procedures 2 1/1/0

This course provides the student with the technical knowledge and skills for completing copper piping procedures. Topics include safety, appropriate usage, sizes and weights of pipe tubing, fittings including flared and compression types, soldering and brazing techniques for copper pipe work.

Prerequisite: None

Corequisite: None

PLBG 1112 Plastic Pipe Procedures 2 1/1/0

This course provides the student with an understanding and the skills for completing plastic piping procedures. Topics include safety; joining drainage, waste and vent water distribution piping; and applicable state plumbing code for plastic piping procedures.

Prerequisite: None

Corequisite: None

PLBG 1114 Steel Pipe Procedures 2 1/1/0

This course provides the student with an understanding and the skills for completing steel piping procedures. Topics include appropriate usage, fittings, safety, tools, equipment and skill development in cutting, threading and fabricating steel piping systems.

Prerequisite: None

Corequisite: None

PLBG 1116 Plumbing Systems 3 2/1/0

This course will provide the student with continued studies in plumbing systems. Topics will include drain, waste and vent systems, potable water systems, gas piping systems, system testing and advanced plumbing principles.

Prerequisite: None

Corequisite: None

PLBG 1120 Plumbing Installation 3 0/3/0

This course will provide the student with continued studies of proper techniques and procedures for the installation of plumbing systems. Topics will include drain, waste and vent systems, potable water systems, faucets, fixtures, water heaters and testing systems.

Prerequisite: None

Corequisite: None

PLBG 1122 Plumbing Repair and Service Work 2 1/1/0

This course provides the student with practical experiences in repair, maintenance and servicing of plumbing systems common to a variety of settings.

Prerequisite: None

Corequisite: None

PLBG 1124 Plumbing Field Internship 3 0/0/3

This course will provide the student with the opportunity to utilize the skills, techniques and procedures developed in previous coursework in an actual work environment. The student will complete industry training under the supervision of an approved employer.

Prerequisite: None

Corequisite: None

PLBG 1126 Oil Burner Service Work 3 1/2/0

This course covers the servicing of the fuel pump, testing and servicing the fuel supply, the oil burner nozzle, basic oil burner controls, combustion testing and adjusting the oil burner for maximum efficiency.

Prerequisite: None

Corequisite: None

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
PLBG 1128	Heating Systems Design and Installation	3	2/1/0				
This course provides the student with a technical understanding of heating system design and installation. Topics include heat loss calculations, heating system selection and design, installation techniques, testing procedures and operation of heating systems.							
Prerequisite: None							
Corequisite: None							
PLBG 1130	Hydronic Heating	3	1/2/0				
This course provides the student with a technical understanding of hydronic heating system design. Topics include heat loss calculations and heating systems selection and design.							
Prerequisite: None							
Corequisite: None							
PLBG 1132	Water Treatment/Conditioning	3	2/1/0				
In this course the student will learn water softener service, water treatment in boilers, pH balance, testing of sanitary water and gray water hazards.							
Prerequisite: None							
Corequisite: None							
PLBG 1134	Advanced Plumbing Blueprints	3	1/2/0				
This course will provide the student with continued studies in blueprint reading. Topics will include specifications, fixture drawings, shop drawings and advanced isometrics.							
Prerequisite: None							
Corequisite: None							
PLBG 1136	Basic Plumbing Code	2	2/0/0				
This course will introduce the student to model plumbing code rules and regulations. Topics will include the Minnesota State Plumbing Code and Uniform Plumbing Code.							
Prerequisite: None							
Corequisite: None							
PLBG 1138	Advanced Plumbing Code	3	3/0/0				
This course will provide the student with continued studies of model plumbing code rules and regulations. Topics will include the Minnesota State Plumbing Code and Uniform Plumbing Code.							
Prerequisite: None							
Corequisite: None							
PLBG 1140	Plumbing Service Learning Project	3	0/0/3				
This course will provide the student with the opportunity to utilize the skills, techniques and procedures developed in previous coursework in a designated community service learning project. The student will perform community service under the supervision of an approved community partner.							
Prerequisite: None							
Corequisite: None							
Practical Nursing							
PNSG 1200	Concepts of Nursing	2	2/0/0				
This course explores the role of the practical nurse. The core values of integrity, holism, caring, patient-centeredness, diversity, excellence and ethics are introduced. Curriculum threads including the nursing process, critical thinking, communication, documentation, teamwork, self-awareness and evidence-based practice are integrated throughout the course.							
Prerequisite: Acceptance into the practical nursing program							
Corequisite: None							
PNSG 1205	Nursing Pharmacology	3	3/0/0				
This course will introduce the foundations of basic pharmacology within the scope of practical nursing. Curriculum threads including drug classifications, therapeutic effects, side effects, interactions and dosage calculations are integrated throughout the course.							
Prerequisite: None							
Corequisite: PNSG1207 AND BIOL2262 AND BIOL2263							
PNSG 1207	Health Promotion I	5	3/2/0				
This course will introduce the foundations of nursing care for diverse populations. Curriculum threads including nursing principles and application of safety, asepsis and infection control, data collection, medication administration, perioerative care, patient comfort, fluids and electrolytes, nutrition, laboratory values and diagnostics, and the integumentary system are integrated throughout the course.							
Prerequisite: None							
Corequisite: PNSG1200 AND BIOL2260 AND BIOL2261							
PNSG 1209	Maternal Child Health	3	3/0/0				
This course focuses on the nursing care of the maternal-child patient within the scope of the practical nurse. Curriculum threads including the female reproductive system and sexual health, peripartum nursing care, nursing care related to the newborn, infant, child and adolescent, and nursing care of the gynecological patient are integrated throughout the course.							
Prerequisite: PSYC2222 AND PNSG1200 AND BIOL2262 AND BIOL2263							
Corequisite: None							
PNSG 1216	Practical Nursing Clinical I	5	0/5/0				
This course introduces the student to patient-centered care within the scope of practical nursing. The student begins to demonstrate caring, integrity and holism with actual patients. The student applies principles of critical thinking, the nursing process and ethics while providing care to diverse patients. Curriculum threads of data collection, medication administration, documentation, safety and communication are integrated throughout this nursing course.							
Prerequisite: American Heart Association Health Care Provider CPR AND PNSG1200 AND PNSG1207							
Corequisite: PNSG1209 AND PNSG1217 AND PNSG1205							
PNSG 1217	Health Promotion II	4	2/2/0				
The course will expand on the foundations of health promotion, maintenance and restoration to a diverse population. Curriculum threads include pathophysiology, data collection, pharmacology and nursing care related to the musculoskeletal, respiratory, urinary, male reproductive and gastrointestinal systems.							
Prerequisite: PNSG1207							
Corequisite: BIOL2262 AND BIOL2263							
PNSG 1221	Psychosocial Nursing	2	2/0/0				
This course focuses on nursing care that assists with promotion and support of the emotional, mental and social well-being of diverse clients within the scope of the practical nurse. Curriculum threads of coping mechanisms, stress and crisis management, therapeutic communication, mental health and illness, grief and loss, end-of-life concepts and cognitive challenges are integrated throughout the course.							
Prerequisite: PSYC2222							
Corequisite: PNSG1200							
PNSG 1223	Health Promotion III	4	4/0/0				
This course expands on the foundations of health promotion, maintenance and restoration of diverse populations. The curriculum threads include pathophysiology, data collection, pharmacology and nursing care related to the cardiovascular, immune, hematological, neurological, sensory and endocrine systems.							
Prerequisite: PNSG1207 AND PNSG1216							
Corequisite: None							
PNSG 1226	Practical Nursing Clinical II	4	0/4/0				
This course builds on patient-centered caring within the scope of practical nursing. The student will build on previously learned core values while integrating critical thinking, safety, quality and evidence-based practice to prioritize care of two patients. Curriculum threads including data collection, dosage calculations, pharmacological concepts, reinforcing patient teaching and documentation are integrated throughout the course.							
Prerequisite: PNSG1209 AND PNSG1216 AND PNSG1217							
Corequisite: None							
PNSG 1232	Principles of Intravenous Therapy	1	0/1/0				
This course builds on basic intravenous theory and skills. Curriculum threads include fluid and electrolytes, acid/base balance, intravenous fluids and equipment, venous access, maintenance and management of complications. The student will demonstrate initiating and maintaining primary and secondary fluids, intravenous push medications, central line dressing changes, central line cap changes, dosage calculations and successful venipuncture. The role of the practical nurse in intravenous therapy is integrated throughout the course.							
Prerequisite: PNSG1216							
Corequisite: Current Practical Nursing Licensure							
PNSG 1234	Nursing Roles	1	1/0/0				
This course is an overview of practical nursing within health care. Curriculum threads including nursing history, health care delivery systems, health care trends, legal aspects, ethical issues and role transition are integrated throughout the course.							
Prerequisite: PNSG1216							
Corequisite: None							
PNSG 1236	Practical Nursing Practicum	2	0/2/0				
This capstone course integrates the knowledge and concepts learned throughout the practical nursing curriculum. The student builds professional relationships by participating within the multidisciplinary health care team with minimal supervision. The student utilizes resources and critical thinking to solve problems and deliver nursing care to multiple patients with excellence.							
Prerequisite: PNSG1217 AND PNSG1214 AND PNSG1220 AND PNSG1223 AND PNSG1226 AND PNSG1232 AND PNSG1234							
Corequisite: None							
Political Science							
POLS 1120	American National Government	3	3/0/0				
Meets MnTC Goal Areas 5 and 9. This course provides an analysis of the organization, institutions and functions of the United States government.							
Prerequisite: None							
Corequisite: None							
POLS 1130	State and Local Government	3	3/0/0				
Meets MnTC Goal Areas 5 and 9. This course provides an analysis of the organization, procedure and functions of state and local governments and their relationship with the national government.							
Prerequisite: None							
Corequisite: None							

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
POLS 2204	Comparative Government	3	3/0/0	PSYC 2224	Social Psychology	3	3/0/0
Meets MnTC Goal Areas 5 and 8. This course provides an introduction to the various systems of government used around the world. Students will compare the processes and institutions of both industrialized and underdeveloped nations and explore how cultures and histories have affected the development of those political systems. Prerequisite: None Corequisite: None				Meets MnTC Goal Areas 5 and 7. This course includes theories and research involving the reaction of individuals to others and the influence of others on individuals. Topics include social thinking, social influence and social relations. Prerequisite: None Corequisite: None			
POLS 2206	Global Politics	3	3/0/0	PSYC 2226	Behavior and Environmental Management	3	3/0/0
Meets MnTC Goal Areas 5 and 8. This course is an introduction to the field of global and international politics, with an emphasis on the history, structure and processes of global relations. Students will study the role of state and non-state actors such as nations, international conflict, war, global economic relations and international organizations. The course will also address current global challenges such as terrorism, arms control, the use of foreign aid in the developing world and/or other pressing issues facing the international political system. Prerequisite: None Corequisite: None				Meets MnTC Goal Areas 2, 5 and 10. This course is an exploration of the scientific study of human behavior and its interrelatedness with the environment. This course describes and explains the acquisition, maintenance and change of behavior with an emphasis on human application within a variety of environmental contexts. This course uses critical thinking on the principles and procedures used to understand and change the environment and human behavior. Prerequisite: None Corequisite: None			
POLS 2220	Introduction to Constitutional Theory	3	3/0/0	PSYC 2228	Cross-Cultural Psychology	3	3/0/0
Meets MnTC Goal Areas 2, 5 and 9. This course focuses on some of the significant constitutional issues that confront policy makers and citizens of the United States. The framework for study is the United States Constitution. Topics covered include governmental powers, separation of powers, civil liberties, civil rights and federalism. Prerequisite: None Corequisite: None				Meets MnTC Goal Area 7. This course is designed to cover the issues and themes current in the field of cross-cultural psychology. Examples of such issues include cultural variation along the lines of collectivism and individualism; psychological principles that might be universal compared to those that are culturally specific; and how content and context affect psychological functioning within, as well as between cultures. A range of substantive areas within psychology will be examined and compared across multiple cultures, including social, developmental, organizational, cognitive and health psychology. Prerequisite: None Corequisite: None			
POLS 2310	Ideas and Ideologies	3	3/0/0	PSYC 2230	Personality Psychology	3	3/0/0
Meets MnTC Goal Areas 7 and 9. This course provides a survey of the most significant ideological systems in Western politics, with an emphasis on the most influential ideas of the 20th and 21st centuries. Modern political movements such as communism, fascism, liberalism, conservatism, feminism, environmentalism and others will be explored and evaluated, with emphasis on the philosophical roots of these systems. Prerequisite: None Corequisite: None				Meets MnTC Goal Area 5. This course examines historical and current theoretical perspectives of personality including psychoanalytic, humanistic, behavioral/social-learning, cognitive, biological and trait theories. This course is designed to examine the methods involved in personality psychology research, the ways in which humans differ with regards to personality, the variables that influence personality and how personality might influence behavior, as well as the development and assessment of personality. Prerequisite: PSYC1200 Corequisite: None			

Psychology

PSYC 1101	Human Interaction	3	3/0/0
Meets MnTC Goal Areas 2 and 5. This is an introductory course emphasizing practical applications of psycho-social concepts, with specific emphasis on personality development, human relations and motivation. This course is applicable for students in occupational and health-related fields or general education. Prerequisite: None Corequisite: None			
PSYC 1200	General Psychology	3	3/0/0
Meets MnTC Goal Areas 5 and 9. This is a comprehensive introductory overview of psychology that studies human behavior and mental processes. Topics include research methods, the history of psychology, theories of human behavior, the physiological basis of behavior, sensation, perception, behavioral learning, memory, problem solving, language development, personality theory, intelligence, the influence of groups on the behavior of individuals and altered states of consciousness such as sleep and dreams. Prerequisite: None Corequisite: None			
PSYC 1500	Positive Psychology	3	3/0/0
Meets MnTC Goal Areas 5 and 9. This course includes different aspects of health psychology, humanistic psychology and positive psychology with emphasis on the integration of psychological, biological and physical factors and the consequences for health and well-being. The course starts with the body's systems, psychological theories behind well-being, and positive emotions which are followed up by work methods and interventions to improve public health, well-being and a healthy work life. Gender and cultural perspectives will be considered throughout the course. Scientific methodology and the design for the study of positive psychology are also included in the course. Prerequisite: None Corequisite: None			
PSYC 2220	Abnormal Psychology	3	3/0/0
Meets MnTC Goal Area 5. This course is an introduction to the diagnosis, etiology and treatment of maladaptive behavior. The course will include historical and theoretical approaches, prevention and community resources. Prerequisite: None Corequisite: None			
PSYC 2222	Developmental Psychology	3	3/0/0
Meets MnTC Goal Areas 5 and 9. This course is a study of human development from the lifespan perspective, including theories, stages and influences of development. The course views the individual from conception to death through physical, social, emotional and mental development. Prerequisite: None Corequisite: None			

PowerSports Technology

PWST 1010	Introduction to PowerSports I	2	1/1/0
This course focuses on the study of two-cycle engine technology. The importance of occupational safety, the use of shop equipment, measuring instruments and service literature, along with appropriate service department etiquette will be addressed. Two-cycle engine theory along with proper lubricants will be covered. All these will be taught and expressed with the PowerSports and Marine industry shop experience as a basis for study. Prerequisite: None Corequisite: None			
PWST 1012	Introduction to PowerSports II	2	1/1/0
This course focuses on the study of four-cycle engine technology. The importance of occupational safety, the use of shop equipment, measuring instruments and service literature will be addressed. Four-cycle engine theory along with proper lubricants will be covered. Students will compare the advantages and disadvantages of two-cycle and four-cycle engines. All these will be taught and expressed with the PowerSports and Marine industry shop experience as a basis for study. Prerequisite: PWST1010 Corequisite: None			
PWST 1302	Snowmobile I	5	2/3/0
This course covers snowmobile engine designs, component identification and engine service procedures. This course also covers snowmobile fuel systems and service. Prerequisite: None Corequisite: None			
PWST 1304	Snowmobile Clutching	2	1/1/0
This course identifies major components of constant variable transmission systems and discusses maintenance, routine adjustment and tuning of variable transmission clutch systems. Prerequisite: None Corequisite: None			
PWST 1402	Chainsaws	2	1/1/0
Students will learn various manufacturers' repair and testing techniques. Students will learn saw repair, chain sharpening and maintenance of chainsaws. Students will be evaluated according to industry standards. Stihl bronze certification is available upon successful completion of the Stihl training portion of the class. Prerequisite: None Corequisite: None			
PWST 1404	Generators	2	1/1/0
This course covers generator components and test procedures. Students will test generator voltages and learn how to diagnose and repair generators. Students should have a basic understanding of electricity and electrical meter usage. Prerequisite: None Corequisite: None			

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
PWST 2302	Advanced Power Equipment	4	2/2/0				
This course covers overhaul procedures on outdoor power equipment. Students will make adjustments for optimum performance, learn multi-angle valve grinding procedures and the effects of modifications on a four-cycle engine. The course will also cover electrical and engine troubleshooting.							
Prerequisite: None							
Corequisite: None							
PWST 2304	Motorcycles I	3	1/2/0				
This course focuses on various types of four-cycle motorcycle and ATV engines. Students will learn engine service and maintenance procedures. Students will also learn about motorcycle fuel systems and related components.							
Prerequisite: None							
Corequisite: None							
PWST 2306	Snowmobile Drives and Suspensions	3	1/2/0				
This course covers suspension operation and components. Student will learn suspension set-up and adjustment techniques and various suspension designs used by manufacturers. Students will perform suspension service on various manufacturers' snowmobiles.							
Prerequisite: None							
Corequisite: None							
PWST 2308	Advanced Snowmobiles	3	1/2/0				
Students will demonstrate troubleshooting skills. Students will perform electrical tests used in diagnosing electrical failures on snowmobiles. Students will learn and demonstrate a systematic approach to troubleshooting snowmobiles.							
Prerequisite: None							
Corequisite: None							
PWST 2310	Motorcycles II	4	2/2/0				
This course covers electrical and suspension systems. Students will learn where motorcycle electrical components are located and their specific testing procedures. Students also learn the different types of suspension systems and repair procedures. Students will learn how to set up a motorcycle suspension for optimum performance.							
Prerequisite: None							
Corequisite: None							
PWST 2312	Advanced Motorcycle Systems	3	1/2/0				
This course is designed to test troubleshooting skills and knowledge. Students will be presented with motorcycle problems and, using a systematic approach, students will identify and repair the unit. This course is designed to simulate the role of a technician in a dealership. Students will be expected to write a work order, estimate repairs, make the repair and finalize the work order.							
Prerequisite: None							
Corequisite: None							
Radiologic Technology							
RADT 1108	Introduction to Radiologic Technology and Patient Care	3	2/1/0				
This course is designed to provide the basic concepts of patient care, including consideration of the physical and psychological needs of the patient and family. Routine and emergency patient care procedures will be described, as well as infection control procedures utilizing standard precautions. Information confidentiality as it relates to medical records and other forms of health information will be presented. The role of the radiographer in patient education will also be identified.							
Prerequisite: None							
Corequisite: None							
RADT 1114	Radiographic Procedures I	4	2/2/0				
This course will provide the student with the knowledge necessary to perform radiographic procedures relative to the thoracic and abdominal organs (including gastrointestinal studies), upper and lower extremities and pelvic girdle. Emphasis will be on radiographic terms, anatomy, positioning, manipulation of radiographic equipment and accessories, and related patient care considerations.							
Prerequisite: BIOL2232 AND RADT1108							
Corequisite: None							
RADT 1124	Radiographic Procedures II	4	2/2/0				
This course will provide the student with the knowledge necessary to perform radiographic procedures relative to the urinary system, the bony thorax, skull, vertebral column and arthrology. Emphasis will be on radiographic terms, anatomy, positioning, manipulation of radiographic equipment and accessories, and patient care considerations related to radiography of the urinary system, bony thorax, vertebral column, skull and arthrography. Basic techniques in venipuncture, contrast media types, intravenous medication and emergency response will also be included.							
Prerequisite: RADT1114 AND RADT1140							
Corequisite: None							
RADT 1132	Principles of Radiobiology	4	3/1/0				
This course is designed to establish a basic knowledge of atomic structure and terminology and provide an overview of the principles of radiation protection and interaction with living systems. Also presented are the nature and characteristics of radiation (i.e. its effects on molecules, cells, tissues and the body as a whole, x-ray production and the fundamentals of photon interactions with matter). Radiation health and safety requirements of federal and state regulatory agencies, accreditation							
					agencies, health care organizations and the responsibilities of the radiographer for patients, personnel and the public are also incorporated. Factors affecting biological response are presented, including acute and chronic effects of radiation.		
Prerequisite: BIOL2232 AND RADT1140							
Corequisite: None							
RADT 1140	Radiographic Imaging	4	2/2/0				
This course is designed to establish a knowledge base in factors that govern and influence the production and recording of radiographic images as well as provide a basis for analyzing those images. Film and electronic imaging with related accessories will be emphasized. Included is the importance of minimum imaging standards, discussion of problem-solving techniques for image evaluation and the factors that can affect image quality. Class demonstrations/labs are used to demonstrate application. Actual images will be included for analysis.							
Prerequisite: RADT1108 AND PHYS1105 AND MATH1114							
Corequisite: None							
RADT 1144	Radiographic Procedures III	3	2/1/0				
This course will provide the student with the knowledge necessary to perform radiographic procedures relative to traumatic injury, surgical and portable radiography. In addition the student will be introduced to the highly specialized studies of the central nervous system, cardiovascular system and cross-sectional imaging. Special imaging equipment, physical settings and techniques used in these highly specialized studies will also be included.							
Prerequisite: RADT1124							
Corequisite: None							
RADT 1148	Radiographic Clinical I	6	0/0/6				
The emphasis of this clinical rotation will be on radiographic positioning and manipulation of radiographic equipment and accessories related to radiography of the thoracic and abdominal viscera, upper and lower extremity, shoulder girdle, pelvis, upper gastrointestinal tract, lower gastrointestinal tract and the biliary system.							
Prerequisite: RADT1108							
Corequisite: None							
RADT 1158	Radiographic Clinical II	6	0/0/6				
This clinical course emphasizes the basic radiographic procedures and positioning related to the digestive system, urinary system, the bony thorax and the vertebral column. The student also will continue to acquire and build skills in performing radiographic procedures and positioning related to the thoracic and abdominal cavities and the upper and lower extremities including the shoulder girdle and the pelvis. The student is also introduced to skull radiography, surgical procedures, radiographic exposure factors and off-peak (e.g. evening and weekend) clinical hours.							
Prerequisite: RADT1148							
Corequisite: None							
RADT 1168	Radiographic Clinical III	6	0/0/6				
This clinical course emphasizes the basic radiographic procedures and positioning related to the skull, facial bones, paranasal sinuses and detailed areas of the skull. The clinical experience provides an opportunity to work with increased independence.							
Prerequisite: RADT1158							
Corequisite: None							
RADT 2222	Imaging Equipment	3	2/1/0				
This course is designed to establish a knowledge base in radiographic, fluoroscopic, mobile and tomographic equipment (including computed tomography) requirements and design including circuitry of the x-ray machine. The content will also provide a basic knowledge of quality control. Computer applications in the radiologic sciences related to image capture, display, storage and distribution are presented as well.							
Prerequisite: RADT1132 AND RADT1140							
Corequisite: None							
RADT 2244	Legal and Ethical Issues in Radiologic Technology	3	3/0/0				
Content is designed to provide a fundamental background in ethics. The historical and philosophical basis of ethics as well as the elements of ethical behavior will be discussed. The student will examine a variety of ethical issues and dilemmas found in clinical practice. An introduction to legal terminology, concepts and principles will also be presented. Topics will include misconduct, malpractice, legal and professional standards and the ASRT scope of practice. The importance of proper documentation and informed consent is emphasized.							
Prerequisite: None							
Corequisite: None							
RADT 2248	Radiographic Clinical IV	6	0/0/6				
This clinical course provides the student with the opportunity to function more independently in all areas of basic radiography and to develop clinical skills in regular radiographic areas and procedures, with continuing experience in trauma and surgical procedures. The student will be exposed to special procedures and will begin rotations through the specialized areas of nuclear medicine, radiation therapy, computerized tomography, ultrasound and magnetic resonance imaging.							
Prerequisite: RADT1168							
Corequisite: None							
RADT 2250	Radiographic Pathology	3	3/0/0				
This course is designed to introduce theories of disease causation and the pathophysiologic disorders that compromise healthy systems. Etiology, pathophysiologic responses, clinical manifestations, radiographic appearance and management of alterations in body systems will be presented.							
Prerequisite: BIOL2232							
Corequisite: None							

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
RADT 2258	Radiographic Clinical V	7	0/0/7	REFR 1140	Gas Heating	2	1/1/0
This clinical course emphasizes the development of independence, discretion and judgment while performing basic radiographic procedures. It provides the student with the opportunity to function as a nearly registry-eligible radiographer. The student is expected to correlate all clinical and didactic experiences while demonstrating a high degree of proficiency and efficiency. Prerequisite: RADT2248 Corequisite: None				This course covers heating theory of gas furnaces. The student receives basic hands-on service experience with gas-fired furnaces and refining of troubleshooting techniques with gas furnace simulators. Prerequisite: REFR1108 Corequisite: None			
RADT 2280	Board Review	2	2/0/0	REFR 2202	Commercial Refrigeration and Air Conditioning Principles4	4/0/0	
This course is designed to prepare the student to write the national board exam administered by the American Registry of Radiologic Technologists (ARRT). A review of all course work presented in the program with an emphasis on the ARRT exam specifications will be presented. Prerequisite: None Corequisite: None				This course covers the principles of basic heat theory and gas laws as they apply to refrigeration systems. The operation of commercial walk-in coolers and freezers, commercial ice machines, air conditioners and heat pumps will be discussed, along with accessory components and piping methods used to install and maintain these systems. Safety is emphasized. Prerequisite: REFR1110 AND REFR1112 Corequisite: None			
Refrigeration and Air Conditioning							
REFR 1102	Refrigeration Principles	3	3/0/0	REFR 2204	Commercial Refrigeration and Air Conditioning Lab 3	0/3/0	
This course covers the theory and operation and service procedures of the basic refrigeration system including the main components of the system: compressor, condenser, evaporator, metering device and domestic refrigeration. Student will develop troubleshooting techniques using computer and Omnidata refrigerator simulators. Prerequisite: None Corequisite: None				This course covers practical applications as they relate to commercial refrigeration and air conditioning equipment. Sequence of operation, troubleshooting, repair, maintenance and installation are included. Safety is emphasized. Prerequisite: REFR1110 AND REFR1112 Corequisite: None			
REFR 1104	Refrigeration Lab	4	0/4/0	REFR 2206	Commercial Electrical Principles	3	3/0/0
This course covers working with the tools and equipment of the refrigeration trade. The student receives hands-on experience working with refrigeration tubing, refrigerators, freezers and operation of refrigeration and electrical Omnidata computer-operated simulators. Prerequisite: None Corequisite: None				This course covers the fundamentals of electrical components used in commercial refrigeration and air conditioning equipment. Reading and understanding electrical schematics will be employed to comprehend the sequence of operation and aid in troubleshooting. Students will also develop their own wiring diagrams by applying Ohm's law and how it relates to series and parallel circuits. Safety is emphasized. Prerequisite: REFR1113 AND REFR1115 Corequisite: None			
REFR 1106	Electrical Fundamentals	3	3/0/0	REFR 2208	Commercial Electrical Lab	3	0/3/0
This course covers electrical theory of Ohm's law, inductance, capacitance and electrical design, operation, use and construction of domestic refrigeration and electric motors. Prerequisite: None Corequisite: None				This course covers the practical applications of electrical components used to operate commercial refrigeration and air conditioning equipment. Included are troubleshooting, repairing and installing electrical devices common in larger systems. Students will use schematics they have developed to build control systems to operate refrigeration and air conditioning systems. Safety is emphasized. Prerequisite: REFR1113 AND REFR1115 Corequisite: None			
REFR 1108	Electrical Lab	3	0/3/0	REFR 2211	Advanced Refrigeration Principles	4	4/0/0
This course covers the hands-on application of electrical theory and practice of Ohm's law, inductance, capacitance, control operation, building of a startbox and troubleshooting domestic refrigeration while using computers and various tools and meters used in the service field. Prerequisite: None Corequisite: None				This course prepares students for more advanced lab sessions on commercial refrigeration systems. Students need to have a very good understanding of commercial refrigeration and electrical systems. Safety is emphasized. Prerequisite: REFR2202 AND REFR2204 Corequisite: None			
REFR 1110	Refrig, A/C and Htg Prin	3	3/0/0	REFR 2212	Advanced Refrigeration Lab	3	0/3/0
This course covers refrigeration theory of domestic refrigeration and introduction theory to commercial refrigeration and residential heating and air conditioning equipment including controls and accessories. Prerequisite: REFR1104 AND REFR1108 Corequisite: None				This course gives students the opportunity to work on more complicated refrigeration systems through individual or paired groups on field trips, off-site meetings and hands-on projects. Safety is emphasized. Prerequisite: REFR2202 AND REFR2204 Corequisite: None			
REFR 1112	Refrig, A/C and Htg Lab	3	0/3/0	REFR 2213	Advanced Electrical Theory	3	3/0/0
This course covers the operation and service procedures of domestic refrigeration and an introduction to residential heating and air conditioning and commercial refrigeration equipment. Prerequisite: None Corequisite: None				This course covers the electrical principles and schematics used in commercial, industrial, hospital and supermarket refrigeration systems. Safety is emphasized. Prerequisite: REFR2206 AND REFR2208 Corequisite: None			
REFR 1113	Refrigeration Electrical Circuits Fundamentals	3	3/0/0	REFR 2215	Advanced Electrical Applications	3	0/3/0
This course will consist of the design of electrical drawings and troubleshooting of different refrigeration and heating equipment schematics and wiring diagrams. Prerequisite: REFR1106 AND REFR1108 Corequisite: None				This course covers the application of electrical principles used in commercial, industrial, hospital and supermarket refrigeration systems. Safety is emphasized. Prerequisite: REFR2206 AND REFR2208 Corequisite: None			
REFR 1115	Refrigeration Electrical Circuits Lab	3	0/3/0	REFR 2216	Refrigeration Internship	3	0/0/3
This course will consist of the design of electrical drawings and troubleshooting of different refrigeration and heating equipment and component schematic and wiring diagrams. Prerequisite: REFR1106 Corequisite: None				In this course, projects, reports and discussions are coordinated to relate to the student's employment situation, which must be in an approved refrigeration or air conditioning occupation. A training agreement and an evaluation are required of each student. Prerequisite: Instructor approval Corequisite: None			
REFR 1130	Refrigeration Management	2	2/0/0	REFR 2220	HVAC Troubleshooting	3	1/2/0
This course covers refrigerant management techniques approved by Environmental Protection Agency (EPA) Section 608 of the Clean Air Act. The course will include environmental concerns, recovery, recycling and reclamation of different refrigerants. After completion of the course, students will be given the option of taking the EPA Refrigerant Certification Exam. Prerequisite: None Corequisite: None				This course is designed to build student confidence in troubleshooting heating, ventilating, air conditioning systems and motor control circuits. While in the course, the student will learn troubleshooting techniques using simulators, computer-generated simulators and actual air conditioning equipment. Prerequisite: REFR1108 Corequisite: None			
				REFR 2242	Heat Load Estimating	2	1/1/0
				This course covers heat and cooling load estimating for residential and light commercial buildings using various manufacturer worksheets, the standard Manual J and computerized methods of estimating. Prerequisite: None Corequisite: None			

Sociology

SOC 1111 Intro to Sociology 3 3/0/0
Meets MnTC Goal Areas 2, 5 and 7. This course is an introduction to the study of societies and the social factors that influence individual and group behavior. The course incorporates sociological and other critical thinking models for the investigation of various components of social life: culture, socialization, social organization, social stratification, social institutions, populations dynamics and social change.
Prerequisite: None
Corequisite: None

SOC 1113 Social Problems 3 3/0/0
Meets MnTC Goal Areas 5 and 9. This course stresses acquiring an enriched understanding of social issues and prospects for improving them. Students will investigate social trends and factors affecting social problems, contrast sociological perspectives of social problems, deal constructively with information and ideas associated with social issues, examine the ethical dimensions inherent in problem definition and intervention design, and define personal and public responsibilities in relation to select social issues. Social issues covered may include parenting and family issues; crime, delinquency and violence; aging, health and health care issues; poverty and inequality; cultural pluralism; urban growth and population; environmental issues; sexual issues; and global issues.
Prerequisite: None
Corequisite: None

SOC 1114 Sociology Service Learning 1 1/0/0
Meets MnTC goal Area 5. This course emphasizes an enriched understanding of social issues and prospects for improving them through direct work/research in a sociological setting. In an actual community setting, students will participate in and make observations of social intervention. These observations will be critically processed in relation to key sociological concepts. The nature of service learning usually necessitates that students be prepared to be off-campus and to participate outside of regular class hours (20-25 hours). Students may need transportation to field sites. Additional expenses may be incurred. Course may be repeated for credit.
Prerequisite: SOC1111 OR SOC1113 OR SOC2211 OR SOC2215 OR SOC2216 OR SOC2217 OR WMST1130
Corequisite: None

SOC 2210 Social Deviance 3 3/0/0
This course is a sociological examination of significant rule-making and rule-breaking that surveys explorations/explanations of non-conformity relevant to juvenile delinquency, crime, health and environmental welfare, mental illness, sexual violence, substance abuse and certain other non-normative lifestyles
Prerequisite: SOC1111
Corequisite: None

SOC 2213 Sociology of the Family 3 3/0/0
Meets MnTC Goal Areas 5 and 7. Families will be examined from the sociological perspective and will be compared across time and cultures. Family relationships, family structure and the effects of race, class, gender, age, social institutions and social policy will be explored in this course. Integral to this course are comprehensive discussions on topics such as dating, cohabitation, marriage/partnering, employment, domestic violence, parenting, divorce, remarriage/re-partnering and elder care. This course provides understanding of the family, family roles and the impact on the individual. Understanding public and private, platonic and intimate relationships can assist in the development of tolerance toward others.
Prerequisite: None
Corequisite: None

SOC 2215 Criminology 3 3/0/0
Meets MnTC Goal Areas 2 and 5. This course will provide a thorough overview of the field of criminology: the study of the theories which attempt to define and explain crime, criminal behavior and society's reactions to crime, including a focus on juvenile delinquency, the judicatory process and penology.
Prerequisite: None
Corequisite: None

SOC 2216 Minority Group Relations 3 3/0/0
Meets MnTC Goal Areas 5 and 7. This course stresses acquiring an enriched understanding of social issues and prospects for improving them. Students will investigate social trends and factors affecting social problems, contrast sociological perspectives of social problems, deal constructively with information and ideas associated with social issues, examine the ethical dimensions inherent in problem definition and intervention design, and define personal and public responsibilities in relation to select social issues.
Prerequisite: None
Corequisite: None

SOC 2217 Rural Sociology 3 3/0/0
Meets MnTC Goal Areas 5 and 7. This course is a sociological study of the forces which have transformed the rural setting and impacted future trends in rural America. The course will also focus on the diverse cultural heritage contributing to the rich cultural mosaic found in rural scenarios.
Prerequisite: None
Corequisite: None

SOC 2220 Food, Culture and Society 3 3/0/0
Meets MnTC Goal Areas 5 and 7. This course examines the social and cultural dimensions of the production, preparation and consumption of food. The course will include discussion of a wide variety of topics including food citizenry, sustainable food production, agroecology, hunger, food sovereignty, food choice and options, policy and legislation, social justice, and the interplay between food and gender, social class, race and ethnicity.
Prerequisite: None
Corequisite: None

SOC 2222 Sociology of Agriculture 3 3/0/0
Meets MnTC Goal Area 5. The central theme of this course is to understand the institutions and processes critical to farm success. Students will utilize sociological perspectives to study the many aspects of a local food system.
Prerequisite: None
Corequisite: None

Spanish

SPAN 1111 Beginning Spanish 4 4/0/0
This course provides basic instruction in the correct form and use of the Spanish language. Study concentrates on oral and written comprehension of simple Spanish, verbal expression of personal themes, pronunciation and grammar.
Prerequisite: None
Corequisite: None

SPAN 1112 Beginning Spanish II 4 4/0/0
This course provides continued basic instruction in the correct form and use of the Spanish language. Study concentrates on oral and written comprehension of simple Spanish, verbal expression of personal and extended themes, pronunciation and grammar.
Prerequisite: SPAN1111
Corequisite: None

SPAN 2211 Intermediate Spanish 4 4/0/0
Meets MnTC Goal Area 8. This course is the first semester of Intermediate Spanish. Students will develop reading, writing, listening and speaking through a focus on historical, political, cultural and artistic expressions of the Spanish-speaking world. Grammar from beginning Spanish courses is lightly reviewed. Students will learn new grammatical skills including the perfect tense of the indicative mood and simple tenses of the subjunctive mood.
Prerequisite: SPAN1112 OR Instructor approval
Corequisite: None

SPAN 2212 Intermediate Spanish II 4 4/0/0
Meets MnTC Goal Area 8. This course is the second semester of Intermediate Spanish. Students continue to hone their reading, writing, listening and speaking through a focus on historical, political, cultural and artistic expressions of the Spanish-speaking world. Grammar from Intermediate Spanish is further developed to include the simple and perfect tenses of the indicative and subjunctive moods. Students investigate the development of science and technology on various aspects of the Spanish-speaking world.
Prerequisite: Instructor approval
Corequisite: None

Management Skills

SUPL 1110 Budget and Financial Management 3 3/0/0
This course is designed for non-financial personnel who need to understand the basic theories of finance and apply them to practical business decisions. Key topics include learning the generally accepted accounting and budgeting principles, financial statement analysis, analysis of return on investment and cost/benefit ratios analysis of annual reports.
Prerequisite: None
Corequisite: None

SUPL 1118 Lead and Facilitate Teams 3 3/0/0
This course will address the role of supervisor, manager and leader as a leader and facilitator of work teams. Topics will include planning work teams, creating effective team interaction, identifying characteristics of successful teams and demonstrating skills and behaviors of both team leader and team member.
Prerequisite: None
Corequisite: None

Social Work

SW 2250 Introduction to Social Work/Social Welfare 3 3/0/0
 This course introduces students to social welfare and social work, including fields of practice, institutions, populations served, special issues and an introduction to some social work methods and theories. A general historical and contemporary overview of the profession is provided, including its values, ethics, methods, multiple settings and a beginning use of system theory.
Prerequisite: None
Corequisite: None

Massage Therapy

THPY 1110 Massage Techniques and Ethics 3 2/1/0
 This course provides students with an in-depth knowledge of massage techniques. Emphasis will be on the application of the basic massage strokes and their variations. Students will learn proper draping and positioning techniques and recommended client protocol. In regards to ethics, a variety of topics will be discussed and explored in order to help the students form their own written code of ethics.
Prerequisite: None
Corequisite: None

THPY 1118 Kinesiology 3 2/1/0
 This course teaches students to identify the location and movements of skeletal muscles. Students will identify bones and boney landmarks. They will learn muscle origin and insertion using specific boney landmarks as points of anatomical reference. They will learn directional terms and terms of movement. Students will learn to identify and describe the movement of each muscle.
Prerequisite: None
Corequisite: None

THPY 1123 Integrative Massage 2 1/1/0
 This course introduces students to a variety of specialized modalities of massage. Specialization in the massage industry increases the marketability of therapists and is strongly recommended. Students will be familiar with the basic principles of each modality presented. In addition to lectures presented by the instructor, students will be responsible for researching modalities of particular interest to them.
Prerequisite: None
Corequisite: None

THPY 1130 Advanced Massage 2 1/1/0
 This course prepares massage students to execute advance massage techniques. Students will learn optional techniques available to clients including abdominal massage, facial massage and massage of the gluteals. Massage for special populations will be discussed, including massage for the elderly and chair massage.
Prerequisite: THPY1110
Corequisite: None

THPY 1135 Deep Tissue Massage 2 1/1/0
 This course prepares the massage student to apply deep muscular therapy techniques. Emphasis will be placed on the use of proper body mechanics and the use of proper techniques to deliver deep tissue massage safely. Trigger point therapy will be used extensively in this course. Students will learn the use of massage tools. Individual muscles will be isolated and massaged with parallel and cross fiber techniques.
Prerequisite: THPY1110
Corequisite: None

THPY 1142 Practical Skills Clinic 3 0/3/0
 This course provides students with an opportunity to develop the practical skills necessary to administer professional massage therapy treatments. In addition to performing massage treatments on the general public, students will also perform seated chair massage at scheduled on-site events as arranged by the instructor. This course provides students with an opportunity to develop the practical learned skills needed to work as a professional massage therapist.
Prerequisite: THPY1110 AND current certified CPR/first aid card-holder
Corequisite: None

THPY 1146 Certification Preparation 2 2/0/0
 This course is designated to prepare the students to take the National Certification Examination (NEC) issued by the National Certification Board of Therapeutic Massage and Bodywork (NCBTMB). Students will review anatomy, physiology, kinesiology, clinical pathology, massage theory, massage assessment and practice, adjunct techniques and business practices. Students will be taught to identify the areas where they need the most review and use outside texts to help them maximize their learning potential. A study guide and sample test questions will be used to exemplify the National Certification Examination. Students will be encouraged to apply to take the National Certification Examination after they receive their diploma.
Prerequisite: THPY1110
Corequisite: None

THPY 1148 Sports Massage and Hydrotherapy 2 1/1/0
 This course covers the fundamentals of hydrotherapy and sports massage. Students will be taught to perform massage treatments specific to individual sports. The course

addresses pre-, post- and event-sports massage techniques, as well as rehabilitative massage for injuries and maintenance massage. Students will also be instructed on the use of hydrotherapy techniques. Hydrotherapy will address the application of water as treatment in each of its three forms, hot and cold treatments, hydrocollators, body wraps and salt glows. These green techniques can be implemented into Swedish massage treatments and sports massage.
Prerequisite: None
Corequisite: None

THPY 1150 Business Development 2 2/0/0
 This course will introduce the massage therapist to the business aspects of operating a massage practice. Topics include client scheduling, budgeting, bookkeeping, marketing and massage-related business issues. The course will detail client/therapist business concerns and help prepare students to identify and solve these concerns in a professional manner. Students will learn to write and execute a detailed workable massage business plan.
Prerequisite: None
Corequisite: None

THPY 1156 Massage Pathophysiology 3 3/0/0
 This course discusses common pathologies that massage therapists are likely to encounter in their professional practices. It also discusses whether these conditions are indicated or contraindicated for massage and describes how they may be treated.
Prerequisite: None
Corequisite: None

Theater

THTR 1100 Introduction to Theatre 3 3/0/0
 Meets MnTC Goal Area 6. This course introduces students to the artistic, historical, cultural, and social significance of theatre; the process of producing live theatre; the examination of major developments; and theatre personnel. Participation in class projects, production attendance and production work hours may be required.
Prerequisite: None
Corequisite: None

THTR 1105 Acting I 3 3/0/0
 Meets MnTC Goal Area 6. This course is intended to introduce students to basic acting skills and techniques through the use of games, exercises and improvisations, and in-class performances.
Prerequisite: None
Corequisite: None

THTR 1120 Theatre Performance Practicum 2 0/2/0
 Meets MnTC Goal Area 6F. This course is intended for students who participate as performers in a main stage or approved theatrical production. May be repeated twice.
Prerequisite: None
Corequisite: None

THTR 1125 Theatre Technical Practicum 2 0/2/0
 Meets MnTC Goal Area 6F. This course is intended for students who participate as a construction or run crew member on a main stage or approved theatrical production. May be repeated twice.
Prerequisite: None
Corequisite: None

Transportation Technology

TRNS 1001 Fuel Systems I 3 2/1/0
 This course covers the basics in many types of fuel systems used on current two- and four-cycle off-road/marine products. Training will be on most realms of models from high-performance to standard output recreational equipment. The incorporation of fuel distribution systems is studied along with fuel make-up and its properties. Included in this course will be practices of pre-delivery, inspection and troubleshooting along with seasonal service requirements.
Prerequisite: None
Corequisite: None

TRNS 1100 Introduction to Shop Technology 4 3/1/0
 This course is the study of occupational safety, shop orientation procedures and power and hand tool usage. The use of shop equipment applications, fasteners, measuring instruments and service literature, along with appropriate service department etiquette, will be addressed. Four- and two-stroke engine theory along with their proper lubricants will be covered. All these will be taught and expressed with the PowerSports and Marine industry shop experience as a basis for study.
Prerequisite: None
Corequisite: None

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
TRNS 1102	Introduction to Transportation	2	1/1/0	TRNS 1197	Electrical Systems I Lab	2	0/2/0
This course is the study of occupational safety, shop operation procedures, power and hand tool use, shop equipment applications, fasteners, measuring instruments, service literature, general service knowledge, acceptable work habits, industry standards and expectations.				This course applies the information learned in the Electrical Systems I Theory course. Students will test charging systems, ignition systems and starting systems for their proper functionality. Students will also be exposed to proper troubleshooting techniques for these systems.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: TRNS1198			
TRNS 1104	Transportation Electronics	3	2/1/0	TRNS 1198	Electrical Systems I Theory	2	2/0/0
This course prepares the student for the electronics-related courses that follow. The theory and operation of electricity and test instruments will be studied.				This course introduces electrical systems used on powersports/marine equipment, focusing primarily on ignition and electrical components. Students will learn the theories of ignition, induction, AC and DC circuit, and electronic and computer controls. Emphasis will be on proper use of test equipment and system operation.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
TRNS 1109	Fuel Systems I	4	2/2/0	TRNS 1199	Electrical Systems I Marine Service	2	0/2/0
This course covers the basics in many types of fuel systems used on current two- and four-cycle off-road/marine products. Training will be on most realms of models, from high-performance to standard output recreational equipment. The incorporation of fuel distribution systems is studied, along with fuel make-up and its properties. Included in this course will be practices of pre-delivery, inspection and troubleshooting, along with seasonal service requirements.				This course applies the information learned in the Electrical Systems I Theory course. Students will test charging systems, ignition systems and starting systems for their proper operation. Students will also be exposed to proper troubleshooting techniques of these systems. This course is intended for the Marine program student and applies specifically to marine products.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: TRNS1198			
TRNS 1111	Electrical Systems I	4	2/2/0	TRNS 2108	Power Hydraulics	2	1/1/0
This course introduces electrical systems used on powersports/marine equipment, focusing primarily on ignition and electrical components. Students will learn the theories of ignition, induction, AC and DC circuits, and electronic and computer controls. Emphasis will be on proper use of test equipment and system operation.				This course covers the theory and service of hydraulic systems used on a wide range of off-road applications. Power steering and power trim and tilt systems service will be performed. System troubleshooting as well as component service will also be included in this course.			
Prerequisite: None				Prerequisite: None			
Corequisite: None				Corequisite: None			
TRNS 1112	Heating Ventilation A/C	3	1/2/0	Video Game Development			
This course teaches the principles of air conditioning and its relationship to the heating system. The various types and the diagnosis of malfunctions, testing and repair are studied in the classroom. Practical experience is performed on live systems: recovering, evacuating, component replacement, charging and performance testing of the systems.				<hr/>			
Prerequisite: DSET1100 OR TRNS1102				VGAM 1111			
Corequisite: None				Digital Modeling Creation			
TRNS 1118	Welding I	2	0/2/0	This course is a comprehensive introduction to three-dimensional (3D) modeling as it is used in computer games. Students will create two-dimensional (2D) and 3D graphics using Adobe Photoshop and Autodesk Maya. The course incorporates knowledge of hard surfaces and organic modeling techniques for digital sculpting as well as non-uniform rational B-splines (NURBS) and polygon modeling tool sets.			
This class introduces students to welding safety, welding and cutting fundamentals. The course provides the theory of welding and the training to develop the necessary skills to cut and weld metal.				Prerequisite: Assessment into college algebra and college-level English composition or completion of prerequisite courses for college algebra and college-level English			
Prerequisite: None				Corequisite: None			
Corequisite: None				VGAM 1122	Two Dimensional Animation	3	3/0/0
TRNS 1120	Welding II	1	0/1/0	This course will help students develop the technique and craft involved in hand-drawn two-dimensional (2D) animation and the fundamental principles of traditional animation as well as the fundamental principles of computer animation. Students will learn concepts such as potential versus kinetic energy, basic storytelling, virtual camera animation and vehicle animation.			
This course teaches skills needed to weld metals in a variety of positions using various methods of welding. The class will also introduce aluminum welding.				Prerequisite: VGAM1111			
Prerequisite: TRNS1118				Corequisite: None			
Corequisite: None				VGAM 1133	Digital Texturing and Lighting	3	3/0/0
TRNS 1125	Starting and Charging Theory	2	2/0/0	This course is a comprehensive introduction of digital textures that simulate details to a digital model that would be impossible to model. This course provides detail attention on standard three-dimensional (3D) projections and UV (axes) mapping on a 3D software package (Autodesk Maya). Professional techniques for texture painting in Photoshop will be addressed along with techniques for overcoming common texture mapping problems.			
This course covers the service and repair of starting and charging systems for off-road products, both two- and four-stroke.				Prerequisite: VGAM1111			
Prerequisite: None				Corequisite: None			
Corequisite: TRNS1126				TRNS 1136	Starting and Charging Lab	1	0/1/0
TRNS 1126	Starting and Charging Lab	1	0/1/0	This course covers the hands-on testing of starting and charging systems and their components.			
This course covers the application of information learned in the Fuel Systems I Theory course. Students will apply the theories of testing the operability of the fuel systems of both two- and four-stroke engines. Included in this course will be practices of pre-delivery, inspection and troubleshooting, along with seasonal service requirements.				Prerequisite: None			
Prerequisite: None				Corequisite: TRNS1125			
Corequisite: TRNS1125				TRNS 1193	Fuel Systems I Lab	1	0/1/0
TRNS 1193	Fuel Systems I Lab	1	0/1/0	This course covers the application of information learned in the Fuel Systems I Theory course. Students will apply the theories of testing the operability of the fuel systems of both two- and four-stroke engines. Included in this course will be practices of pre-delivery, inspection and troubleshooting, along with seasonal service requirements.			
This course covers the application of information learned in the Fuel Systems I Theory course. Students will apply the theories of testing the operability of the fuel systems of both two- and four-stroke engines. Included in this course will be practices of pre-delivery, inspection and troubleshooting, along with seasonal service requirements.				Prerequisite: None			
Prerequisite: None				Corequisite: TRNS1194			
Corequisite: TRNS1194				TRNS 1194	Fuel Systems I Theory	2	2/0/0
TRNS 1194	Fuel Systems I Theory	2	2/0/0	This course covers the basics in many types of fuel systems used on current two- and four-cycle off-road/marine products. Training will be on most realms of models from high performance to standard output recreational equipment. The incorporation of fuel distribution systems is studied, along with fuel make-up and its properties.			
This course covers the basics in many types of fuel systems used on current two- and four-cycle off-road/marine products. Training will be on most realms of models from high performance to standard output recreational equipment. The incorporation of fuel distribution systems is studied, along with fuel make-up and its properties.				Prerequisite: None			
Prerequisite: None				Corequisite: None			
Corequisite: None				TRNS 1195	Fuel Systems I Marine Service	1	0/1/0
TRNS 1195	Fuel Systems I Marine Service	1	0/1/0	This course covers the application of information learned in the Fuel Systems I Theory course. Students will apply the theories of testing the operability of the fuel systems of both two- and four-stroke engines. Included in this course will be practices of pre-delivery, inspection and troubleshooting, along with seasonal service requirements. This course is intended for the Marine student and will be focusing on marine equipment.			
This course is intended for the Marine student and will be focusing on marine equipment.				Prerequisite: None			
Prerequisite: None				Corequisite: TRNS1194			
Corequisite: TRNS1194							

WINE 1201 Food and Wine Pairing 3 3/0/0
 This course offers students the experience of observing and tasting how different wines affect food and how food affects different wines. The class takes into consideration food preparation methods, textures, acidic levels, taste and spice profiles, as well as characteristics of wine and wine servings including light, medium and heavy body; sweet vs. dry; sparkling or non-sparkling; chilled vs. non-chilled; low- or high-alcohol; and acid levels. Students will compare the historical rules of pairing to the evolving rules that reflect the standards of current societal trends. Note: All persons must be at least 21 years of age and have a photo ID as proof of age before enrolling.
Prerequisite: WINE1100 AND Note: All persons enrolling must be of at least 21 years of age and present a photo ID
Corequisite: None

WINE 1500 Old World Wines and New World Wines 3 3/0/0
 This course examines wines from different countries including France, Italy, Spain, Portugal, the United States, Mexico, Chile, New Zealand and South Africa. Additional topics may include identifying the main regions, wine laws, wine varieties, and geography/climate for growing grapes and producing wine. Students will learn about the terroir elements and human-controlled elements of wine. Students will also be exposed to the cultural aspects of terroir such as celebrations and rituals based on geographical regions. Note: All persons must be at least 21 years of age and have a photo ID as proof of age before enrolling.
Prerequisite: WINE1100 AND Note: All persons enrolling must be of at least 21 years of age and present a photo ID
Corequisite: None

Women's Studies

WMST 1130 Introduction to Women's Studies 3 3/0/0
 Meets MnTC Goal Areas 5 and 7. This course is an interdisciplinary study designed to enhance the student's understanding of women's cultural, social, historical, political and economic contributions and humanitarian achievements based on historical and diverse societal settings.
Prerequisite: None
Corequisite: None

WMST 1136 Global Perspectives of Women 3 3/0/0
 Meets MnTC Goal Areas 6 and 8. This course examines the present-day realities of women's lives around the world.
Prerequisite: None
Corequisite: ENGL1101

Zoology

ZOO 1122 Hematology and Coagulation 4 3/1/0
 This is an introductory course for Medical Laboratory Technician students covering the production, maturation, function and abnormalities of blood cells and coagulation (stoppage of bleeding) to maintain body homeostasis. The course covers routine hematology procedures to identify normal, abnormal and immature cells. The course also covers coagulation procedures to detect deficiencies and abnormal conditions of blood clotting.
Prerequisite: None
Corequisite: None

ZOO 1123 Immunohematology 3 2/1/0
 This course is an introduction to the clinical area of blood banking. The course covers compatibility theory, principles of antigens on red blood cells and antibodies in serum of blood. The course also includes blood typing and other basic immunohematological procedures.
Prerequisite: BIOL1125
Corequisite: None

ZOO 1126 Urinalysis and Body Fluids 2 1/1/0
 This is an introductory course for Medical Laboratory Technician students. The course is an overview of the urinary system including abnormalities and diseases. The course also covers collection, handling, storage of, analysis of physical and chemical properties and identification of morphological elements of urine. The course also includes study of other body fluids including cerebral spinal fluid, amniotic fluid, serous fluid, synovial fluid, sputum, semen and feces.
Prerequisite: None
Corequisite: None

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 and Marketing*
 BA, University of North Dakota
 MA, University of North Dakota

Johnson, Monty V *Dean of Academic Affairs/
 Senior Campus Dean*
 BE, Wayne State College
 MED, Iowa State University

Knudson, Daniel L.....*Interim Chief Information Officer*
 BS, Minnesota State University Moorhead

Laymon, Denise Ann..... *Chief Development and Alumni Officer*
 BS, University of Mary
 MS, University of Mary

Nordick, Patrick A*Chief Finance Officer*
 BS, Bemidji State University

Schaffhauser, Anthony*Dean of Student Access*
 BA, Tulane University
 MS, University of Rochester

Shortle, Dillon*Dean of Academic Affairs*
 BS, University of Wisconsin, Oshkosh
 MBA, Keller Graduate School of Management

Tucker, G.L...... *Dean of Custom Training Services/
 Business & Entrepreneurial*
 BS, St. Cloud State University

Whelihan, Thomas M..... *Dean of Academic Affairs/
 Senior Campus Dean*
 BA, University of Minnesota, Duluth
 MSED, University of Wisconsin-Superior

Wielinski, Peter A... *Vice President/Chief Student Services Officer*
 BA, University of Minnesota Twin Cities
 MSED, University of Wisconsin-Superior
 PhD, Capella University

Faculty Credentials

Ahlschlager, Patricia M <i>Nursing</i> BS, Metropolitan State College of Denver MS, Minnesota State University Moorhead	Bainer, James Stephen <i>Diesel</i> Dipl, Staples Area Vocational Technical Institute
Altenburg, Mark O <i>English</i> BA, North Dakota State University MA, Hamline University	Baker, Adam Joseph, CPA <i>Accounting</i> AA, Fergus Falls Community College BS, Minnesota State University Moorhead
Amundson, Sonja C <i>Nursing</i> AAS, Miles Community College	Balluff, Mark Allen <i>Math</i> BS, Minnesota State University Moorhead MAT, Minot State University
Andersen, David L <i>Law Enforcement</i> BA, Minnesota State University Moorhead MS, Minnesota State University Moorhead	Banerji, Nandini <i>Science</i> BS, University of Delhi MS, Indian Institute of Technology, Kanpur MA, Indian Institute of Technology, Delhi PHD, University of Vigo
Anderson, Heidi Rochelle <i>English</i> AA, Minnesota State Community and Technical College MA, St. Cloud State University BA, St. Cloud State University	Barfknecht, Joseph P <i>Football Coach</i> BS, Minnesota State University Moorhead
Anderson, JaDean Jake <i>Biology</i> BA, Minnesota State University Moorhead	Baumann, William Anton <i>English</i> AA, Ridgewater College BS, Minnesota State University, Mankato MS, Iowa State University
Anderson, Marc David <i>Biology</i> BS, North Dakota State University MS, North Dakota State University PHD, Iowa State University	Beacom, Teresa Ann <i>English</i> BA, College of Saint Benedict MA, University of Missouri-Kansas City
Anderson, Sue Christine <i>Art</i> BS, Minnesota State University Moorhead MS, Minnesota State University Moorhead	Beaton, Allen M, CPA <i>Accounting</i> BS, San Diego State University
Arneson, Brenda <i>Nursing</i> AAS, Clackamas Community College BSN, Minnesota State University Moorhead	Benchama, Noureddine <i>Math</i> MS, Wichita State University PHD, Wichita State University
Ashworth, Teresa K <i>Music</i> BA, University of South Dakota MED, North Dakota State University	Bergquist, James D <i>Physics</i> BS, North Dakota State University PHD, VA Polytechnic Institute & State University
Asmus, Jarrod L <i>Baseball Coach</i> BS, North Dakota State University	Bernstetter, Roberta A <i>Cosmetology</i> AA, Fergus Falls Community College Dipl, Northwest Technical College - Wadena BS, Bemidji State University
Bagent, Jack Kevin <i>Science</i> BA, University of Minnesota DR, University of Minnesota	Beyer, Jennifer Ann <i>English</i> BA, Bemidji State University MA, Bemidji State University
Bagent, Karoline Lisa <i>Nursing</i> MN, University of Minnesota	Bischof, Carol Muriel <i>Biology</i> BS, MS State University - College of Agriculture MS, Miami University - Oxford, OH
Bagne, Angela Grace Beach <i>Psychology</i> MS, North Dakota State University	

Faculty Credentials

Bjerke, M Shawn*Biology*

BS, North Dakota State University
MS, North Dakota State University

Blasczyk, Linda Kay.....*Nursing*

BSN, University of Mary
MSN, Concordia College

Bocnuk, Cheryl L.....*Web Development*

AA, Rainy River Community College
BA, St. Cloud State University
BA, St. Cloud State University
MMA, Metropolitan State University

Boe, Thomas L.....*Dental*

DDS, University of Minnesota
MBA, St. Cloud State University

Booth, Michael*Math*

BS, North Dakota State University
MS, North Dakota State University

Borcherding, Matthew John*Biology*

MAT, Minnesota State University, Mankato
BS, Minnesota State University, Mankato

Boutwell, Renee.....*Art*

MS, University of South Dakota
BA, Florida State University

Brady, Colleen A.....*Radiologic Technology*

RT (R)(M), ARRT Registered Technologist
certified in Radiography and Mammography
BS, University of Minnesota Crookston
MS, Minnesota State University Moorhead

Brannick, Kristi Georjean.....*Biology*

CERT, Anoka-Hennepin Technical College
AA, Normandale Community College
BS, St. Cloud State University
MS, St. Cloud State University

Bremer, John O.....*English*

AA, Rochester Community College
BA, St. Cloud State University
MA, North Dakota State University

Brewster, Kim Earl.....*Culinary Arts, Wine Studies*

DIPL, Northwest Technical College-Moorhead
BS, University of Mary

Brickner, Joan Marie.....*English*

ALA, Wayne State University
BA, Wayne State University
MA, Eastern Michigan University

Bry, Jeff D.....*Sociology*

BS, University of North Dakota
MA, University of North Dakota

Bucholz, Glen A.....*Marine Engine Technology*

DIPL, Detroit Lakes Technical College
DIPL, Detroit Lakes Technical College
BS, Bemidji State University

Burns, Arvid A.....*Graphic Design*

Bushaw, Valerie Mae.....*Dental Hygiene*

AS, North Dakota State College of Science
AA, Minnesota State University, Mankato
BS, Northern Arizona University

Carley, Dane A.....*Fire Services*

AAS, Lake Superior College
BS, University of Cincinnati
MS, St. Cloud State University

Carlson, Daniel Q.....*Music*

BM, Concordia College
BM, Concordia College
MM, North Dakota State University

Carney, Paul.....*English*

BA, Southern Methodist University
MA, The University of Texas at El Paso
MA, The University of Texas at El Paso

Carter, Daniel J.....*Computer and Network Technology*

BS, Bemidji State University

Caswell, Ramona L. Johnson.....*Chemistry*

BS, University of Wisconsin
MS, University of Minnesota

Charest, Lori Ann.....*Ceramics*

BFA, University of North Dakota

Christensen, Bryan Alan.....*Marketing*

AAS, Minnesota State Community and Technical College
DIPL, Alexandria Technical and Community College
BS, University of Minnesota, Crookston
MBA, University of Mary
AAS, Minnesota State Community and Technical College

Faculty Credentials

Christianson, Milan *Psychology*
MS, North Dakota State University

Coley, Amy Marie.....*Radiological Technology*
BS, University of Mary

Condiff, Misty Lynn*Nursing*
BS, Bemidji State University
AA, Hibbing Community College
MS, University of North Dakota
PHD, University of Minnesota

Cox, John Charles..... *Art*
AA, Northland Community and Technical College
BFA, University of Minnesota, Duluth
MFA, University of South Dakota

Cox, Rachel Marie.....*English*
BA, University of Minnesota, Duluth
MA, University of South Dakota

Craik, Marlene R.....*Network Technology Administration, Cisco*
AAS, Northwest Technical College-Moorhead
AAS, Northwest Technical College-Moorhead
BS, University of Mary

Cummings, Pamela K.....*Paralegal*
BS, Moorhead State University

Daeuber, Eric.....*Humanities*
BA, University of Western Ontario, Huron College
MDIV, Brock University
MLA, Moorhead State University

Dahms, Shannon Kaye.....*Nursing*
BSN, Viterbo College
MSN, Minnesota State University Moorhead

Daniels, Jessica Brimhall*Biology*
BA, Concordia College
MS, University of Minnesota

DeJong, Travis J.....*Refrigeration and Air Conditioning*
DIPL, Minnesota State Community and Technical College

Desjarlais, Sarah Miriam.....*Dental Hygiene*
BA, Augustana College
AS, Argosy University

Dittmann, Scarlet May..... *Massage Therapy*
CERT, Minnesota State Community and Technical College
DIPL, Minnesota State Community and Technical College
CERT, Sister Rosalind Gefre

Donehower, James W*Paralegal*
BA, Concordia College
JD, Vanderbilt University

Doyle, Benjamin M..... *Industrial Maintenance*
AAS, Western Dakota Vo-Tech Institute

Drange, Stephanie Annette*English*
BS, Minnesota State University Moorhead
MED, Saint Marys University of Minnesota

Drummond, Donald Gerard.....*Math*
BS, North Dakota State University
MAT, Minot State university

Dubbels, Thomas Kenneth*Counselor*
BS, North Dakota State University
MS, Moorhead State University

Durand, Heidi Lynn *Sociology*
BA, North Dakota State University
MS, North Dakota State University

Durgin, Jay C..... *History*
MA, University of North Dakota

Dykhoff, Wayne Donald*Electrical Lineworker*
DIPL, Minnesota State Community and Technical College

Dyrstad, Heidi L*Communication*
BA, Concordia College
MA, North Dakota State University
PHD, University of North Dakota

Ebsen, Michelle Ann*Business: Management,
Marketing and Sales*
BS, University of Mary
MBA, University of Mary

Ecker, Elizabeth L*English*
BS, North Dakota State University
MA, North Dakota State University

Eisenberg, Steven C*Biology*
MS, Rutgers
BA, Rutgers

Ekelund, Rebekah J.....*Chemistry*
BS, Houghton College
MS, Northeastern University

Eklund, Clyde Wayne.....*Math*
BS, Bemidji State University
MS, University of Minnesota

Faculty Credentials

Elhard, Kathy L*Nursing*

AAS, Northwest Technical College
BSN, Minnesota State University Moorhead
MSN, Minnesota State University Moorhead

Eliason, David W *Diesel Equipment Technology*

DIPL, Ridgewater College
AAS, North Dakota State College of Science

Ellefson, Megan Kelly*Math*

BSC, University of Minnesota
MSC, University of North Dakota

Embretson, Deborah L*Music*

BA, St. Olaf College
MA, Hamline University

Erickson, Sara Kristina Kern*Nursing*

BSN, Jamestown College

Evans, Bill L*Biology*

AAS, Minnesota State Community and Technical College
BS, The Citadel
MS, Medical College of Georgia

Fankhanel, Amy Rebecca*Nursing*

BSN, University of North Dakota

Field, Marla C*Business: Management,
Marketing and Sales*

BA, Moorhead State University
BS, Moorhead State University

Fjeld, Dixie L*Administrative*

BA, Concordia College
MA, University of St. Thomas

Flaskerud, Debra L*Computer Programming*

BS, Moorhead State University
MED, North Dakota State University

Francis, Daniel J *Digital Photography and Imaging*

DIPL, Minnesota State Community and Technical College

Frank, Eugene D*Radiologic Technology*

BS, Saint Francis Medical Center College
MA, Saint Marys University of Minnesota

Frannea, Ronald K*English*

BA, Moorhead State University
MA, University of North Dakota

Freeman, Roberta J*Communication*

AA, Bemidji State University
BS, Bemidji State University
MS, Bemidji State University
MA, North Dakota State University

Frider, Debra K*Dental Hygiene*

AS, North Dakota State School of Science

Gaarder, Carolyn J*Health Information Technology*

BA, College of Saint Scholastica
MLA, Minnesota State University Moorhead

Ganyo, Jennifer*English*

BA, University of Minnesota, Morris
MFA, Minnesota State University Moorhead

Garza, Sarah Anne*Medical Coding and Insurance*

DIPL, Northwest Technical College
CERT, Northwest Technical College

Gausman, Thomas A, MFA*Economics, Business*

BA, University of Minnesota, Morris
MA, Northern Illinois University
MS, Northern Illinois University

Gerhardson, Stefanie Leigh *Theatre*

BS, Bemidji State University
BA, Bemidji State University

Gibbins, Darren Royce*Graphic Design, Digital Photography
and Imaging*

AAS, Bismarck State College
BS, Moorhead State University

Godzinski, Ronald Peter*Philosophy*

BA, California State University - Chico
MA, Colorado State University

Goltz, Christopher A*Computer Programming*

BS, University of Mary

Griffin, Joseph A*Automotive Service Technology*

DIPL, Brainerd Technical Institute
DIPL, Alexandria Technical College

Grubb, Darrin F*Economics*

BA, Minnesota State University Moorhead
MBA, Minnesota State University Moorhead

Haagenson, Dana LaRae*Accounting*

BS, Minnesota State University Moorhead

Faculty Credentials

Haagenson, Loren M......*Human Resources*
 AA, Northland Community College
 BS, Minnesota State University Moorhead
 MM, University of Mary

Haecherl, Lisa M......*Dental Hygiene*
 AS, North Dakota State College of Science
 BS, Valley City State University

Hagen, LeRoy Dean.....*Dental Hygiene*
 DDS, School of Dentistry Marquette University

Halling, Melissa.....*Math*
 BS, North Dakota State University
 MA, Eastern Kentucky University

Haltli, Russell Alan.....*Construction Electricity*
 AAS, North Dakota State College of Science

Hanson, Kenneth C......*English*
 BS, Dickinson State University
 MFA, Minnesota State University Moorhead

Hanson, Nancy C......*English*
 AS, Minnesota State University Moorhead
 BA, Minnesota State University Moorhead
 MA, North Dakota State University

Hanson, Nancy.....*Dental Hygiene*
 CERT, North Dakota State College of Science
 AS, North Dakota State College of Science

Hanson, Robin Grollmus.....*English*
 AA, Pensacola Junior College
 BA, Florida State University
 MA, Pacific Lutheran University
 MLS, University of Maryland

Hanstad, Tanya J.....*Math*
 BA, Concordia College
 MS, North Dakota State University

Hartman, Robin Lee.....*Nursing*
 AS, Fergus Falls Community College
 BSN, Minnesota State University Moorhead

Heikes, David Arnold.....*English*
 BS, University of South Dakota
 MA, Western Washington University
 MA, University of South Dakota

Herbrandson, Angela Kaye.....*Nursing*
 AAS, Minnesota State Community and Technical College
 AS, Minnesota State Community and Technical College

Hetland, Mary K......*Psychology*
 BA, Concordia College
 MS, Minnesota State University Moorhead

Hibma, Jody Carroll.....*Biology*
 AS, Worthington Community College
 BS, South Dakota State University
 MS, Central Michigan University

Hibma, Julie Ann.....*Biology and Chemistry*
 BS, Central Michigan University
 MS, Central Michigan University

Hilton, Kristi Marie.....*American Sign Language*
 AAS, Southeast Technical Institute
 BA, Minnesota State University Moorhead
 MS, Minnesota State University Moorhead

Hinrichs, Andrew J......*Equine Science*
 BS, University of Minnesota, Crookston

Hintermeister, Melissa J......*Graphic Design Technology*
 BA, Concordia College

Hintgen, Sharon Voigt.....*Math*
 BA, University of Minnesota, Morris
 BS, Minnesota State University Moorhead
 MS, Bemidji State University

Hjalmquist, Dave C......*Computer Programming*
 DIPL, Northwest Technical College-Moorhead
 DIPL, Northwest Technical College-Moorhead

Holmquist, Sherrie L......*Business: Management,
 Marketing and Sales*
 AAS, University of Minnesota, Crookston
 MS, University of North Dakota

Hrdlicka, Janell Faye.....*Nursing*
 BSN, North Dakota State University

Hughes, Alan S.....*Construction Electricity*

Indieke, Gerald N.....*Construction Electricity*
 DIPL, Northwest Technical College-Wadena

Jensen, Crystal Rae.....*English*
 BA, Minnesota State University Moorhead
 MFA, Minnesota State University Moorhead

Jesser, Joanna K......*IT System Support, Information Technology*
 BSED, Mayville State University

Faculty Credentials

Johnson, Brenda Kay.....*Architectural Technology*
AAS, Minnesota State Community and Technical College

Johnson, Deb F..... *Custom Training*
BS, Moorhead State University

Johnson, Eric A..... *Art*
BS, North Dakota State University
MFA, University of North Dakota

Johnson, Erin Elizabeth*Biology*
BA, Augustana College
PHD, University of Delaware

Johnson, Jay E.....*Math*
BA, University of Minnesota, Morris
MAT, University of Wisconsin Eau Claire

Johnson, Keith.....*Construction Management*
DIPL, Moorhead Area Technical Institute
BS, Minnesota State University Moorhead

Johnson, Mark L.....*Political Science and History*
BA, University of North Dakota
MA, Louisiana State University and
Agricultural and Mechanical College

Johnson, Mark S*Electrical Lineworker*
CEC, Minnesota State Community and Technical College

Johnson, Peggy J.....*Music*
BM, Colorado State University
MM, Colorado State University
DMA, University of Cincinnati

Johnson, Randall Joseph.....*Information Technology*
CEC, Bismarck State College
BSC, University of Mary

Johnson, Robert P.....*Graphic Design Technology*
DIPL, Northwest Technical College-Moorhead

Johnson, Sheri A.....*Communication, Theatre*
BA, South Dakota State University
MS, South Dakota State University
MA, South Dakota State University

Johnson, Stephen R*Electrical Lineworker*
DIPL, Minnesota West Community and Technical College

Jorgens, Kelly J.....*Medical Administrative Assistant*
AAS, North Dakota State College of Science
BS, Bemidji State University

Kaiser, Lynn Renee.....*Business: Management,
Marketing and Sales*
BS, Minnesota State University Moorhead
MMA, University of Mary

Kallinen, Brian P*Nursing*
AS, Northland Community and Technical College

Kelman, Deborah C*Librarian*
BA, University of Illinois
MS, Western Michigan University

Kiecker, Carole A..... *Sociology*
BA, Northern State University
MS, Northern State University

King, Steven J.....*Football Coach, Athletic Director*
AA, Fergus Falls Community College
BA, St. Cloud State University
MA, Northern State University

Knoke, Karen R.....*Math*
BS, Moorhead State University
MA, University of St. Thomas

Kraemer, David J.....*Carpentry*
DIPL, Northwest Technical College-Detroit Lakes
BS, Bemidji State University

Kraft, Colleen F..... *Culinary Arts*
DIPL, Northwest Technical College-Moorhead

Laager, Lon A.....*Counselor*
BS, Bemidji State College
MS, Bemidji State College

Lacher, Marcus J.....*Administrative Management Technology*
BS, Minnesota State University Moorhead
MA, University of St Thomas

Lamey, Camelia.....*Biological Science*
BA, University of Minnesota
MS, University of Oklahoma

Larsen, Barbara A.....*Nursing*
BSN, University of North Dakota

Larsen, Nathanael..... *Psychology*
BA, Minnesota State University Moorhead
BS, Moorhead State University
MS, North Dakota State University
MSED, North Dakota State University
PHD, Capella University

Faculty Credentials

Lebahn, Marilyn A *Business: Management Marketing and Sales*
BS, North Dakota State University

Lee, Patrick M *Construction Electricity*
DIP, Wadena Area Vocational Technical Institute

Lindgren, Steven G *Psychology*
BS, Northern State University
MS, South Dakota State University

Line, Donald W *Construction Electricity*
DIP, Wadena Area Vocational Technical Institute

Loveland, Richard Alan *Fire Service*
AAS, Lake Superior College

Lovgren, Jennifer Elizabeth *Communication*
BS, North Dakota State University
MA, North Dakota State University

Lundborg, Shelley Kay *Business*
BA, Concordia College
MS, Minnesota State University Moorhead
MBA, University of Mary

Lutgen, Emily R *Biology*
BA, Grinnell College
MS, University of Montana-Missoula

Mann, Kirk Joel *English*
BA, Concordia College
MA, St. Cloud State University

Mann, Randolph W *ELL*
BS, Dickinson State University
MA, Iowa State University

Massen, Christie L *Medical Laboratory Technology*
BS, University of North Dakota
MS, University of North Dakota

McDaniels, Scott Gavin *Construction Electricity*
DIP, Minnesota State Community and Technical College

Meissner, Christofer W *Humanities*
BA, Moorhead State University
MA, University of Kansas
PHD, University of Kansas

Miller, Dennis M *Automotive Service Technology*
BS, Valley City State University

Miltich, Anthony J *English*
AA, Itasca State Junior College
BA, Saint John's University
MA, Bemidji State University
BS, Bemidji State University

Moeller, Michael Alan *Automotive Service Technology*
DIP, North Dakota State College of Science

Mohn, Shannon Dale *Automotive Service Technology*
AAS, Hennepin Technical College

Mohr, Angie Kay *Nursing*
AAS, College of Saint Catherine-Minneapolis
BS, North Central University
MSN, University of Minnesota

Moore, Cynthia L *Nursing*
DIP, Fergus Falls Community College
AS, Fergus Falls Community College
BSN, Minnesota State University Moorhead
MSN, Minnesota State University Moorhead

Morstad, Tracy L *Nursing*
BSN, Southern Illinois University
MSN, University of Mary

Mrazek, Joseph A *Mechanical Drafting and Design*
AA, Brainerd Community College
BS, Bemidji State University
MS, Bemidji State University

Murphy, Thomas James *Anthropology*
BS, Black Hills State University
BS, Minnesota State University, Mankato
MS, Minnesota State University, Mankato

Mutzenberger, Reuben T *Math*
BS, North Dakota State University
MED, North Dakota State University

Nansen, Gary Lee *Civil Engineering Technology*
BEN, University of Minnesota

Neece, Shari L *English*
BS, Minnesota State University Moorhead
LIC, Moorhead State University
MA, North Dakota State University

Nelson, Jeffrey O *Criminal Justice*
AA, Northland Community College
BA, Minnesota State University Moorhead

Faculty Credentials

Nerdahl, Joyce E <i>Nursing</i> LIC, Fergus Falls Community College RN, Central Lakes College BSN, Moorhead State University MSN, University of Minnesota	Peterson, Greg R <i>Diesel Equipment Technology</i> DIPL, Northwest Technical College-Moorhead
Neuenfeldt, Phyllis H <i>Math</i> BSED, North Carolina State University at Raleigh MED, East Carolina University	Pierce, Patsy <i>Nursing</i> CERT, Fergus Falls Community College
Nevala, David E <i>Heating, Ventillation and Air Conditioning</i> DIPL, Western Iowa Tech Community College	Pladson, Kristie G <i>Dental</i> DIPL, Rochester Community College AS, North Dakota State College of Science BS, Valley City State University MS, Minnesota State University Moorhead
Nielson, Laurel A <i>Sociology</i> BS, Mayville State University MA, North Dakota State University	Potter, Brenda A <i>Medical Administrative Assistant</i> BS, Moorhead State University
Nikolas, Arlin D <i>History</i> BA, Moorhead State University MS, North Dakota State University	Preuss, Tim <i>Information Technology</i> BS, Concordia College MED, North Dakota State University
Olson, Carla Nichole <i>Nursing</i> BSN, North Dakota State University MS, University of North Dakota	Prieve, Thomas M <i>Equine Science</i> BS, University of Minnesota DVM, University of Minnesota
Olson, David D <i>Math</i> BSED, Valley City State University MAT, Minot State University	Quamme, Kent <i>Business</i> BS, Dickinson State University MS, University of North Dakota
Otto, Teresa Uhde <i>English</i> BS, Bemidji State University MS, University of Wisconsin-Stout MA, Hamline University	Redlin, Jennifer Anne <i>Psychology</i> BS, North Dakota State University MS, North Dakota State University
Parker, Anthony J <i>Business Entrepreneurship</i> BSB, University of Minnesota MBA, Colorado State University-Pueblo	Reed, Amber L <i>Nursing</i> DIPL, Fergus Falls Community College AS, Fergus Falls Community College BSN, Minnesota State University Moorhead
Paton, John R <i>History</i> MA, University of Southern Maine BA, University of Southern Maine	Reisenauer, Kent James <i>PowerSport Technology</i> AAS, North Dakota State College of Science
Patrick, Judy A, CPA <i>Accounting</i> BBA, University of New Mexico-Anderson/Man MBA, Metropolitan State University	Retzlaff, Jason <i>Physical Education</i> AA, Fergus Falls Community College BS, North Dakota State University MS, North Dakota State University
Peltier, Robin Theresa <i>Dental</i>	Richter, Sarah Ann <i>Math</i> BS, St. Cloud State University MS, St. Cloud State University
Perry, Meghan Joy <i>Study Skills Tutor</i> BA, University of Minnesota	Ripplinger, Scott C <i>Automotive Service Technology</i> DIPL, East Grand Forks Technical Institute
Petermann, Shana R <i>Biology</i> BS, North Dakota State University MS, North Dakota State University	Risbrudt, Susan Marie <i>Nursing</i> CERT, Fergus Falls Community College AAS, Central Lakes College BSN, Minnesota State University Moorhead

Faculty Credentials

Roberts, Randy R *Architectural Technology*
DIPL, Northland Community and Technical College

Robertson, Maronda Sue *Counselor*
BS, University of Wisconsin-Madison
MS, Minnesota State University, Mankato

Roers, Mary B *Nursing*
AS, Fergus Falls Community College
ADN, Northland Community College
BSN, Moorhead State University
MSN, University of North Dakota

Rosell, Brian L *Auto Body Collision Technology*
DIPL, Northwest Technical College-Detroit Lakes

Rosen, Kenneth J *Construction Electricity*
DIPL, Northwest Technical College

Ruud, Terry Edward *English*
BS, Minnesota State University Moorhead
LIC, Minnesota State University Moorhead
MFA, Minnesota State University Moorhead

Samuelson, Kimberle Rae *Health Information Technology*
DIPL, Northwest Technical College-Moorhead
AS, Minnesota State University Moorhead

Saraswathamma, Manjusha T *Chemistry*
BSC, Mahatma Gandhi University - India
MS, Mahatma Gandhi University - India
MS, Cochin University of Science and Technology
PHD, North Dakota State University

Schaefer, Sally J *Nursing*
BSN, Minnesota State University Moorhead

Schirmer, Diana Rachel *English*
BA, Minnesota State University Moorhead
MFA, Minnesota State University Moorhead

Schirmer, Joshua D *English*
BA, Minnesota State University Moorhead

Schulz, Douglas L *Chemistry*
PHD, Northwestern University

Schwalboski, Ann Marie *English*
BS, St. Cloud State University
MA, Bowling Green State University
MFA, Emerson College

Schwandt, Kenneth F *Pharmacy Technology*
BS, North Dakota State University

Schwartz, Eugene M *Carpentry*

Seaborn, Susan J *Nursing*
BSN, American Sentinel University

Seibold, Shaun E *Nursing*
BS, The University of Montana-Missoula
UKN, Concordia College

Shepard, Jana Lee *English*
BA, St. Cloud State University
MA, St. Cloud State University

Shumake, Crystal K *Dental Assisting*
CERT, North Dakota State College of Science
AAS, Lake Superior College
BS, Minnesota State University Moorhead

Skatvold, Karina Marie *Dental Hygiene and Dental Assisting*
BS, Old Dominion University
MA, University of Oklahoma Norman Campus

Smith, Cliff Fagerburg *Math*
BS, Portland State University
MS, Portland State University

Smith, Leretta May *Sociology*
BS, North Dakota State University
MS, North Dakota State University
PHD, South Dakota State University

Steidl, Carole Friestad *Dental Hygiene and Dental Assisting*
AS, North Dakota State College of Science
BS, Valley City State University
MA, University of St. Thomas

Stende Miller, Mary Louise *Pharmacy Technology*
BS, North Dakota State University

Stenerson, Diane Lynn *English*
AS, Fergus Falls Community College
BS, Minnesota State University Moorhead
MED, Lesley University

Stigen, Nancy E, CMA *Accounting*
AA, Moorhead Area Vocational Technical Institute
BS, Moorhead State University

Stone, Megan M *Psychology*
BA, Minnesota State University Moorhead
MA, University of Colorado at Denver

Faculty Credentials

Strom, Terri Lynn *Volleyball Coach*

AA, Fergus Falls Community College
BA, University of Minnesota, Morris

Swanson, Alicia R *Nursing*

BSN, North Dakota State University
MSN, Concordia College

Swedberg, Marilyn *Psychology*

AA, Fergus Falls Community College
BA, Moorhead State College
MS, St. Cloud State University

Swenby, Christopher J *Carpentry*

BA, Concordia College

Synstelien, Loren A *Psychology*

AA, Fergus Falls Community College
BA, Concordia College
MSW, University of Connecticut- School of Social Work

Szczech-Johnson, Janet D *Network Technology Administration, Cisco*

DIPL, Wadena Area Vocational Technical Institute
BS, Bemidji State University
MS, Bemidji State University

TenEyck-Stafki, Susan D *Childcare and Education*

BS, Moorhead State University
LIC, Moorhead State University
MS, Moorhead State University

Tharaldson, Brent A *Web Development*

AAS, Minnesota State Community and Technical College
BA, Minnesota State University Moorhead

Thompson, Fonda Ruth *Medical Transcription*

DIPL, Minnesota State College Moorhead
DIPL, Northwest Technical College-Moorhead

Thorstenson, Anthony M *Philosophy*

BA, University of Minnesota-Duluth
MA, Ohio University

Titus, Mary J *Art*

BA, University of North Dakota
MFA, University of North Dakota

Todt, Rebecca W *Nursing*

BS, Berea College

Tougas-Mann, Cynthia Kay *Childcare and Education*

AA, Central Lakes College
BES, St Cloud State University

Trombley, Kathryn M *Communication*

BS, Saint John Fisher College
MA, Central Michigan University

Trosvig, Michael R *Music*

MM, University of Colorado at Boulder

Ullmer, Mike W *Marine Engine Technology*

DIPL, Northwest Technical College
DIPL, Northwest Technical College
AAS, Fergus Falls Community College
BS, Bemidji State University

Vigness, Jeanne Jo *Medical Administrative Assistant*

BS, University of Mary

Wagner, Dennis D *Construction Electricity*

AAS, North Dakota State College of Science

Walters, Christopher A *English*

BA, University of Minnesota
MA, The State University of New York at Buffalo

Ward, Carrie M *Administrative*

BS, Minnesota State University Moorhead
MA, Minnesota State University Moorhead

Weber, Celeste N *Counselor*

MS, Minnesota State University Moorhead

Weber, Dean A *Plumbing*

DIPL, Northwest Iowa Community College

Weber, Richard T *Diesel Equipment Technology*

DIPL, North Dakota State College of Science

Weiby, Darlene K *Cosmetology*

DIPL, Wadena Area Vocational Technical Institute

Werner, Perry N *Librarian*

BA, University of Nebraska at Kearney
MA, University of Iowa
MLIS, Emporia State University

Wgeishofski, Rory John *Cosmetology*

DIPL, Wadena Area Vocational Technical Institute

Whitney, Sara Lynn *Communication*

AA, Bismarck State College
AAS, North Dakota State University
BS, North Dakota State University
MA, North Dakota State University

Faculty Credentials

Wiecks, Jana K.....*Medical Administrative Assistant*
DIPL, Minnesota State Community and Technical College

Wiese, Gerald A.....*Auto Body Collision Technology*
DIPL, Central Lakes College

Wika, Sue T..... *Sociology*
BS, South Dakota State University
MSC, University of Reading
PHD, South Dakota State University

Wilkens, Eric S..... *Computer Network Security*
AAS, Community College of the Air Force
BS, Bellevue University
MPA, University of Oklahoma Norman Campus
MS, Bellevue University
PHD, Capella University

Wilkens, Michele Lee.....*Accounting*
AAS, Metropolitan Community College Area
BBA, Bellevue University
MBA, Bellevue University

Williams, Marcia E.....*Accounting*
ASBA, North Dakota State College of Science
BSBA, University of North Dakota

Willoughby, Daniel R.....*Math*
BS, Minnesota State University Moorhead
MS, Northern Arizona University

Winter, Doris A.....*Medical Administrative Assistant*
DIPL, Alexandria Technical College

Wolden, Diane M.....*Nursing*
BSN, College of Saint Benedict
MPH, University of Minnesota

Younger, Paul.....*Construction Management*
BS, Minnesota State University, Mankato

Zachariason, Robert J.....*Construction Electricity*
DIPL, Northwest Technical College

Zirbes, Joan M.....*Administrative Support*
BS, Moorhead State University

Directions to Campuses



Detroit Lakes Campus

900 Highway 34 East

From the East on US Highway 10

At the first stoplight as you enter Detroit Lakes, turn right onto Kris Street. Cross over the railroad track and turn left onto Randolph Road. Travel approximately 1 mile to the stop sign on Roosevelt Avenue. Turn right and travel approximately a half mile to the stop light; turn right on State Highway 34. The campus is ahead on your left.

From the East on US Highway 34

Entering the city, the campus is on your right (across from the Cenex Station).

From the West on US Highway 10 East

Continue on Highway 10 to the stop light at the intersection of US Highways 10 and 59. Turn left and continue for approximately two blocks. Turn right onto State Highway 34. The campus is about 1 mile ahead on your left.

From the South on US Highway 59

Travel on Highway 59 to the stop light at the intersection of US Highways 59 and 10. Continue straight, passing over the bridge. Turn right onto State Highway 34; the campus is about 1 mile ahead on your left.

From the North on US Highway 59

Travel on Highway 59 to the intersection of US Highway 59 and State Highway 34. Turn left onto Highway 34; the campus is about 1 mile ahead on your left.



Fergus Falls Campus

1414 College Way

From the East on Interstate 94

Take Exit 54 and turn right onto Lincoln Avenue. Turn left onto College Way, and the campus is on your right.

From the West on Interstate 94

Take Exit 54 and turn left onto Lincoln Avenue. Turn left onto College Way, and the campus is on your right.

From the East on State Highway 210 West

Turn right onto Pebble Lake Road/Vernon Avenue and continue to Union Avenue. At the stop sign, turn right onto Vernon Avenue and then left onto Lincoln Avenue at the downtown intersection. Turn right onto College Way, and the campus is on your right.

From the North on State Highway 59

At the junction with Interstate 94, turn left onto County Road 88/Fir Avenue and continue to Tower Road. Turn right onto Tower Road and continue to Spartan Drive. Turn left at the north entrance to the campus.

Directions to Campuses



Moorhead Campus

1900 28th Avenue South

From the West on Interstate 94

Take Exit 1B (20th Street) and turn left onto 20th Street. Cross over the interstate, and you will see the college on your left. Turn left at 28th Avenue South.

From the East on Interstate 94

Take Exit 1A and turn right onto Highway 75. Immediately after your turn, take another right at the Minnesota State Community and Technical College directional sign and follow the frontage road (28th Avenue) to the campus, which will be on your left.

From the East on Highway 10

Turn left at the 21st Street intersection, one stoplight beyond Highway 75 North. Follow 21st Street beneath the railroad bridge; the street angles to the right, but continue straight onto 20th Street South. Continue for approximately two miles to 28th Avenue South. The campus will be on your right.

North Moorhead Campus

1110 14th Street South

From the main campus, travel west on either 24th or 28th avenues (the main streets on the north or south sides of the campus). Turn right onto 14th Street South and continue to 12th Avenue South, where the campus is located.



Wadena

405 Colfax Ave SW

From the North on US Highway 71

At Colfax Avenue/State Highway 29, turn right and continue on Colfax Avenue for five blocks.

From the South on US Highway 71

At Colfax Avenue/State Highway 29, turn left and continue on Colfax Avenue for five blocks. The campus is on your left.

From the East on US Highway 10 West

Turn left onto State Highway 71 and continue to Colfax Avenue/US Highway 29. Turn right onto Colfax Avenue and continue for five blocks. The campus is on your left.

From the West on US Highway 10 East

Turn right onto Highway 71 and continue to Colfax Avenue/Highway 29. Turn right onto Colfax Avenue and continue for five blocks. The campus is on your left.

From the South/West on State Highway 29

The campus will be on your right shortly after entering the city limits.

Minnesota State

Community and Technical College



Detroit Lakes

900 Highway 34 East
Detroit Lakes, MN 56501-2698
218.846.3700
Fax: 218.846.3794



Fergus Falls

1414 College Way
Fergus Falls, MN 56537-1000
218.736.1500
Fax: 218.736.1510



Moorhead

1900 28th Avenue South
Moorhead, MN 56560-4899
218.299.6500
Fax: 218.299.6810



Wadena

405 SW Colfax Avenue
Wadena, MN 56482-1447
218.631.7800
Fax: 218.631.7904



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