

2015-2016

# COLLEGE CATALOG



Minnesota State  
Community and Technical College



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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 E113, 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 E113  
Moorhead, MN 56560  
Telephone: 218.299.6870  
Fax: 218.299.6513  
Email: doug.andring@minnesota.edu

**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.ncahlc.org](http://www.ncahlc.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.  
Minnesota State Colleges and Universities is an Equal Opportunity/Affirmative Action/  
Veterans/Disability employer/educator committed to the principles of diversity.

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](http://www.minnesota.edu).

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# Welcome to Minnesota State Community and Technical College!

Minnesota State Community and Technical College has campuses in Detroit Lakes, Fergus Falls, Moorhead and Wadena, and an online program that offers numerous opportunities to *discover your future*. Whether you are interested in career and technical training, academic transfer education, advancing in your existing career or just enriching your life and personal interests, M State can meet your professional and personal learning needs. M State serves nearly 8,000 students each year, so we offer large college advantages with a small college feel.

There is something for everyone at M State, and I invite you to visit any of our campuses or our website at [minnesota.edu](http://minnesota.edu) to explore the many pathways open to you. You will find caring and helpful student services staff ready to assist you — be sure to stop by one of our campus Spartan Centers for help with studying, developing a resume, practicing your interviewing skills, getting a job or transferring to a university. Be sure to engage with our experienced faculty who are experts in their fields of study and discipline — you'll get extra attention with our smaller class sizes. Everyone on campus is eager to assist you in meeting your educational, career and transfer goals, so be sure to take advantage of that.



Your success is our priority, and we are focusing on realizing what we do extremely well, reconnecting with our stakeholders to determine what we can do better and redesigning what we offer to achieve more for you, for the regional workforce and for our communities.

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 and working with you to help you reach your career and transfer goals.

Best wishes for success with your college plans and your personal goals. Remember, your success is our vision!

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  
 Vice President/  
 Chief Academic Officer..... 218.736.1504  
 Vice President/  
 Chief Student Development Officer .....218.631.7810

Academic Advising ..... 218.846.3670  
 Assessments/Accuplacer..... 218.846.3777  
 Bookstore..... 218.846.3727  
 Child Care ..... 218.847.1145  
 Computer Help Center ..... 218.846.3764  
 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 ..... 218.846.3720  
 Housing ..... 218.846.3670  
 Information ..... 218.846.3670  
 Library ..... 218.846.3772  
 Multicultural Services/  
 Diversity and Inclusion..... 218.846.3756

Student Life ..... 218.846.3768  
 Learning Services/Tutoring ..... 218.846.3714  
 Student Records ..... 218.846.3789  
 Veterans Services ..... 218.299.6881

## eCampus

### Academic and Student Services

Dean of Student Access..... 218.736.1528  
 Dean of Student Success ..... 218.299.6535  
 Solution Center ..... 877.450.3322  
 Vice President/  
 Chief Academic Officer..... 218.736.1504  
 Vice President/  
 Chief Student Development Officer ..... 218.631.7810

Academic Advising ..... 218.299.6590  
 Assessments/Accuplacer..... 218.736.1569  
 Bookstore..... 218.736.1569  
 Computer Help Center ..... Contact any campus help desk  
 Disability Services ..... Contact campus  
 associated with your program  
 Enrollment..... 218.736.1660  
 Financial Aid ..... Contact campus  
 associated with your program  
 Information ..... 218.736.1569  
 Library ..... Contact any campus library  
 Student Success Center/Tutoring..... Contact any campus  
 Student Records ..... 218.631.7808  
 Veterans Services ..... 218.299.6881

# Directory of College Services

## Fergus Falls

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### 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
Vice President/ Chief Academic Officer.....	218.736.1504
Vice President/ Chief Student Development Officer .....	218.631.7810

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
Computer Help Center .....	218.736.1655
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.....	218.736.1760
Foundation .....	218.736.1514
Housing .....	218.736.1635
Information .....	218.736.1533
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

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### Academic and Student Services

Academic Dean/Liberal Arts .....	218.299.6544
Academic Dean/Career and Technical.....	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
Vice President/ Chief Academic Officer.....	218.736.1504
Vice President/ Chief Student Development Officer .....	218.631.7810

Academic Advising .....	218.299.6880
Assessments/Accuplacer.....	218.299.6845
Bookstore.....	218.299.6570
Computer Help Center .....	218.299.6568
Counseling.....	218.299.6618
Disability Services .....	218.299.6882
Enrollment.....	218.299.6581

# Directory of College Services

Facilities..... 218.299.6522  
 Financial Aid ..... 218.299.6511  
 Foundation ..... 218.299.6826  
 Information ..... 218.299.6500  
 Library ..... 218.299.6530  
 Multicultural Services/  
 Diversity and Inclusion ..... 218.299.6806  
 Student Life ..... 218.299.6853  
 Learning Center/Tutoring..... 218.299.6882  
 Student Records ..... 218.299.6593  
 Veterans Services ..... 218.299.6925

Disability Services ..... 218.631.7832  
 English Language Learner..... 218.632.2450  
 Enrollment..... 218.631.7818  
 Facilities..... 218.631.7906  
 Financial Aid ..... 218.736.1534  
 Foundation .....218.631.7931  
 Information ..... 218.631.7821  
 Computer Help Center ..... 218.631.7873  
 Library ..... 218.631.7865  
 Student Life .....218.631.7827  
 Learning Center/Tutoring..... 218.631.7870  
 Student Records and Transcripts ..... 218.631.7819  
 Veterans Services ..... 218.299.6881

## Wadena

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### Academic and Student Services

Academic Dean.....218.631.7817  
 Campus Director of Student Services ..... 218.631.7832  
 Dean of Student Access..... 218.736.1528  
 Dean of Student Success ..... 218.299.6535  
 Solution Center ..... 877.450.3322  
 Vice President/  
 Chief Academic Officer..... 218.736.1504  
 Vice President/  
 Chief Student Development Officer .....218.631.7810  
 Academic Advising .....218.631.7827  
 Assessments/Accuplacer.....218.631.7827  
 Bookstore..... 218.631.7825  
 Child Care ..... 218.632.2348

## K12 Collaborations

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Career Articulation Agreements .....218.347.6215  
 Center for College Readiness .....218.347.6215  
 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 • 877.450.3322  
 Fax: 218.846.3794



## Fergus Falls

1414 College Way  
 Fergus Falls, MN 56537-1000  
 218.736.1500 • 877.450.3322  
 Fax: 218.736.1510

### About the Campus

The Detroit Lakes campus, with a total enrollment of 780, 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.

### About the Campus

The Fergus Falls campus, with a total enrollment of 760, 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, 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 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 over \$4 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 new Cancer Care and Research Center.

### eCampus:

1.888.696.7282  
 ecampus@minnesota.edu

### About the Campus

With an enrollment of 3,958, 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



## Moorhead

1900 28th Avenue South  
Moorhead, MN 56560-4899  
218.299.6500 • 877.450.3322  
Fax: 218.299.6810



## Wadena

405 SW Colfax Avenue  
Wadena, MN 56482-1447  
218.631.7800 • 877.450.3322  
Fax: 218.631.7904

### About the Campus

The Moorhead campus is a vibrant, comprehensive community and technical college, offering in-demand technical/career programs and liberal arts and sciences to 2,993 enrolled students. Students have the option of completing Associate in Science transfer degrees in Accounting, Biological Sciences, Business, Chemistry, Criminal Justice, Engineering, Environmental Science, Human Resources, Information Technology and Nursing or an Associate in Arts transfer degree with the intent of earning a bachelor's degree or beyond. Innovative programs allow students to prepare for careers in exciting and expanding sectors including transportation, construction trades, human services, graphic and mechanical design, business and health. Industry sponsorships provide students in the transportation, construction trades and health career areas with the opportunity to combine work and school in a synergistic approach giving students needed skills and industry qualified workers. The Moorhead campus proudly supports one of the area's most extensive and robust art collections. Food service is created by the Culinary Arts students. Academic and technical skill competitions such as SkillsUSA provide opportunities for students to compete on a national level. M State - Moorhead Campus students have a history of placing in the top 15 regionally and the top 10 nationally. Student services supports students with financing, tutoring, academic advising, counseling and a myriad of opportunities for success. Scholarships abound through Moorhead Community and Technical College Foundation.

### About the Community

The Fargo-Moorhead metro area, with a population of 228,300, is a college town, small enough to feel comfortable yet offering all the benefits of a larger metropolitan area with its cultural, sports, recreational and commercial diversity. Arts and culture flourish, 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 as a center for agri-business, marketing, technology, research, health and construction in the heart of the Red River Valley. The metropolitan area is a regionally recognized health care provider whose members are in the process of constructing a state-of-the-art hospital complex.

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 the Campus

The Wadena campus, with a total enrollment of 597, offers degrees in a range of fields, including business, health care, cosmetology, and electrical line worker. 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.





## About Us.

Minnesota State Community and Technical College (M State) is a member of the Minnesota State Colleges and Universities system. M State serves more than 8,000 students in credit courses each year in more than 70 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 560 employees across Minnesota.

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. 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.

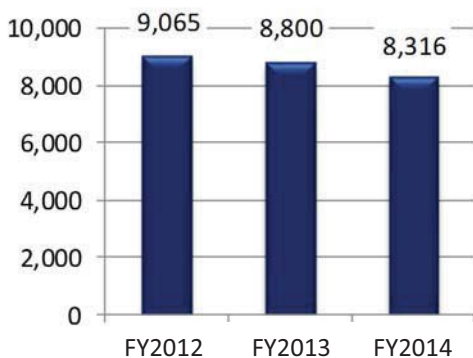


## Healthy Enrollment.

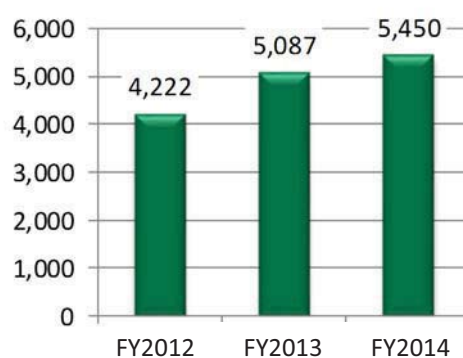
M State has made progress in College-wide enrollment since 2008, experiencing **growth in online courses and programs and in site-based workplace training** in business and industry. Custom training staff work closely with each of our communities to meet the ever-changing needs of local businesses and industries.

By partnering with communities, the College also provides custom training services and other responsive training programs to more than 5,000 people through our business partnerships.

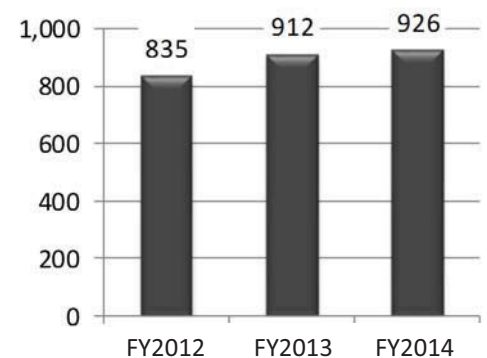
Credit Based Headcount



Custom Training Headcount



eCampus Headcount\*

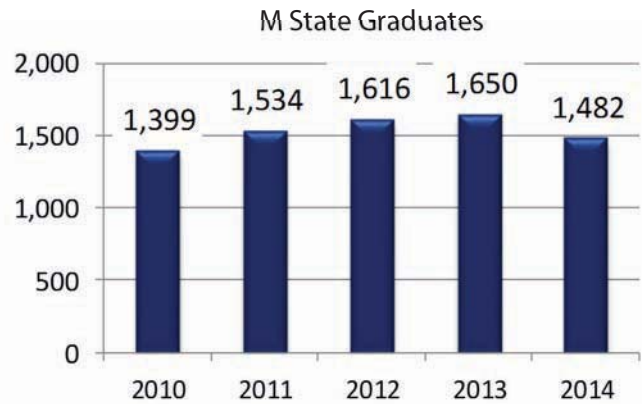


\*eCampus Majors, 30th Day Headcount

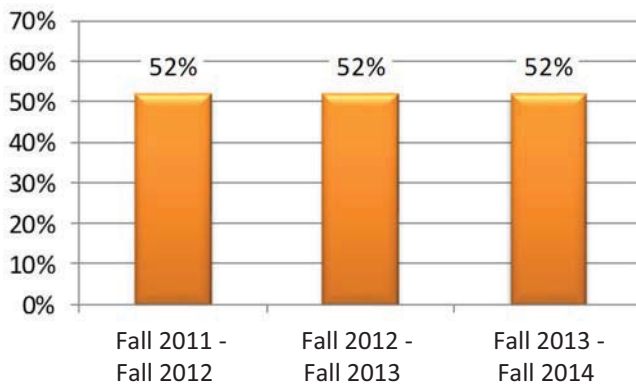


## Quality of Graduates.

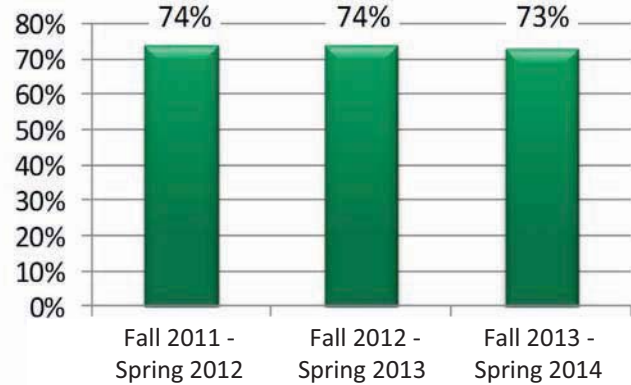
Student success is measured by student persistence, program completion, graduation and transfer rates. We also measure success by looking at the pass rates for licensure exams. In 2014, **M State graduated 1,482 students**. Within the past three years, 49 percent of M State students graduated or transferred to continue their education at another college. M State students **had a pass rate of 96 percent on licensure exams** in FY13, in the nursing, criminal justice and radiology programs.



Fall to Fall Persistence Rate  
All Students



Fall to Spring Persistence Rate  
All Students



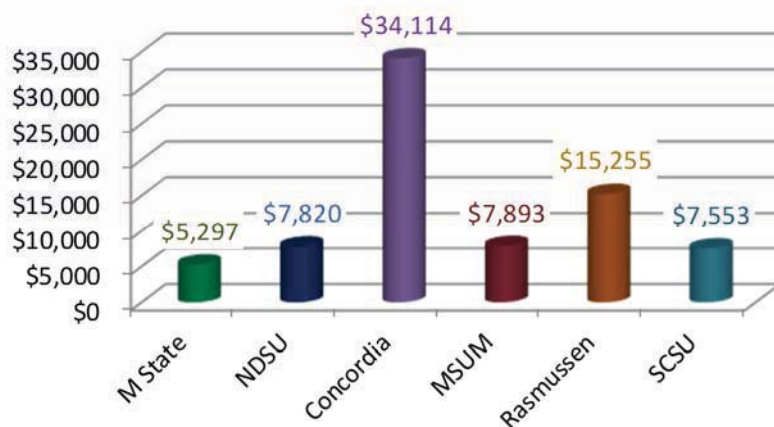
## Serving a Diverse Student Population.

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 2014, 12 percent of our students were of an ethnic background other than Caucasian/white, 46 percent had high financial need, 23 percent were first-generation students and 51 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 the fall of 2013, a two-year tuition freeze was approved by the MnSCU Board of Trustees. This appropriation of state funds by the Legislature further enables M State to strengthen our commitment to provide assessable education for students.

2013 - 2014 Tuition & Fees Comparison



The Tuition and Fees Comparison chart compares tuition rates for full-time students who are state residents.

Reference: Minnesota Office of Higher Education  
[www.ohe.state.mn.us](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**.



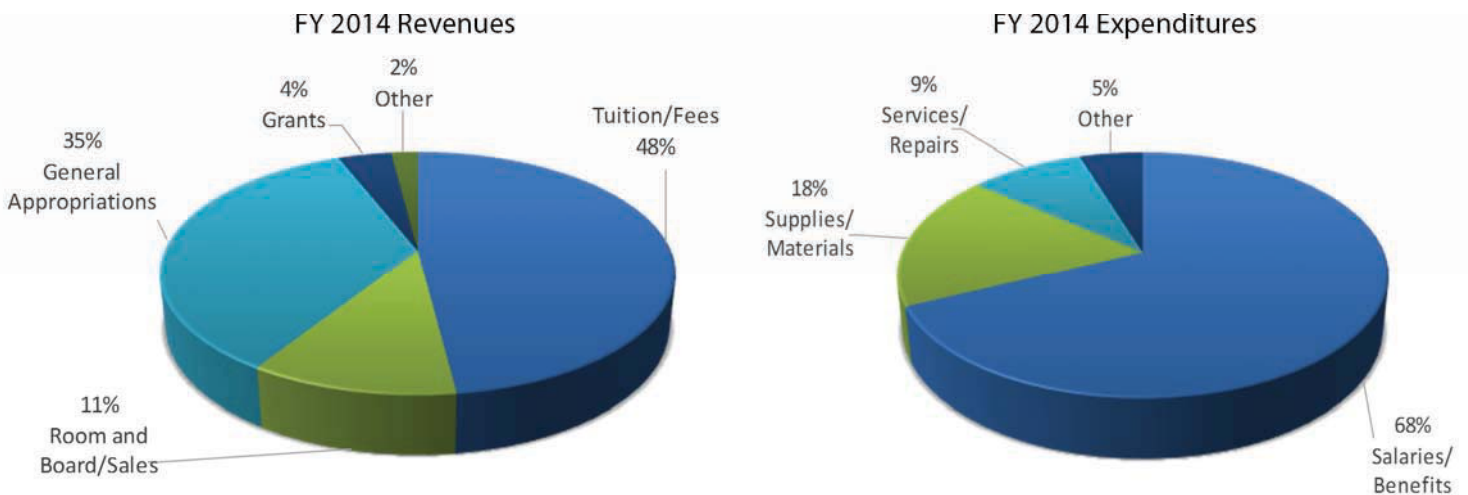
Higher Learning Commission (HLC) Website: [www.ncahigherlearningcommission.org](http://www.ncahigherlearningcommission.org)

HLC AQIP Website: [www.hlcommission.org/Pathways/aqip-home.html](http://www.hlcommission.org/Pathways/aqip-home.html)

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 \$1,902,472 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.

- ✓ *M State has partnered with high schools to offer **concurrent courses to high school students** since 1985. During the 2014-15 academic year, M State reached over 1,500 students with over 250 offerings at 35 partner high schools.*
- ✓ *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 eCampus in the High School, which served 110 students in FY 15.*

Through these combined efforts, M State works collaboratively with more than **50 Minnesota high school partners** to provide credit-based offerings and college readiness services.

## 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.

### 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.

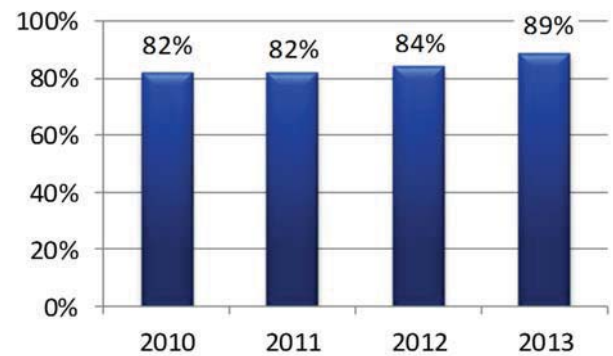
FY 2014 Full-Time Faculty Tenure



### Employment of Graduates

Not only is M State committed to educating our communities, we are invested in them! From 2008 to 2013, M State has assisted in **educating more than 8,736 graduates available for employment** in their fields of study. The College's 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.

Percent of Graduates Employed in Related Field\*



\*Percent reported by students available for employment

### Federal Grants

M State is currently managing two federal grants totaling over \$4,700,000. The U.S. Department of Labor, TAACCCT Grant, will support the training of over 400 residents of west central Minnesota in careers in construction and utilities in the next three years. The U.S. Department of Education, Title III Grant, supports institutional improvements in business efficiencies, faculty development and student development.

### 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 MnSCU, 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."**

### 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

Custom Training Services supports business and industry growth in Minnesota. For more than 20 years we have worked with companies to help them expand and become more efficient and to develop a skilled workforce.

## Service Area

CTS provides skills and technology training for individuals and organizations in the communities of Detroit Lakes, Fergus Falls, Moorhead and Wadena, as well as the surrounding areas of west central Minnesota and eastern North Dakota. Training is available on-site, at a campus or online. CTS serves approximately 6,700 students annually, providing more than 90,000 hours of training. We have worked with more than 500 companies in Minnesota and Eastern North Dakota to offer contract training or enrolled their workers in open enrollment classes.

## 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

- Business Development
- Health and Emergency Services
- Safety
- Trade and Industry
- Transportation

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:

## Business Development

- Behavioral Expectations and Interviewing Skills
- Bullying in the Workplace
- Conducting Performance Appraisals
- Customer Service
- Dealing with Difficult People
- Diversity/Culture Change/Generation Gap
- Facilitating Lean Projects
- Franklin Covey Opportunities
- Human Resources Aids
- Interpersonal Skills
- Leadership Management
- Lean Implementation
- Making the Most of Change in the Workplace
- Sales Effectiveness
- Selling Services in a Product World
- Social Media
- Software Applications (Basic to Advanced)
- Stress in the Workplace
- Train the Trainer

## Health and Emergency Services

- Confined Space Rescue
- Continuing Education for Nurses, Social Workers and Dental Professionals
- CPR and First Aid Training
- Fire Fighter Training
- Hazardous Materials
- ICD-10 Training
- LPN Lean Leadership Training
- Live Fire Training
- Medication Administration for School Personnel
- Medication Administration for Unlicensed Personnel (MN)
- Medication Administration II (ND)
- Minnesota Cosmetology Continuing Education 4-hour Renewal Course
- National Fire Academy Courses
- NFPA 1670 Technical Rescue Training
- Nursing Assistant Training
- Nursing Assistant/Home Health Aide Testing
- OSHA Required Courses
- Rapid Intervention Team Training



- Refresher Courses State Certification Test Review
- RN and LPN Nurse Refresher Courses
- Rope Rescue
- Search & Rescue
- Tactics and Strategies Courses
- Training Officer and Chief Officer Courses
- Vehicle Extrication

### Safety

- Fall Protection
- Forklift/Powered Industrial Vehicle Operator Training
- Forklift Train-the-Trainer
- HazComm
- HazMat
- Lanyard/Harness
- Lockout-Tagout
- Machine Guarding
- NFPA 70 E Arc Flash
- OSHA 10/30 Construction
- OSHA 10/30 General Industry
- Personal Protective Equipment (PPE)
- Rigging/Hoisting
- Right-to-Know
- Workplace Violence

### Trade and Industry

- AutoCAD
- Automation
- Basic and Advanced Manufacturing Technologies
- Basic Technical Skills
- BICSI Installer and Technician Level Training
- Blueprint Reading
- Continuous Improvement
- Data Communications
- Electrical Continuing Education
- Electrical Troubleshooting
- Electronics
- Fiber Optics
- HVAC
- ISO 9001
- LEAN
- MIG and TIG Welding
- Mechanical / Industrial Maintenance
- Power Limited and Test Preparation
- Precision Machining
- Project Management
- Quality
- Sanitation ServSafe
- Statistical Process Control
- Steam Plant Engineering/Boiler
- Telecommunications
- Technical Problem Solving
- Test Equipment

### Transportation

- CDL Training (coming Fall 2015)
- MN Commercial Vehicle Inspection Recertification
- Motorcycle Safety Courses

### 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

### Amy Hochgraber, Director of Business and Industry

Custom Training Services  
900 Hwy 34 East  
Detroit Lakes, MN 56501  
218.846.3766 (office)  
218.846.3706 (fax)  
218.849.0811 (cell)  
amy.hochgraber@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)  
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 lifelong 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](http://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/](http://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.**

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 [bes.dl@arvig.net](mailto:bes.dl@arvig.net).

## Incubator Locations

BES opened its first business incubator in Detroit Lakes in October 2009 and has an incubator in Hawley. 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 218.846.3733 or go online for an application to [www.BESMState.com](http://www.BESMState.com).

### Detroit Lakes

900 Hwy 34 East, Detroit Lakes, MN 56501

218.846.3733 (phone)

218.844.5423 (fax)

[BES.dl@arvig.net](mailto:BES.dl@arvig.net)

### Hawley

407 6th Street, Hawley, MN 56549

218.486.4600 (phone)

218.486.4601 (fax)

[BES.hawley@arvig.net](mailto:BES.hawley@arvig.net)

# Accreditation and Approvals

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

230 South LaSalle Street, Suite 7-500  
Chicago, IL 60604-1411  
Website: [www.ncahlc.org](http://www.ncahlc.org)  
Phone: 800.612.7440 or 312.263.0456

Programs accredited/approved by additional 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: [www.natef.org](http://www.natef.org)

### Cosmetology (Wadena)

Minnesota Board of Cosmetologist Examiners  
2829 University Ave. SE, Suite 710  
Minneapolis, MN 55414  
Phone: 651.201.2742  
Fax: 612.617.2601  
email: [bce.board@state.mn.us](mailto:bce.board@state.mn.us)  
Website: [www.bceboard.state.mn.us](http://www.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  
Website: [www.dps.mn.gov](http://www.dps.mn.gov)

### Dental Hygiene and Dental Assisting (Moorhead)

Commission on Dental Accreditation of ADA  
211 East Chicago Avenue  
Chicago, IL 60611  
Phone: 800.621.8099  
Website: [www.ada.org](http://www.ada.org)

### Electrical Lineworker (Baudette, Wadena)

Minnesota Rural Electric Association (MREA)  
11640 73 Ave. N.  
Maple Grove, MN 55369  
Phone: 763.424.1020  
Website: [www.mrea.org](http://www.mrea.org)

### Electrical Technology (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: 651.284.5005 or 800.342.5354  
Website: [www.dli.mn.gov/BOE.asp](http://www.dli.mn.gov/BOE.asp)

### 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  
Website: [www.cahiim.org](http://www.cahiim.org)

### Massage Therapy (Wadena)

National Certification Board for Therapeutic Massage and Bodywork (NCBTMB)  
1333 Burr Ridge Parkway, Suite 200  
Burr Ridge, IL 60527  
Phone: 630.627.8000 or 800.296.0664  
email: [info@ncbtmb.org](mailto:info@ncbtmb.org)  
Website: [www.ncbtmb.org](http://www.ncbtmb.org)

### Medical Laboratory Technician (Fergus Falls)

National Accrediting Agency for Clinical Laboratory Sciences  
5600 N. River Rd.  
Suite 720  
Rosemont, IL 60018  
Phone: 773.714.8880  
Fax: 773.714.8886  
Website: [www.naacls.org](http://www.naacls.org)

### Nursing (AS) (Detroit Lakes, Fergus Falls, Moorhead, Wadena)

Approved by: Minnesota Board of Nursing  
2829 University Ave. Southeast, #200  
Minneapolis, MN 55414-3253  
Phone: 612.317.3000  
Toll Free: 800.627.3529  
Fax: 612.617.2190  
Website: <http://mn.gov/health-licensing-boards/nursing/>

### Pharmacy Technology (eCampus)

American Society of Health Systems Pharmacists  
7272 Wisconsin Avenue  
Bethesda, MD 20814  
Phone: 866.279.0681  
Website: [www.ashp.org](http://www.ashp.org)

### Radiologic Technology (Detroit Lakes and eCampus)

Joint Review Committee on Education in Radiologic Technology  
20 N. Wacker Drive Suite 2850  
Chicago, IL 60606-3182  
Phone: 312.704.5300  
Fax: 312.704.5304  
Website: [www.jrcert.org](http://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  
Phone: 651.284.5005 or 800.657.3944  
Website: [www.dli.mn.gov](http://www.dli.mn.gov)

### Practical Nursing (Diploma/AAS)

(Detroit Lakes, Fergus Falls, Moorhead, Wadena)  
Approved by: Minnesota Board of Nursing  
2829 University Ave. Southeast, #200  
Minneapolis, MN 55414-3253  
Phone: 612.317.3000  
Toll Free: 800.627.3529  
Fax: 612.617.2190  
Website: <http://mn.gov/health-licensing-boards/nursing/>

## 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 student Right to Know discloses annual student completion and graduation rates and is available on the college website or by calling 877.450.3322.

### Annual Security Report

The Annual Security Report includes details 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 Annual Security Report is distributed annually to students and employees and is available from the Student Development Services office on each campus. Prospective students and employees can obtain this information from the college website at [www.minnesota.edu](http://www.minnesota.edu) or by calling 877.450.3322.

### Cost of Attendance

Visit the college website for information on tuition, fees, estimated book and cost supplies, additional program costs and 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 on the college website.

### Drop/Add/Withdraw

Refer to the college website for the most current Drop/Add/Withdraw policy, which explains the process for making course enrollment changes.

### Academic Program Information

A listing of all academic programs and their specific requirements is available on the college website.

### Family Education Rights and Privacy Act (FERPA)

The Family Education Rights and Privacy Act affords 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 complete FERPA policy is included in the Catalog and Handbook and on the college website.

### Financial Assistance

The college website and Student Development Services staff can provide the most current information on the availability of financial aid, 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.

## College Policies

M State policies are regularly reviewed, and policy changes may occur during an academic year. Please visit the college website for updates to policies 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 policies in an alternate form.

## Admission

As an open enrollment 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](http://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 and through articulation agreements for college credit, Advanced Placement courses, 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](http://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](http://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 does not intend to immediately pursue a certificate or degree program and who is not seeking financial aid need not go through formal admission procedures. No proof of high school graduation is required of this type of student. Visiting students must provide appropriate documentation in order to enroll in courses with prerequisites.

## Veterans Benefits

The majors offered by M State have been approved by the Minnesota State Approving Agency for veterans and their dependents eligible for GI Bill educational benefits. To determine eligibility or for assistance with GI Bill educational benefits, students should visit with one of our veterans assistance coordinators. In Moorhead contact Aaron Jensen at 218.299.6925 or email at [aaron.jensen@minnesota.edu](mailto:aaron.jensen@minnesota.edu). In Detroit Lakes, Fergus Falls or Wadena contact Eric Abell at 218.299.6881 or email at [eric.abell@minnesota.edu](mailto:eric.abell@minnesota.edu). eCampus students can contact either Abell or Jensen. Veterans may receive credit for appropriate military training. The college transfer specialist will determine the number of credits acceptable to transfer.

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## 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 their 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](http://www.MnTransfer.org) and [www.transfer.org/uselect](http://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. Pay 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/ma-



for. 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 (MnSCU) system, 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 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

#### 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 believes 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 U.S. 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. M State 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

Minnesota State Community and Technical College designates the following information as *limited* directory data:

1. Permanent address
2. Telephone number
3. Students' personal and/work email address (if supplied by student)

**The full Student Directory Data policy is available on the college website. Notice to students:** If you are currently enrolled in or receiving services from one college or university within the Minnesota State Colleges and Universities system, 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 Student Development Services. 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 Development Services with questions.

## Photography/Video for Publicity

Student images (photo or video) may be used by the college for public relations, marketing and/or publications. If a student does not wish to have his/her image used for these purposes, a written request must be filed with the Marketing and Communications office by contacting Tina Bartels at [tina.bartels@minnesota.edu](mailto:tina.bartels@minnesota.edu).

## 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 on the college website at [minnesota.edu](http://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 course work 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. Many of these services are available on campus in the Spartan Center and include assistance with portfolio and resume development, 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](mailto: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 Development Services.

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

International students are required to be enrolled in 12 or more cred-

its 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)

Enrollment managers 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 in reaching their educational goals. See an academic advisor, enrollment manager or resource specialist 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](http://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 use the credit by exam process for 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 an 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 within 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 percent) 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 courses can do so online at [www.minnesota.edu](http://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:

<u>Date of Withdrawal</u>	<u>Refund allowed</u>
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:

<u>Date of Withdrawal</u>	<u>Refund allowed</u>
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 (MnTC) 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 the general education transfer curriculum are certified in 10 areas of competency by faculty at the sending institution. Beginning January 1, 2002, all MnTC 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 MnTC:

### 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 MnTC 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 student learning. These plans include assessment of approved program learning outcomes to provide evidence of student learning 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 evaluate 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 evaluative processes, such as course surveys, satisfaction surveys, comment cards and focus groups. The college uses the feedback 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. Because financial aid may not cover the cost of repeated courses, students are advised to consult 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](http://www.minnesota.edu) for the complete 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 are based on cumulative registered credits and are detailed below:

### Qualitative Measure

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

#### Cumulative Registered Credits    Minimum Required GPA

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:

$$\text{Percent earned} = \left[ \frac{\text{cumulative earned credits/}}{\text{cumulative registered credits X 100}} \right]$$

#### Cumulative Registered Credits    Minimum Required Completion

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 returning 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 his or her 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 (SAP) and what has changed in the student's situation that would allow the student to demonstrate SAP at the end of the next evaluation period.

### An appeal may be approved only 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 also has 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 prog-

ress 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 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 awarded for remedial course work (below 1000 level). Students may receive financial aid for developmental credits up to a maximum of 30 credits (English Language Learner courses). 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" (withdraw) 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 Honesty and Integrity

M State is committed to providing students with the competencies and skills associated with academic honesty and integrity. Students are expected to meet their academic requirements with honesty and integrity pursuant to this policy. Students are expected to be the sole authors of their work and to acknowledge the authorship of others' work through proper citation and reference. Use of another person's ideas, including another student's, without proper reference or citation constitutes plagiarism and academic dishonesty and is prohibited conduct. The college extends the concept of plagiarism to include issues of copyright and trademark infringement. Submission of prior work without self-citation constitutes self-plagiarism and academic dishonesty and is prohibited conduct.

Collaboration in the completion of course work is prohibited unless explicitly permitted by the course instructor. Where such collaboration is permitted by the course instructor, students must acknowledge any collaboration and its extent in all submitted course work.

The consequences of academic dishonesty are determined on a case-by-case basis by each instructor and may include but are not limited to one or more of the following academic sanctions: non-acceptance of submitted course work, failing grade on an assignment, lower grade in a course, or

failing grade in a course. In severe cases, the student may be referred to the student code of conduct process for possible sanctions.

M State students, faculty and staff share the responsibility for promptly reporting any alleged violation of this policy.

## Rationale

In support of M State's core values, this policy establishes the standards for academic honesty and enforces the college's commitment to teaching and learning while maintaining authenticity, ethics and scholarship in one's work as a student at the college. This policy also establishes the due process procedures for the internal resolution of acts of academic dishonesty.

## Definitions

**Academic dishonesty:** Academic dishonesty refers to the use of either intellectual property produced by the work of others that has not been given the appropriate recognition or the intentional misuse of quantitative or qualitative data.

**Plagiarism:** Plagiarism is one example of academic dishonesty. Plagiarism is presenting someone else's ideas or work as your own. Plagiarism also includes copying verbatim or rephrasing ideas without properly acknowledging the source by author, date, and publication medium. Students must take great care, whether in a draft or final version of a paper or project, to distinguish their own ideas and language from information acquired from other sources. Sources include published primary and secondary materials, electronic media, unpublished materials, and information and ideas gained through other people.

**Consequence:** A consequence is an academic decision that may be issued due to committing an act of academic dishonesty. Academic consequences may include but are not limited to one or more of the following: non-acceptance of submitted course work, failing grade on an assignment, lower grade in a course, or failing grade in a course. In severe cases, the student may be referred to the student code of conduct process for possible sanctions. This list is not exhaustive.

## 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 Development 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 development 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 occur-



rences, 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.

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## 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.

### Cancellation for Non-payment

Minnesota State Colleges and Universities policy requires that minimum payment criteria must be met 15 days 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 charged 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](http://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 Development 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 (commonly referred to as 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 from the Student Development Services office.

### 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**

Students in the culinary arts program are assessed a fee to cover meals they consume during the courses.

### **Equine Fee**

Students enrolled in courses delivered at Red Horse Ranch are assessed a fee to cover the costs of tack and the use of ranch horses.

### **Golf Green Fee**

Students in golf classes are assessed a fee to cover green fees at 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 and has not provided proof of financial aid or other funding. The fee is based on the number of credits for which a student is registered.

### **Nursing Application Deposit**

Applicants to the nursing programs are required to pay a deposit, which will be returned if the applicant is not accepted into one of the college's nursing programs. The deposit will be applied toward the first-term tuition of accepted students.

### **Parking/Common Area Fee**

Parking fees are assessed on a per credit basis, with the proceeds used to maintain and upgrade college parking facilities.

### **Pottery Clay Fee**

Students enrolled in ceramics courses are assessed a fee to pay for the cost of the clay used in class projects.

### **Private Music Lessons**

A fee is assessed for students who enroll in private vocal and instrumental music instruction.

### **Pre- and Post-Test Assessment Fee**

Nursing students are assessed fees to cover the cost of the pre-test and post-test exams required of students in the nursing program.

### **Professional Liability Fee**

Students in courses that require clinical/internship experience are assessed a fee that is used to purchase professional liability insurance on their behalf.

### **Replacement of Student Identification Card**

Each student receives his or her first student identification card at no cost, but there is a charge for replacement cards.

### **Technology Fee**

Students are assessed a technology fee 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**

Students are assessed a student activity fee to support Student Life activities.

### **Student Association Fee**

All students are assessed a per-credit fee to support membership dues required by the Minnesota State College Student Association.

### **Uniform Deposit Fee**

All students who rent a uniform from the college must pay a deposit, which is refunded at the end of the academic year if all uniforms are returned undamaged.

### **Uniform Rental Fee**

A uniform rental fee is assessed to all students who are enrolled in programs that require uniform rental.

### **Wellness Fee (Moorhead campus only)**

Students enrolled in courses on the Moorhead campus are assessed a fee for the operation of the campus Fitness Center.

## Student Payments

All tuition and fees are due on the tuition and fee due date which is 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, 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 allow students to pay for their charges throughout the term. To access these services, go to our website at [www.minnesota.edu](http://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 applicable only to complete withdrawals from the college.

The following refund schedule applies to students who completely withdraw from the college, which requires withdrawal from all courses for which a student 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 his or her program of study. Students can find their assigned advisor's name in SpartanNet (under the Welcome) and on their Degree Audit Report (DARS).

### Program advisors

- Advise students 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 Campus:

*Sarah Hofmann*, 218.846.3670, sarah.hofmann@minnesota.edu

*Mark Nelson*, 218.846.3670, mark.nelson@minnesota.edu

### Fergus Falls Campus:

*Jennifer Bieniek*, 218.736.1533, jennifer.bieniek@minnesota.edu

*Ann Porter*, 218.736.1533, ann.porter@minnesota.edu

### Moorhead Campus:

*Michele Burns*, 218.299.6804, michele.burns@minnesota.edu

*Penny Brynildson*, 218.299.6880, penny.brynildson@minnesota.edu

*Sarah Kenz*, 218.299.6880, sarah.kenz@minnesota.edu

*Amanda LeGare*, 218.299.6880, amanda.legare@minnesota.edu

*Joni Massie*, 218.299.6590, joni.massie@minnesota.edu

### Wadena Campus:

*Suzie Rethemeier*, 218.631.7800, suzie.rethemeier@minnesota.edu

## 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

Textbooks and course related items purchased in Fall and Spring semesters may be returned with original receipt within the first five (5) business days of the semester while those items purchased for Summer session and late starting classes may be returned within (3) business days from the start of the class. Textbooks and course related items purchased after the refund period may only be returned if within 24 hours and with the original receipt and in new condition.

Books, course related items and non-course related items will be refunded in full if they are in new, resalable condition. New books returned that are not in new condition may be refunded at 75 percent of the new price. Defective items must be exchanged within the same semester of purchase. Non-returnable items include: e-books, software, special orders, seasonal and clearance merchandise. Refunds on credit card purchases will be issued to the credit card used at time of purchase and the purchaser must present the original receipt.

The bookstore staff reserves the right to access the condition of all returned items and may make exceptions at their sole discretion.

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

eCampus: 218.736.1569

Fergus Falls: 218.736.1556

Moorhead: 218.299.6570

Wadena: 218.631.7825

## 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.

## Campus Dining

Each campus has a dining service and vending machines that offer a variety of snacks, light meals and entrees. Dining services are open Monday through Friday during the regular academic year. Each dining service can provide information about pre-pay options and may be available to cater events on request.

## Child Care

Child care resource information may be available from the Student Development 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](http://www.mnchildcare.org). North Dakota Child Care Resource and Referral can be contacted at 701-772-1106 or [www.ndchildcare.org](http://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, personal and life-career planning resources, short-term individual counseling and in making referrals.

### Campus Counselors

**Fergus Falls campus:** Steve Lindgren 218.736.1641

**Moorhead campus:** Tom Dubbels 218.299.6516, Maronda Robertson 218.299.6618

## Disabilities

M State complies fully with the provisions of 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 major life activity.

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 is available on note-taking, study skills, time management and developmental courses in math and composition. 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 including testing assistance, note takers, assistive devices and tutoring;
- Advocacy services that may include assistance from a disability services coordinator for students needing services, assistance in working individually with faculty and administrators, intervention procedures and grievance procedures.

### Disability Services Coordinators:

**Detroit Lakes Campus:** Sarah Hofmann, 218.847.3734

**Fergus Falls Campus:** Jon Kragness, 218.736.1595

**Moorhead Campus:** Claudia Simon, 218.299.6882

**Wadena Campus:** Christian Breczinski, 218.631.7832

## 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](http://www.minnesota.edu), emergency text messaging service and on local and regional television and radio stations.

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 a designated 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. Students can manage their Star Alert settings through 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.

## 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 Development Services. International students are required to purchase a 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

Some M State majors and programs require that students possess adequate computing resources. These requirements 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 general communication, research and specific program computing activities needed for that program or major.

Annually the college Information Technology Services Department identifies minimum hardware requirements for a laptop and required general software to meet all programs and majors. These hardware and software requirements are available from each campus Computer Help Center and available on our 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 alternate specifications are strongly advised to consider the numerous changing variables that may affect their computing needs throughout their program of study prior to leasing or purchasing an alternate specification. Limited IT resources may result in not possessing adequate computer and software resources.

### All students are required to:

- On request, produce proof of licensure for all software installed on the computer, and
- Register their computer or mobile device with the Computer Help Center to gain access to campus IT resources.

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

Collection points for lost and found items are located in Student Development Services on the Detroit Lakes, Fergus Falls and Wadena campuses and in the library in Moorhead.

## Representing the College

Students and student groups should not imply or state that they represent the college unless specifically authorized to do so.

## Computer Help Center

### Tech Help Request

For all your IT-related technical questions, including D2L Brightspace, please submit a ticket to our Computer Help Center technicians using the Tech Help Request link within your SpartanNet Portal. You can also search the Self-Help tab under the Tech Help Request link to troubleshoot your own problem, or click New Request to get assistance from a tech specialist.

### Software and Printing

M State participates in the Microsoft Campus Agreement and makes available to students the most current Microsoft products at a reduced cost. Please refer to our college website for the most current information about available Microsoft products. Technical assistance is available through your campus Computer Help Center.

At the start of each semester, a student's network account receives a printing balance of \$12.50. This equates to about 250 sheets of free printing to the campus networked printers. These free balances are not carried from semester to semester and cannot be transferred. 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. NOTE: Additional printing that is purchased does carry over from semester to semester as long as the student is continuously enrolled. However there are no refunds issued for printing balances when a student leaves M State. Student printing balances can be viewed in the SpartanNet portal.

## SpartanNet

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

## Student Clubs and Activities

M State believes student activities and organizations promote the complete development of students and help motivate students to enroll in and continue in college. Through the number and variety of activities and organizations, all students have the opportunity to participate in extra-curricular 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 director of student engagement/director of student life.

## Student Clubs

### ADN Organization - Fergus Falls

Supports students in the Associate Degree nursing program

### Auto Tech Club - Moorhead

Encourages student interest in automotive careers

### Business Professionals of America - Moorhead

Helps prepare students for careers in business and information technology

### College Ambassadors - Fergus Falls, Moorhead

Represents and promotes M State

### Cosmetology Club - Wadena

Promotes professionalism and leadership among cosmetology students

### Creative Minds Connection - Moorhead

Promotes student interest in the arts

### Criminal Justice - Moorhead

Promotes an interest in the criminal justice program

### Dental Assisting - Moorhead

Supports students in the dental assisting program

### Diesel Club - Moorhead

Supports diesel students and their interests

### F2CO - Fergus Falls

Encourages interest in chemistry

### Fine arts - Fergus Falls

Chamber Chorale, Concert Band, Jazz Band, Theater and Voice Ensemble

### Ignite (Campus Crusade for Christ) - Fergus Falls

Explores issues related to faith, spirituality and Christianity

**Intercollegiate athletics** - Fergus Falls

Football, volleyball, basketball (men's and women's), baseball, softball and golf (men's and women's)

**Intramural sports** - Fergus Falls

Activities can include basketball, volleyball, flag football, soccer and bowling

**LPN Organization** - Fergus Falls

Supports students in the Practical Nursing program

**Mu Alpha Theta** - Fergus Falls

Mathematics honor society

**Native American Student Association** - Moorhead

Enhances knowledge and awareness of Native American culture

**Nursing Club** - Wadena

Provides leadership and growth opportunities for nursing students

**Phi Theta Kappa (PTK)** - Detroit Lakes, Fergus Falls, Moorhead

Academic honor society

**Pride Alliance** - Moorhead

Supports lesbian, gay, bisexual and transgender students and their allies

**Skills USA** - Detroit Lakes, Moorhead, Wadena

Official organization of vocational education with state and national competitions

**Student American Dental Hygienists Association** - Moorhead

Supports students in the dental hygiene program

**Student Government Association** - Detroit Lakes, Fergus Falls, Moorhead, Wadena

Provides a student voice in campus administration

**Student Human Resource Organization** - Moorhead

Expands experience in the human relations and business fields

**Technology, Gaming and Robotics** - Moorhead

Provides opportunities for hands-on projects related to technology, gaming and robotics

To learn more about opportunities to get involved in student life activities or the clubs offered at M State, visit the Student Life section of our college website.

**Student Email**

Students are automatically issued an email address once they are admitted to M State. 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. Student email account addresses will be in the format of `firstname_lastname@my.minnesota.edu`. Contact your campus Computer Help Center as soon as possible with email questions or activation problems.

**Student Housing**

Housing arrangements are the responsibility of individual students, although each M State campus may maintain information about community and on-campus housing options. Please contact your campus for more information.

**M State Housing - Fergus Falls**

On-campus housing is available on the Fergus Falls campus. Students wishing to live on campus can choose from two apartment-style complexes, college Manor or Williams Hillside Village. Both complexes are furnished and house four students in 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 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, Moorhead 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 Development 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 may appeal any student services 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 student services 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 student services appeal, contact Student Development Services.

## M State Official Team Colors

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

## Theatre

The College Theater Department on the Fergus Falls campus produces two plays a year.

## Transcript Requests

Official transcript requests are fulfilled at no charge. The Transcript Request to Self/Another Institution form is available at [www.minnesota.edu](http://www.minnesota.edu). For privacy reasons, this form must be completed and electronically signed by the student in order for a transcript request to be processed. Students transferring to or from another Minnesota State Colleges and Universities (MnSCU) campus do not need to submit a transcript request.

## 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

As part of Minnesota's 1984 "Percent for Art" legislation, M State works to use up to 1 percent of the total construction budget to purchase or commission original art work for building projects costing \$500,000 or more. M State campuses strive to select art work that reflects the region's culture, history and diversity. 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 focus of the Moorhead campus art collection is the acquisition of 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 2015-2016

(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. For up-to-date information, view articulation agreements online at [www.mntransfer.org](http://www.mntransfer.org). Enter the Student Portal>Transfer Planning>Articulation Agreements.

M State Program	M State Degree	Transfer Program	Transfer Degree	Institution
Accounting	AS	Accounting	BS	Minnesota State University, Moorhead
Accounting	AS	Accounting	BS	University of Minnesota, Crookston
Accounting	AAS	Accounting	BS	University of Minnesota, Crookston
Architectural Drafting and Design	AAS	Construction Management	BS	Minnesota State University, Moorhead
Architectural Drafting and Design	AAS	Operations Management	BS	Minnesota State University, Moorhead
Auto Body Collision Technology	AAS			
Automotive Service Technology	AAS			
Carpentry	AAS			
Civil Engineering Technology	AAS			
Diesel Equipment Technology	AAS			
Electrical Lineworker Technology	AAS			
Graphic Design Technology	AAS			
Health Information Technology	AAS			
Marine Engine Technology	AAS			
Mechanical Drafting and Design	AAS			
Automotive Service Technology	Diploma	Operations Management	BS	Minnesota State University, Moorhead
Auto Body Collision Technology	Diploma			
Carpentry	Diploma			
Electrical Technology	Diploma			
Electrical Technology- Industrial Maintenance Emphasis	Diploma			
Diesel Equipment Technology	Diploma			
Electrical Lineworker Technology	Diploma			
HVAC	Diploma			
Information Technology	Diploma			
Marine Engine Technology	Diploma			
Mechanical Drafting and Design	Diploma			
PowerSports Technology	Diploma			
Refrigeration and Air Conditioning	Diploma			
Web Development	Diploma			
Automotive Service Technology*	AAS	Automotive Engineering Technology	BS	Minnesota State University, Mankato
Biological Sciences	AS	Biology	BA	Bemidji State University
Biological Sciences	AS	Biology	BS	Bemidji State University
Biological Sciences	AS	Biology	BA	Minnesota State University, Moorhead
Biological Sciences	AS	Biology Emphasis in Ecology and Evolutionary Biology	BA	Minnesota State University, Moorhead
Business	AS	Business Administration	BS	Minnesota State University, Moorhead
Business	AS	Project Management	BS	Minnesota State University, Moorhead
Business	AS	Business: Management Concentration	BS	University of Mary
Business	AS	Business Management	BS	University of Minnesota, Crookston
Business Administration	AAS	Project Management	BS	Minnesota State University, Moorhead

Business Entrepreneurship	AAS	Project Management	BS	Minnesota State University, Moorhead
Business: Management, Marketing and Sales	AAS	Project Management	BS	Minnesota State University, Moorhead
Business: Management, Marketing and Sales	AAS	Business Management	BS	University of Minnesota, Crookston
Business: Management, Marketing and Sales*	AAS	Marketing	BS	University of Minnesota, Crookston
Environmental Science*	AS	Environmental Studies	BS	Bemidji State University
Carpentry	AAS	Manufacturing Management	BMM	University of Minnesota, Crookston
Chemistry	AS	Chemistry	BS	Minnesota State University, Moorhead
Chemistry	AS	Chemistry	BA	Minnesota State University, Moorhead
Civil Engineering Technology	AAS	Construction Management	BS	Minnesota State University, Moorhead
Computer Networking Security	AAS	Operations Management	BS	Minnesota State University, Moorhead
Computer Programming	AAS			
Information Technology	AAS			
IT Systems Support	AAS			
Network Technology Administration	AAS			
Web Development	AAS			
Computer Programming	AAS	Project Management	BS	Minnesota State University, Moorhead
Construction Management	AAS	Construction Management	BS	Minnesota State University Moorhead
Criminal Justice	AS	Criminal Justice	BS	Minnesota State University, Moorhead
Dental Hygiene	AAS	Dental Hygiene	BSDH	Metropolitan State University
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	Electrical Engineering	BS	St. Cloud State University
Engineering	AS	Agriculture and Biosystems Engineering	BS	North Dakota State University
		Civil Engineering	BS	
		Construction Engineering	BS	
		Industrial Engineering & Management	BS	
		Manufacturing Engineering	BS	
		Electrical Engineering	BS	
		Computer Engineering	BS	
		Mechanical Engineering	BS	
Environmental Science*	AS	Environmental Studies	BS	Bemidji State University
Environmental Science	AS	Project Management	BS	Minnesota State University, Moorhead
Environmental Science	AS	Environmental Science (Agricultural Environmental Stewardship Emphasis)	BS	University of Minnesota, Crookston
Environmental Science	AS	Environmental Science (Environmental Ecology Emphasis)	BS	University of Minnesota, Crookston
Environmental Science	AS	Environmental Science (Environmental Health Emphasis)	BS	University of Minnesota, Crookston
Environmental Science	AS	Environmental Science (Environmental Toxicology and Chemistry Emphasis)	BS	University of Minnesota, Crookston
Environmental Science	AS	Environmental Science (Water Quality Emphasis)	BS	University of Minnesota, Crookston
Graphic Design Technology	AAS	Project Management	BS	Minnesota State University, Moorhead
Health Information Technology	AAS	Operations Management	BS	Minnesota State University, Moorhead

Human Resources	AAS	Project Management	BS	Minnesota State University, Moorhead
Human Resources	AS	Project Management	BS	Minnesota State University, Moorhead
Human Resources	AS	Business: Human Resources Concentration	BS	University of Mary
Human Resources	AS	Business Management	BS	University of Minnesota, Crookston
Human Resources Human Resources	AAS AS	Business Administration Major with Human Resource Management Concentration	BS	Valley City State University
Information Technology	AS	Computer Information Technology	BS	Minnesota State University, Moorhead
Information Technology	AS	Operations Management	BS	Minnesota State University, Moorhead
Information Technology	AS	Project Management	BS	Minnesota State University, Moorhead
Information Technology	AS	Information Technology Management	BS	University of Minnesota, Crookston
Liberal Arts and Sciences	AA	Social Work	BSW	Minnesota State University, Moorhead
Management Info Systems	AS	Computer Info Systems	BS	Minnesota State University, Moorhead
Medical Laboratory Technician	AS	Medical Laboratory Science	BS	University of North Dakota
Music	AFA	Music	BA	Southwest Minnesota State University
Network Administration & Security	AAS	Project Management	BS	Minnesota State University, Moorhead
Paralegal	AAS	Paralegal	BS	Minnesota State University, Moorhead
Theatre Arts	AFA	Theatre Arts	BA	Minnesota State University, Moorhead
Statewide Agreement		Nursing		MnSCU Statewide

\*Pending MnSCU approval



# PROGRAMS

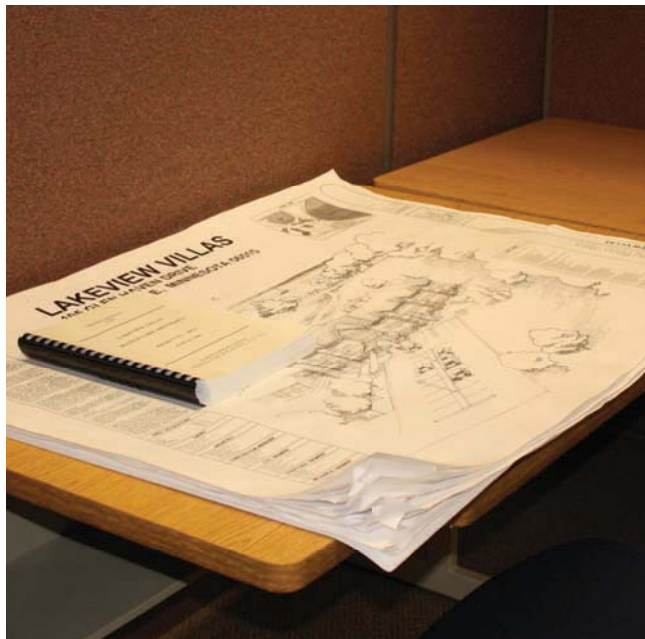
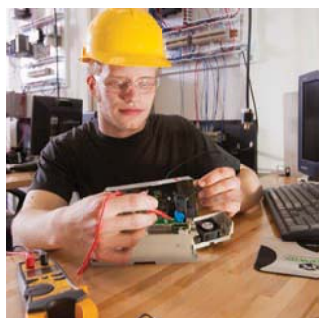


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62	Accounting	AAS	69	D	E		M		
62	Accounting	AS	60		E	F			
62	Accounting	Diploma	63	D	E		M		
62	Accounting Clerk	Diploma	33	D	E		M		
63	Administrative Assistant	AAS	60				M		
63	Administrative Support	Diploma	33				M		
56	American Sign Language Studies	Certificate	17				M		
70	Architectural Drafting and Design	AAS	72	D					
70	Architectural Drafting	Diploma	36	D					
75	Auto Body Collision Technology+	AAS	72	D					
75	Auto Body Collision Technology+	Diploma	60	D					
75	Auto Body Collision Technology+	Certificate	30	D					
76	Automotive Light Duty Technician	Certificate	14	D			M		
75	Automotive Service Technology*	AAS	72	D			M		
76	Automotive Service Technology*	Diploma	66	D			M		
82	Biological Sciences	AS	60			F			
82	Biological Sciences - Ecology and Evolutionary Biology Emphasis	AS	60				M		
63	Business	AS	60		E	F	M		
64	Business Administration	AAS	60			F			
64	Business Administration	Certificate	30			F			
64	Business Entrepreneurship	AAS	60	D	E				
64	Business Entrepreneurship	Diploma	33	D	E				
64	Business: Management, Marketing and Sales	AAS	66	D	E		M		
64	Business: Marketing and Sales	Diploma	33	D	E		M		
71	Carpentry+	AAS	69				M		
71	Carpentry+	Diploma	60				M		
72	Carpentry Assisting	Certificate	29				M		
90	Child Care and Education	Certificate	24	D					
65	Cisco Networking	Certificate	12	D	E			W	
70	Civil Engineering Technology*	AAS	66	D					
73	Commercial Refrigeration	Diploma	35				M		
56	Computer Programming	AAS	60		E		M		
72	Construction Management	AAS	66				M		

All campuses listed may not offer all of the degrees listed for a specific program, please check [www.minnesota.edu](http://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.

+Program not offered academic year 2015-2016.

**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
90	Correctional Officer	Certificate	25				M		
90	Cosmetology	Diploma	58					W	
90	Cosmetology (North Dakota)*	Certificate	9					W	
91	Criminal Justice	AS	60				M		
91	Culinary Arts	Diploma	64				M		
82	Dental Assisting	AAS	63				M		
82	Dental Assisting	Diploma	48				M		
83	Dental Hygiene	AAS	88				M		
76	Diesel Equipment Technology	(Case IH and New Holland Sponsored) - AAS	79				M		
76	Diesel Equipment Technology	(Truck Option) - AAS	79				M		
76	Diesel Equipment Technology	(General) - AAS	79				M		
76	Diesel Equipment Technology	(General) - Diploma	65				M		
58	Digital Photography and Imaging+	Certificate	18				M		
71	Drafting and 3D Technologies	AAS	66				M		
90	Early Childhood and Paraprofessional Education	AS	60	D					
72	Electrical Lineworker Technology	AAS	70					W	
72	Electrical Lineworker Technology	Diploma	36					W	Baudette
72	Electrical Technology	Electrician Emphasis - Diploma	74				M	W	
72	Electrical Technology	Industrial Electrician Emphasis - Diploma	74					W	
70	Engineering	AS	60				M		
65	Entrepreneur Essentials	Certificate	9	D	E				
65	Entrepreneurship Fundamentals	Certificate	9	D	E				
65	Entrepreneurship	Certificate	18	D	E				CT
52	Environmental Science	AS	60			F	M		
52	Equine Science	AAS	60			F			
52	Equine Science	Diploma	31			F			
91	Esthetist	Certificate	21					W	
91	Fire Service Preparation	Certificate	30				M		
73	Gas Utility and Construction	Diploma	32					W	
65	Golf Management	Diploma	60			F			
58	Graphic Design Technology	AAS	60				M		
58	Graphic Design Technology	Certificate	30				M		
83	Health Information Technology/Coding	AAS	64		E				
83	Health Information - Technology Specialist	Certificate	30		E				
73	Heating, Ventilation, Air Conditioning and Refrigeration	Diploma	36				M	W	
65	Human Resources	AAS	60		E		M		
65	Human Resources	AS	60		E		M		
66	Individualized Studies	AAS	60	D	E	F	M	W	
74	Industrial Maintenance+	Diploma	31				M	W	CT
74	Industrial Workplace	Certificate	16	D		F	M	W	
56	Information Technology	AAS	60	D	E				
57	Information Technology	AS	60				M		
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	60	D	E	F	M		
66	Management Information Systems	AS	60			F			
92	Manicurist	Certificate	16					W	
77	Marine Engine Technology	AAS	69	D					

Page	Program Title	Degree	Credits	D	E	F	M	W	O
77	Marine Engine Technology	Diploma	60	D					
78	Marine/PowerSports Maintenance Specialist	Certificate	16	D					
92	Massage Therapy	Diploma	34					W	
71	Mechanical Drafting and Design	Diploma	60				M		
84	Medical Administrative Assistant	AAS	60		E		M	W	
84	Medical Coding and Insurance	Diploma	50		E		M	W	
83	Medical Laboratory Technology	AS	60			F			
84	Medical Office Assistant	Diploma	44		E		M	W	
84	Medical Receptionist	Diploma	34		E		M	W	
84	Medical Transcription	Diploma	40		E		M	W	
85	Mental Health Behavioral Aide II	Certificate	16		E				
58	Music	AFA	68			F			
57	Network Administration and Security	AAS	66				M	W	
57	Network Security	Certificate	18	D	E		M		
85	Nursing	Advanced Standing - Associate Degree (RN)	32	D		F	M	W	
85	Nursing	Generic Option - Associate Degree (RN)	64	D		F		W	
66	Paralegal	AAS	60	D	E				
63	Payroll Specialist	Diploma	33	D	E		M		
86	Pharmacy Technology	AAS	60		E				
86	Pharmacy Technology	Diploma	36		E				
86	Phlebotomy Technician	Certificate	11			F			
74	Plumbing Technology+	AAS	60				M		
74	Plumbing Technology+	Diploma	36				M		
78	PowerSports Technology	Diploma	60	D					
78	PowerSports Technology	Certificate	30	D					
85	Practical Nursing+	AAS	60	D		F	M	W	
86	Practical Nursing	Diploma	40	D		F		W	
66	Professional Sales Skills	Certificate	9	D	E				CT
87	Radiologic Technology	AAS	79	D	E				
56	Sign Language Interpreter Preparation	AAS	64				M		
58	Theatre Arts	AFA	60			F			
87	Surgical Technology	AAS	60				M		
70	Survey Technician	Diploma	33	D					
63	Virtual Office Professional	Certificate	29	D	E				
58	Visual Art	AFA	60			F			
57	Voice and Video Over Internet Protocol	Certificate	15					W	
57	Web Development	AAS	72	D	E				
57	Web Development	Certificate	30	D	E				





# UNIVERSITY TRANSFER



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SOC 2215	Criminology (3cr)	2,5	MUSC 1118	Rock and Pop Music (3cr)	6	WMST 1130	Introduction to Women's Studies (3cr)	5,7
SOC 2216	Minority Group Relations (3cr)	5,7	MUSC 1120	Introduction to Music Technology (3cr)	6			
SOC 2217	Rural Sociology (3cr)	5,7	MUSC 1121	Basic Theory and Musicianship I (3cr)	2,6	<b>AREA 8: Global Perspective</b>		
SOC 2220	Food, Culture and Society (3cr)	5,7	MUSC 1122	Basic Theory and Musicianship II (3cr)	2,6	<i>Complete a minimum of three credits</i>		
SOC 2222	Sociology of Agriculture (3cr)	5	MUSC 1123	Sight Singing & Ear Training I (1cr)	6	ANTH 1100	Introduction to Anthropology (3cr)	5,8
WMST 1130	Introduction to Women's Studies (3cr)	5,7	MUSC 1124	Sight Singing & Ear Training II (1cr)	6	ANTH 1300	Cultural Anthropology (3cr)	5,8
			MUSC 1131	Civic Orchestra (1cr)	6	ART 1121	World of Art I (3cr)	6,8
<b>AREA 6: The Humanities and Fine Arts</b>			MUSC 1135	Voice Ensemble (1cr)	6	ART 1122	World of Art II (3cr)	6,8
<i>Complete a minimum of nine credits from at least three different discipline areas; a maximum of three Fine Arts credits may be utilized (^ denotes Fine Arts courses)</i>			MUSC 1141	Concert Choir (1cr)	6	CHIN 1101	Introduction to Chinese (3cr)	8
^ART 1107	Foundations of Art, 2-D (3cr)	2,6	MUSC 1145	Chamber Chorale (1cr)	6	ENGL 2235	Intro to Literature: Drama (3cr)	2,6,8
^ART 1108	Foundations of Art, 3-D (3cr)	6	MUSC 1150	History of Jazz (3cr)	6	ENGL 2325	Contemporary World Literature (3cr)	6, 8
ART 1110	Intro to Art (3cr)	6	MUSC 1151	Ind Voice Lessons (1cr)	6	ENGL 2361	British Literature I (3cr)	6,8
^ART 1111	Drawing I (3cr)	6	MUSC 1160	Makings of a Rock Band (3cr)	6	ENGL 2362	British Literature II (3cr)	6,8
^ART 1112	Painting I (3cr)	6	MUSC 1162	Jazz Ensemble (1cr)	6	GEOG 1110	World Geography (3cr)	5,8
^ART 1117	Printmaking I (3cr)	2,6	MUSC 1164	Concert Band (1cr)	6	GEOG 1160	Global Physical Geography (3cr)	8,10
^ART 1118	Watercolor I (3cr)	6	MUSC 1168	Pep Band (1cr)	6	GLST 1121	Humanities Italy (3cr)	6,8
ART 1121	World of Art I (3cr)	6,8	MUSC 1181	Private Instrumental Lessons (1cr)	6	GLST 1126	Cultures of Italy and Greece II (3cr)	6,8
ART 1122	World of Art II (3cr)	6,8	MUSC 1185	Private Music Composition Lessons (1cr)	6	GLST 1510	Global Studies: Natural Science (3cr)	3,8
ART 1123	Global Art History: Asian, Islamic, African, Mesoamerican (3cr)	2,6	MUSC 1191	Ind Piano Lessons (1cr)	6	GLST 2291	Humanities British Isles (3cr)	6,8
ART 1124	American Art (3cr)	6,7	MUSC 1192	Piano Pedagogy (2cr)	6	HIST 1110	Western Civilization: Ancient-1400 (3cr)	5,8
^ART 1140	Handbuilt Ceramics (3cr)	6	MUSC 2223	Sight Singing & Ear Training III (1cr)	6	HIST 1111	Western Civilization: 1400-1600 (3cr)	5,8
^ART 1141	Ceramics I (3cr)	6	MUSC 2231	Adv Theory and Musicianship III (3cr)	2,6	HIST 1112	Western Civilization: 1600-1800 (3cr)	5,8
^ART 2241	Advanced Ceramics (3cr)	6	MUSC 2232	Adv Theory and Musicianship IV (3cr)	2,6	HIST 1113	Western Civilization: 20th Century (3cr)	5,8
^ART 2260	Art, Portfolio Design and Professional Development (1cr)	6	MUSC 2251	Individual Voice Lessons (2cr)	6	HIST 1500	European Experience (3cr)	5,8
^ART 2261	Art, Portfolio Design and Professional Development Internship (2cr)	6	MUSC 2281	Private Instrumental Lessons (2cr)	6	HUM 1105	Religion in the Humanities (3cr)	6,8
COMM 2220	Oral Interpretation (3cr)	6	MUSC 2285	Advanced Music Composition (2cr)	6	HUM 1120	Culture of Italy (3cr)	6,8
^ENGL 2200	Introduction to Creative Writing (3cr)	6	MUSC 2291	Individual Piano Lessons (2cr)	6	HUM 1134	Global Perspectives for Women (3cr)	6,8
^ENGL 2221	Creative Writing: Poetry (3cr)	6	PHIL 1201	Ethics (3cr)	2,6,9	HUM 2230	World Cinema (3cr)	6,8
^ENGL 2222	Creative Writing: Fiction (3cr)	6	PHIL 1211	Intro to Philosophy (3cr)	2,6	HUM 2236	Technology in the Humanities (3cr)	2,6,8
^ENGL 2223	Creative Writing: Personal Narrative (3cr)	6	PHIL 2224	Philosophy of Religion (3cr)	2,6,8	HUM 2281	Culture of the British Isles (3cr)	6,8
^ENGL 2228	A Well Examined Life: Reading and Writing Memoir (3cr)	6,7	PHIL 2230	Existentialism (3cr)	2,6	HUM 2293	Field Experience: Europe (3cr)	6,8
ENGL 2230	Environmental Literature (3cr)	2,6,10	PHIL 2240	Non-Western Philosophical Perspectives (3cr)	6,8	HUM 2295	Field Experience: The East (3cr)	6,8
ENGL 2234	Introduction to Literature: Short Stories (3cr)	2,6,7	PHYS 1107	Physics of Music (3cr)	3,6	MUSC 1116	World Music (3cr)	6,8
ENGL 2235	Intro to Literature: Drama (3cr)	2,6,8	THTR 1100	Introduction to Theatre (3cr)	6	PHIL 2224	Philosophy of Religion (3cr)	2,6,8
ENGL 2236	Introduction to Literature: Novel (3cr)	2,6,7	THTR 1105	Acting I (3cr)	6	PHIL 2240	Non-Western Philosophical Perspectives (3cr)	6,8
ENGL 2237	Intro to Literature: Short Prose (3cr)	2,6,9	^THTR 1120	Theatre Performance Practicum (2cr)	6	POLS 2204	Comparative Government (3cr)	5,8
ENGL 2239	Nature Writers (3cr)	2,6,10	^THTR 1125	Theatre Technical Practicum (2cr)	6	POLS 2206	Global Politics (3cr)	5,8
ENGL 2302	American Ethnic Literature (3cr)	6,7	THTR 1130	Stage Make-up (3cr)	6	SPAN 2211	Intermediate Spanish (4cr)	8
ENGL 2304	Introduction to Literature, Native American Focus (3cr)	2,6	THTR 1135	Stage Costuming (3cr)	6	SPAN 2212	Intermediate Spanish II (4cr)	8
ENGL 2310	Introduction to Mythology (3cr)	6	THTR 1140	Stagecraft (3cr)	6	WMST 1136	Global Perspectives of Women (3cr)	6,8
ENGL 2314	Introduction to Shakespeare (3cr)	6	THTR 1145	Stage Lighting and Sound (3cr)	6			
ENGL 2321	Women in Literature (3cr)	6,7	THTR 2120	Script Analysis (3cr)	6	<b>AREA 9: Ethical and Civic Responsibility</b>		
ENGL 2322	Banned Literature (3cr)	2,6,7	THTR 2130	Design for the Stage (3cr)	6	<i>Complete a minimum of three credits</i>		
ENGL 2323	Horror and Supernatural Fiction (3cr)	2,6	THTR 2120	Script Analysis (3cr)	6	ECON 2222	Microeconomics (3cr)	2,5,9
ENGL 2324	Travel Literature (3cr)	2,6,10	THTR 2220	Theater Certificate Internship and Portfolio (1cr)	6	ENGL 2237	Intro to Literature: Short Prose (3cr)	2,6,9
ENGL 2331	American Literature I (3cr)	6,7	WMST 1136	Global Perspectives of Women (3cr)	6,8	MCOM 1122	Intro to Mass Communication (3cr)	5,9
ENGL 2332	American Literature II (3cr)	6,7				PHIL 1200	Applied and Professional Ethics (3cr)	2,9
ENGL 2361	British Literature I (3cr)	6,8	<b>AREA 7: Human Diversity</b>			PHIL 1201	Ethics (3cr)	2,6,9
ENGL 2362	British Literature II (3cr)	6,8	<i>Complete a minimum of three credits</i>			PHIL 2220	Environmental Ethics (3cr)	9,10
ENGL 2372	Children's Literature (3cr)	2,6,7	ART 1124	American Art (3cr)	6,7	PHIL 2225	Bioethics (3cr)	2,9
ENGL 2374	The Poetics of Rock Lyrics (3cr)	2,6	COMM 2230	Intercultural Communication (3cr)	7	POLS 1120	American National Government (3cr)	5,9
GLST 1121	Humanities Italy (3cr)	6,8	COMM 2250	Gender Communication (3cr)	7	POLS 1130	State and Local Government (3cr)	5,9
GLST 1126	Cultures of Italy and Greece II (3cr)	6,8	ENGL 2228	A Well Examined Life: Reading and Writing Memoir (3cr)	6,7	POLS 2220	Intro to Constitutional Theory (3cr)	2,5,9
GLST 2291	Humanities British Isles (3cr)	6,8	ENGL 2234	Introduction to Literature: Short Stories (3cr)	2,6,7	POLS 2310	Ideas and Ideologies (3cr)	7,9
HUM 1105	Religion in the Humanities (3cr)	6,8	ENGL 2236	Introduction to Literature: Novel (3cr)	2,6,7	PSYC 1200	General Psychology (3cr)	5,9
HUM 1110	Native American Culture (3cr)	2,6,7	ENGL 2302	American Ethnic Literature (3cr)	6,7	PSYC 1500	Positive Psychology (3cr)	5,9
HUM 1120	Culture of Italy (3cr)	6,8	ENGL 2321	Women in Literature (3cr)	6,7	PSYC 2222	Developmental Psychology (3cr)	5,9
HUM 1132	Women in the Humanities (3cr)	6,7	ENGL 2322	Banned Literature (3cr)	2,6,7	SOC 1113	Social Problems (3cr)	5,9
HUM 1134	Global Perspectives for Women (3cr)	6,8	ENGL 2331	American Literature I (3cr)	6,7			
HUM 1201	Religion and the American Experience (3cr)	6,7	ENGL 2332	American Literature II (3cr)	6,7	<b>AREA 10: People and the Environment</b>		
HUM 2210	Introduction to Film (3cr)	2,6	ENGL 2372	Children's Literature (3cr)	2,6,7	<i>Complete a minimum of three credits</i>		
HUM 2230	World Cinema (3cr)	6,8	HIST 2211	American History: the Colonial Period (3cr)	5,7	ANTH 1400	Physical Anthropology (3cr)	3,10
HUM 2236	Technology in the Humanities (3cr)	2,6,8	HIST 2212	American History 19th Century (3cr)	5,7	BIOL 1107	Environmental Science Issues (3cr)	2,3,10
HUM 2281	Culture of the British Isles (3cr)	6,8	HIST 2213	American History: 20th Century (3cr)	5,7	BIOL 1108	Env Science Issues Lab (1cr)	2,3,10
HUM 2293	Field Experience: Europe (3cr)	6,8	HUM 1110	Native American Culture (3cr)	2,6,7	BIOL 1123	General Biology II (4cr)	3,10
HUM 2295	Field Experience: The East (3cr)	6,8	HUM 1132	Women in the Humanities (3cr)	6,7	BIOL 1161	Introduction to Freshwater Biology (3cr)	3,10
HUM 2301	Heroes, Moral and Cultural (3cr)	2,6	HUM 1201	Religion and the American Experience (3cr)	6,7	BIOL 2010	General Ecology (4cr)	3,10
HUM 2302	Science, Class and Culture - Conceptual Wars (3cr)	2,6	MCOM 1142	Popular Culture and Social Media (3cr)	7	ECON 2500	Environmental Economics (3cr)	2,5,10
HUM 2303	A Conceptual Mingling, Love and Sex (3cr)	2,6	MCS 2230	Multicultural America (3cr)	7	ENGL 2230	Environmental Literature (3cr)	2,6,10
HUM 2304	Rhetoric, Sophistry and the Truth (3cr)	2,6	MUSC 1115	America's Musical Heritage (3cr)	6,7	ENGL 2239	Nature Writers (3cr)	2,6,10
MUSC 1111	Fundamentals of Music (3cr)	6	PHIL 2300	Political and Social Philosophy (3cr)	5,7	ENGL 2324	Travel Literature (3cr)	2,6,10
MUSC 1112	Beginning Class Guitar (1cr)	6	POLS 2310	Ideas and Ideologies (3cr)	7,9	GEOG 1160	Global Physical Geography (3cr)	8,10
MUSC 1113	Beg Class Voice (1cr)	6	PSYC 2224	Social Psychology (3cr)	5,7	PHIL 2220	Environmental Ethics (3cr)	9,10
MUSC 1114	Beginning Class Piano (2cr)	6	PSYC 2228	Cross-Cultural Psychology (3cr)	7	PSYC 2226	Behavior and Environmental Management (3cr)	2,5,10
MUSC 1115	America's Musical Heritage (3cr)	6,7	SOC 1111	Intro to Sociology (3cr)	2,5,7	SFP 1100	Principles of Sustainability (3cr)	10
MUSC 1116	World Music (3cr)	6,8	SOC 2210	Social Deviance (3cr)	5,7			
			SOC 2213	Sociology of the Family (3cr)	5,7			
			SOC 2216	Minority Group Relations (3cr)	5,7			
			SOC 2217	Rural Sociology (3cr)	5,7			
			SOC 2220	Food, Culture and Society (3cr)	5,7			

## 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)

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**Area 8: Global Perspective** (3 credits)

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

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**Area 9: Ethical and Civic Responsibility** (3 credits)

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**Area 10: People and the Environment** (3 credits)

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

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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

**Elective credits to bring total to 60**

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**Area 4: Mathematics/Logical Reasoning** (3 credits)  
Prep courses may be needed; see your advisor.

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**Area 5: History and the Social and Behavioral Sciences**  
(9 credits from 2 or more disciplines)

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**Elective Credits** \_\_\_\_\_

**General Education Credits** \_\_\_\_\_

**Total Credits (60 required)** \_\_\_\_\_

**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.)

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Subtotal \_\_\_\_\_

**Notes**

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## 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
	Mathematics/Logical Reasoning .....	3
	Natural Science Electives .....	3
	People and the Environment .....	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

*Program not offered academic year 2015-2016*

AA 60 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
SOC1111	Introduction to Sociology .....	3

\* Take three credits from the specified courses.

# AGRICULTURE, FOOD AND NATURAL RESOURCES

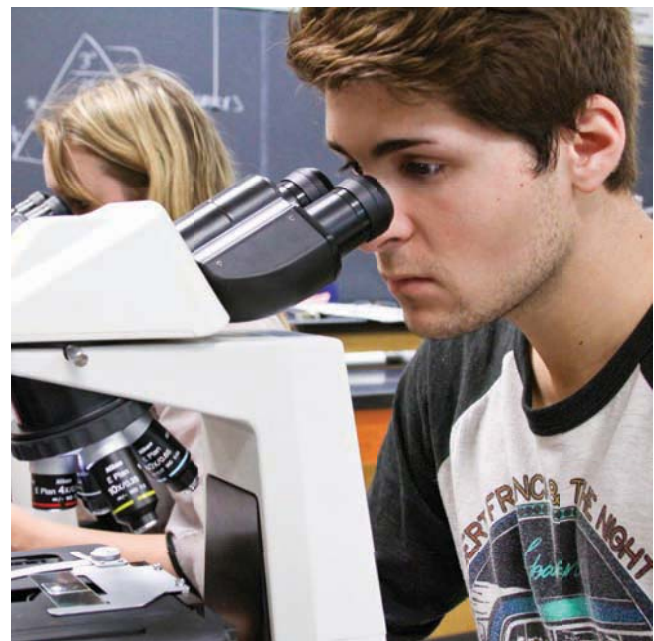


+ Not offered academic year 2015-2016

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## Equine Science

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Equine Science AAS .....52

Equine Science Diploma .....52

## Environmental Science

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Environmental Science AS .....52



**Minnesota State**  
Community and Technical College

## Equine Science

### Equine Science

AAS 60 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
	Career Electives .....	1
	MN Transfer Electives .....	14
AGRI1400	Farm Marketing and Management .....	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 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
	Career Electives .....	1
AGRI1400	Farm Marketing and Management .....	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

## Environmental Science

### Environmental Science

AS 60 Credits

F M

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
	Environmental Science Issues.....	3
BIOL1107	Env Science Issues Lab .....	1
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.





# ARTS, COMMUNICATION AND COMPUTER/INFORMATION SYSTEMS



+ Not offered academic year 2015-2016

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## Computer Careers

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## Graphic Design

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## Fine Arts

Music AFA .....	58
Theatre Arts AFA .....	58
Visual Arts AFA .....	58

# American Sign Language

## American Sign Language Studies

**Certificate 17 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
COMM2230	Intercultural Communication.....	3

## Sign Language Interpreter Preparation

**AAS 64 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
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

# Computer Careers

## Cisco Networking

**Certificate 12 Credits**

D W E

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 Programming

**AAS 60 Credits**

M E

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
	MN Transfer Electives .....	6
	Math/Logical Reasoning Electives (MNTC Goal Area 4).....	3
	CPTR, CSCI, CSEC, CTEC, CVNP, INTD, ITSS, WEBD .....	6
CPTR1001	Introduction To Programming and Scripting.....	3
CPTR1106	Microcomputer Databases .....	3
CPTR1110	Visual Basic Program I.....	3
CPTR1115	COBOL Programming.....	4
* COMM1120	Introduction to Public Speaking.....	3
or		
COMM1130	Small Group Communication.....	3
or		
COMM1140	Interpersonal Communication.....	3
CPTR1129	RPG Programming .....	4
CPTR1170	Web Engineering I.....	3
CPTR2000	Mobile Application Development.....	3
CPTR2230	Structured Query Language.....	3
CPTR2238	Database Integration .....	3
CPTR2242	Java Programming .....	3
CSCI1110	Informatics.....	3
CSCI1121	Computer Science I.....	4
ENGL1101	College Writing .....	3

### Special Requirement:

CPTR1100 and CPTR1104 will NOT be counted as technical electives in the Computer Programming AAS.

## Information Technology

**AAS 60 Credits**

D E

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
	MN Transfer Electives .....	6
CPTR1001	Introduction to Programming and Scripting .....	3
CPTR1106	Microcomputer Databases .....	3
CPTR1108	CISCO 1.....	3
CPTR1118	CISCO 2.....	3
CPTR1125	IT Essentials .....	3
CPTR1130	IT Essentials 2.....	3
CPTR1142	Network Essentials .....	3
CPTR1148	Microcomputer Operating System .....	3
CPTR2224	Linux I.....	3
CPTR2236	Network Security .....	3
* CPTR2252	Microcomputer Systems Project.....	3
or		
CPTR2294	Internship .....	3
CPTR2272	Network Operating Systems.....	3
CSCI1110	Informatics.....	3
ENGL1101	College Writing .....	3
HUM2236	Technology in the Humanities .....	3
ITSS1100	Information Technology Help Desk.....	3
ITSS2100	Supporting End User Applications .....	3
SOC1111	Intro to Sociology.....	3

\* Take three credits from the specified courses.



## Information Technology

AS 60 Credits

M

The Information Technology Associate of Science 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 .....	14
COMM1120	Intro to Public Speaking .....	3
CPTR1001	Intro 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
CPTR2224	Linux I .....	3
CPTR2236	Network Security .....	3
CPTR2272	Network Operating Systems .....	3
ENGL1101	College Writing .....	3
HUM2236	Technology in the Humanities .....	3
MATH1114	College Algebra.....	4
PSYC1200	General Psychology.....	3

## Network Administration and Security

Pending MnSCU Program Update and Credit Waiver Approval

AAS 66 Credits

M W

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 .....	9
COMM1120	Introduction to Public Speaking.....	3
CPTR1001	Introduction to Programming and Scripting .....	3
CPTR1106	Microcomputer Databases .....	3
CPTR1108	CISCO 1 .....	3
CPTR1118	CISCO 2 .....	3
CPTR1125	IT Essentials .....	3
* CPTR1148	Microcomputer Operating System .....	3
or		
CPTR1178	Robotics .....	3
CPTR2224	Linux I .....	3
CPTR2236	Network Security .....	3
CPTR2245	Enterprise Network Technologies.....	3
CPTR2272	Network Operating Systems .....	3
CSCI1110	Informatics.....	3
CSEC2204	Managing Directory Services.....	3
CSEC2210	Security Breaches and Counter Measures.....	3
CSEC2212	Web Security .....	3
* CPTR2294	Internship .....	3
or		
CSEC2222	Network Security Design .....	3
CSEC2228	Network Defense.....	3
CVNP2216	Voice Over Internet Protocol (VoIP) and IP Telephony .....	3
ENGL1101	College Writing .....	3

\* Take three credits from the specified courses.

## Network Security

Certificate 18 Credits

D E M

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
CPTR2234	Linux II .....	3
CPTR2236	Network Security .....	3
CSEC2210	Security Breaches and Countermeasures .....	3
CSEC2212	Web Security .....	3
CSEC2214	Topics in Network Security .....	3
CSEC2228	Network Defense .....	3

## 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

## Web Development

Pending MnSCU Credit Waiver Approval

AAS 72 Credits

D E

The Web Development program provides students with the opportunity to use creative and technical skills to create customer-friendly websites and applications using the most sophisticated tools currently available. Students will gain a strong understanding, appreciation and practical knowledge of the processes involved in building successful websites and applications.

Course #	Course Title	Crds
	MN Transfer Electives .....	6
*COMM1120	Introduction to Public Speaking.....	3
or		
COMM1130	Small Group Communication.....	3
or		
COMM1140	Interpersonal Communication.....	3
ENGL1101	College Writing .....	3
ENGL1215	Professional & Technical Writing .....	3
WEBD1000	Foundations of Web Design.....	3
WEBD1010	HTML .....	3
WEBD1020	Photoshop .....	3
WEBD1030	Multimedia .....	3
WEBD1040	Foundations of Web Development.....	3
WEBD1110	Cascading Style Sheets .....	3
WEBD1120	User Experience Design .....	3
WEBD1130	Electronic Commerce.....	3
WEBD1140	JavaScript.....	3
WEBD1150	PHP & MySQL .....	3
WEBD2000	Web Projects I.....	3
WEBD2010	Content Management Systems.....	3
WEBD2020	User Interface Design .....	3
WEBD2030	Search Engine Optimization.....	3
WEBD2040	Web Applications I.....	3
WEBD2100	Web Projects II.....	3
WEBD2110	Web Portfolio.....	3
WEBD2120	Mobile Applications.....	3
WEBD2140	Web Applications II.....	3

\* Take three credits from the specified courses.

## 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 cus-

tommer-friendly interactive websites for individuals, small businesses and large corporations.

Course #	Course Title	Crds
WEBD1000	Foundations of Web Design.....	3
WEBD1010	HTML .....	3
WEBD1020	Photoshop .....	3
WEBD1030	Multimedia .....	3
WEBD1040	Foundations of Web Development.....	3
WEBD1110	Cascading Style Sheets .....	3
WEBD1120	User Experience Design .....	3
WEBD1130	Electronic Commerce.....	3
WEBD2010	Content Management Systems.....	3
WEBD2020	User Interface Design .....	3

## Graphic Design

### 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 Mac-

intosh 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

### Digital Photography and Imaging

Program not offered academic year 2015-2016

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
CPT1102	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

## Fine Arts

### 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
	MNTransfer Electives.....	15
ENGL1101	College Writing.....	3
ENGL1205	Writing About Literature .....	3
MUSC1115	America's Musical Heritage.....	3
MUSC1116	World Music .....	3
MUSC1117	Beginning Class Guitar.....	2
MUSC1120	Introduction to Music Technology.....	3
MUSC1121	Basic Theory and Musicianship I .....	3
MUSC1122	Basic Theory and Musicianship II .....	3
MUSC1123	Sight Singing & Ear Training I.....	1
MUSC1124	Sight Singing & Ear Training II.....	1
MUSC2223	Sight Singing & Ear Training III.....	1
MUSC2224	Sight Singing & Ear Training IV.....	1



MUSC2231	Advanced Theory and Musicianship III.....	3
MUSC2232	Advanced Theory and Musicianship IV .....	3
* MUSC1135	Voice Ensemble .....	1
or		
MUSC1141	Concert Choir .....	1
or		
MUSC1162	Jazz Ensemble.....	1
or		
MUSC1164	Concert Band.....	1
or		
MUSC1168	Pep Band .....	1
** MUSC1151	Ind Voice Lessons .....	1
or		
MUSC1181	Private Instrumental Lessons .....	1
or		
MUSC1185	Private Music Composition Lessons .....	1
or		
MUSC1191	Individual Piano Lessons .....	1
***MUSC1151	Ind Voice Lessons .....	1
or		
MUSC1181	Private Instrumental Lessons .....	1
or		
MUSC1185	Private Music Composition Lessons .....	1
or		
MUSC1191	Individual Piano Lessons .....	1
or		
MUSC2251	Individual Voice Lessons.....	2
or		
MUSC2281	Private Instrumental Lessons .....	2
or		
MUSC2285	Advanced Music Composition .....	2
or		
MUSC2291	Individual Piano Lessons .....	2
****MUSC1114	Beginning Class Piano.....	2
or		
MUSC2291	Individual Piano Lessons .....	2
PHYS1107	Physics of Music .....	3

- \* Take eight credits from the specified courses.
- \*\* Take one credits from the specified courses.
- \*\*\* Take six credits from the specified courses.
- \*\*\*\* Take two credits from the specified courses.

## Theatre Arts

### AFA 60 Credits

F

The 60-credit Associate in Fine Arts (AFA) degree in Theatre Arts at M State provides students with the skills to help them develop into professional artists. Students will explore multiple areas of technical theatre including set building, design, lighting and sound and makeup. In addition, students will explore performance and production. The degree ensures that students will have the necessary coursework to prepare for transfer and advanced studies in theatre.

Course #	Course Title	Crds
	MN Transfer Electives .....	31
	Goal areas to be covered: 2,3,4,5,7,8,9 and 10 (Students are advised to take courses meeting multiple goal areas in order to fulfill MnTC requirements within 40 credits). MnTC Goal Area 2: Critical Thinking.	
** COMM1120	Introduction to Public Speaking.....	3
or		
COMM1140	Interpersonal Communication .....	3
ENGL1101	College Writing .....	1
** ENGL1205	Writing About Literature.....	3
or		
ENGL1210	Writing About Current Issues .....	3
or		
ENGL1215	Professional and Technical Writing.....	3
* THTR1120	Theatre Performance.....	2
or		
THTR1125	Theatre Technical Practicum.....	2
** THTR1135	Stage Costuming .....	3
or		
THTR1145	Stage Lighting and Sound .....	3
or		
THTR2130	Design for the Stage .....	3
THTR1100	Introduction to Theatre .....	3
THTR1105	Beginning Acting .....	3
THTR1130	State Make-up .....	3
THTR1140	Stagecraft.....	3
THTR2120	Script Analysis.....	3

- \* Take two credits from the specified courses.
- \*\* Take three credits from the specified courses.

## Visual Art

### AFA 60 Credits

F

The 60-credit AFA in Visual Art 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 MNTC goal areas. The degree specifies 29 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		
ART2111	Drawing II.....	3
or		
ART2112	Painting II.....	3
or		
ART2114	Photographic Art I.....	3
or		
ART2241	Advanced Ceramics .....	3
or		
GLST1121	Humanities Italy.....	3
or		
GLST1126	Cultures of Italy and Greece II .....	3
or		
HUM1120	Culture of Italy.....	3
or		
HUM2210	Introduction to Film.....	3
or		
THTR1125	Theatre Technical Practicum.....	3
or		
THTR1130	Stage Make-up.....	3
ART1121	World of Art I.....	3
ART1122	World of Art II .....	3
** ART1140	Handbuilt Ceramics .....	3
or		
ART1141	Ceramics I .....	3
ART2261	Art Portfolio Design and Professional Development .....	2
** BIOL1104	Biology of Human Concerns .....	3
or		
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 I .....	3
** PSYC1200	General Psychology.....	3
or		
SOC1111	Intro to Sociology.....	3

- \* Take nine credits from the specified courses.
- \*\* Take three credits from the specified courses.

# BUSINESS, ADMINISTRATION AND MANAGEMENT



+ Not offered academic year 2015-2016

Learn more at [minnesota.edu](http://minnesota.edu)

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# Accounting

## Accounting AAS

AAS 69 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 .....	6
ACCT1101	Payroll .....	3
ACCT1108	Business Math and 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		
ACCT2640	Accounting Internship.....	1 - 4
or		
ACCT2800	Accreditation Council for Accountancy and Taxation Exam Review .....	3
** ACCT2256	Income Tax-Business.....	3
or		
ACCT2630	Fund/Nonprofit Accounting.....	3
or		
ACCT2640	Accounting Internship.....	1 - 4
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
or		
ECON2222	Microeconomics .....	3
ENGL1101	College Writing .....	3
PDEV1102	Contemporary Career Search .....	1

\* Take three credits from the specified courses.

\* 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 63 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 1) .....	3
ACCT1101	Payroll .....	3
ACCT1108	Business Math and 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		
ACCT2640	Accounting Internship.....	1 - 4
or		
ACCT2800	Accreditation Council for Accountancy and Taxation Exam Review .....	3
** ACCT2256	Income Tax-Business.....	3
or		
ACCT2630	Fund/Nonprofit Accounting.....	3
or		
ACCT2640	Accounting Internship.....	1 - 4
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 three credits from the specified courses.

\* Take six credits from the specified courses.

## Accounting Clerk

Diploma 33 Credits

D M E

This program provides the knowledge and skills necessary to perform routine calculating, journalizing, posting and verifying duties to maintain accounting records and to 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 1) .....	3
	Credits from any of the following choices:ACCT 2640, ACCT 2630, ACCT 2800, ACCT 2256, ACCT 2291, CPTR 1106, Any BUSN, MKTG, HRES, ADMS or any MNTC.....	3
ACCT1101	Payroll .....	3
ACCT1108	Business Math and 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

### 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
	Communication 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
CPTR1104	Intro to Computer Tech .....	3
HRES1122	Human Resource Management .....	3
HRES1130	Benefits Administration .....	3
PDEV1102	Contemporary Career Search .....	1

## Administrative Support

### Administrative Assistant

#### AAS 60 Credits

M

The Associate of Applied Science 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 higher-level skills of strong verbal, listening and writing skills; interpersonal skills and the ability to keep confidences; technology skills using and integrating a variety of software applications; developing organizational, time management, team building, customer service and soft skills; and developing critical thinking and problem-solving skills to create a positive office environment.

Course #	Course Title	Crds
	MN Transfer Electives .....	6
	Technical Electives .....	10
	History/Social/Behavioral Sciences Electives (MNTC Goal Area 5) .....	3
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 Software Applications .....	3
ADMS2216	Business Communications II .....	3
COMM1120	Introduction to Public Speaking .....	3
ENGL1101	College Writing I .....	3

### Administrative Support

#### Diploma 33 Credits

M

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.

## 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
	Career 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 Administration

### AAS 60 Credits

F

The AAS in Business Administration is a two-year degree designed to prepare students for a career in business at the entry-level of management. The degree is designed 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 administration.

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
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 Administration

### Certificate 30 Credits

F

This one-year certificate in Business Administration is 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

## 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
ENTR1100	Introduction to Entrepreneurship.....	3
ENTR1400	Opportunity Analysis .....	3
ENTR2200	Entrepreneurial Field Studies .....	3
ENTR2220	Business Ethics/Professionalism .....	3
ENTR2222	Business Plan Development .....	3
MKTG1110	Customer Service.....	3

## Business Entrepreneurship

### Diploma 33 Credits

D

The primary purpose of this program is to prepare students for management or ownership of a small business. The program not only will prepare students for business management, but also enable them to better manage their own personal affairs. It especially will 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 will help you cultivate your entrepreneurial spirit: that is, 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
ENTR1400	Opportunity Analysis .....	3
ENTR2200	Entrepreneurial Field Studies .....	3
ENTR2222	Business Plan Development .....	3
MKTG1110	Customer Service.....	3

## Business: Management, Marketing and Sales

### AAS 66 Credits

D E M

The Business: Management, Marketing and Sales AAS major includes business courses as well as general education courses. This major 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 placed on developing skills in management decision-making, communication, problem-solving and technology.

Course #	Course Title	Crds
	MN Transfer Electives .....	6
* ACCT1012	Principles of Bookkeeping .....	3
or		
ACCT2211	Financial Accounting I.....	3
ACCT1108	Business Math/Calculators .....	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
or		
CSCI1155	Cpt Utilization/Business and Society .....	3
or		
MKTG2234	Computer Marketing Applications.....	3
* ECON2210	Macroeconomics .....	3
or		
ECON2222	Microeconomics .....	3
ENGL1101	College Writing .....	3
* ENTR1100	Intro to Entrepreneurship.....	3
or		
MKTG2236	Small Business Mgmt.....	3
* ENTR1400	Opportunity Analysis .....	3
or		
MKTG2230	Marketing Research .....	3
HRES1122	Human Resource Mgmt.....	3
MKTG1106	Professional Selling.....	3

MKTG1110	Customer Service.....	3
MKTG1116	Advertising and Promotion.....	3
MKTG2204	Advanced Professional Selling.....	3
MKTG2214	E-Marketing.....	3
MKTG2218	Retail Management.....	3
MKTG2232	Marketing Management.....	3
MKTG2290	Management, Marketing and Sales Internship.....	3

\* Take three credits from the specified courses.

## Business: Marketing and Sales

### Diploma 33 Credits

D M E

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, telemarketing and retailing and marketing concepts.

Course #	Course Title	Crds
	Communication Electives.....	3
ACCT1108	Business Math/Calculators.....	3
BUS2204	Principles of Management.....	3
BUS2206	Principles of Marketing.....	3
* CPTR1104	Intro to Computer Tech.....	3
or		
CSCI1155	Computer Utilization/Business and Society.....	3
or		
MKTG2234	Computer Marketing Applications.....	3
* ENTR1400	Opportunity Analysis.....	3
or		
MKTG2230	Marketing Research	
MKTG1106	Professional Selling.....	3
MKTG1110	Customer Service.....	3
MKTG1116	Advertising and Promotion.....	3
MKTG2204	Advanced Professional Selling.....	3
MKTG2212	Retail Management.....	3

\* Take three credits from the specified courses.

## Entrepreneur Essentials

### 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
ENTR1100	Introduction to Entrepreneurship.....	3
ENTR2220	Business Ethics/Professionalism.....	3

## Entrepreneurship Fundamentals

### 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
ENTR1400	Opportunity Analysis.....	3
MKTG1110	Customer Service.....	3
ENTR2222	Business Plan Development.....	3

## Entrepreneurship

### Certificate 18 Credits

D E CTS

Entrepreneurs create their own paths to success and work to make their dreams a reality.

This certificate was created to give a basic entrepreneurship education to someone who is technically proficient but has not taken business or entrepreneurship courses. 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
ENTR1100	Introduction to Entrepreneurship.....	3
ENTR2222	Business Plan Development.....	3

## 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 diploma 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

### 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

ME

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.

## Management Information Systems

AS 60 Credits

F

The AS in Management Information Systems is a two-year degree designed to prepare the student pursuing a career in business, specifically in the field of computer information management systems. The degree is designed for the student who wishes to enter the work force 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 preparation for careers in accounting/business.

Course #	Course Title	Crds
	MN Transfer Electives .....	2
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
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.

## Professional Sales Skills

Certificate 9 Credits

DECT

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

## Paralegal

AAS 60 Credits

DE

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 and manage caseloads.

Course #	Course Title	Crds
	MN Transfer Electives .....	3
	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
or		
PARA2216	Paralegal Internship.....	3
PARA2212	Family Law .....	3
* POLS1120	American National Government.....	3
or		
POLS1130	State and Local Government .....	3
PSYC1200	General Psychology.....	3

\* Take three credits from the specified courses.

## Individualized Studies

AAS 60 Credits

DEFMW

The Individualized Studies Associate in Applied Science (AAS) degree is designed for students who intend to update their skills and expand employment opportunities with a customized degree field. This 60 credit degree allows learners to develop a specific education plan to update their skills and gives them the opportunity and flexibility to focus on specialized career interests not offered in the college's structured degree programs. It integrates a number of subjects into a degree program and builds on a current area of study or expertise. Students work collaboratively with faculty and staff to create a degree plan that meets individualized educational needs. Students who enroll in the Individualized Studies program will complete 45 specialized career technical credits and 15 general education credits (in at least three Minnesota transfer goal areas).

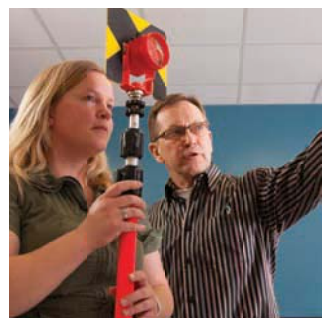
Course #	Course Title	Crds
	MN Technical Electives .....	42
	MN Transfer Electives .....	9
* COMM1100	Power and Communications in Human Relations.....	3
or		
COMM1120	Introduction to Public Speaking.....	3
or		
COMM1140	Interpersonal Communication.....	3
CPTR1104	Intro to Computer Tech .....	3
ENGL1101	College Writing I .....	3

\* Take three credits from the specified courses.





# ENGINEERING, MANUFACTURING AND TECHNOLOGY



+ Not offered academic year 2015-2016

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## Architectural and Mechanical Drafting and Engineering

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Mechanical Drafting and Design Diploma	71
Drafting and 3D Technologies AAS	71

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Carpentry Diploma <sup>+</sup>	71
Carpentry Assisting Certificate	72
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## Transportation, Distribution and Logistics

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Auto Body Collision Technology Certificate <sup>+</sup>	75
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Marine Engine Technology Diploma	77
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PowerSports Technology Diploma	78
PowerSports Technology Certificate	78

# Architectural and Mechanical Drafting and Engineering

## Architectural Drafting and Design

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 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 also will be enrolled in general education courses selected to complement their technical education. This degree can allow students to continue their education in a number of baccalaureate programs at four-year institutions.

Course #	Course Title	Crds
	MN Transfer Electives .....	9
	Architecture Electives .....	6
ARCH1122	Computer Aided Drafting for Architecture .....	4
ARCH1126	Residential Project I .....	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
ARCH2250	Project Administration .....	2
BLDG1114	Blueprint Reading I .....	2
CADD1102	Fundamentals of CADD .....	4
CIVL1100	Survey I: Fundamentals .....	3
COMM1120	Introduction to Public Speaking .....	3
CONM1108	Principles of Estimating .....	4
CONM1124	Building Systems .....	3
CONM2206	Building Codes .....	2
ENGL1101	College Writing .....	3
ENGT1126	Engineering Graphics .....	3
ENGT1134	Office Systems and Equipment .....	3
MATH1020	Intermediate Algebra .....	3

## Architectural Drafting

Diploma 36 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.

Course #	Course Title	Crds
ARCH1122	Computer Aided Drafting for Architecture .....	4
ARCH1126	Residential Project I .....	3
ARCH2248	CADD Alternatives .....	3
BLDG1114	Blueprint Reading I .....	2
CADD1102	Fundamentals of CADD .....	4
CIVL1100	Survey I: Fundamentals .....	3
CONM1124	Building Systems .....	3
CONM2206	Building Codes .....	2
ENGL1101	College Writing .....	3
ENGT1126	Engineering Graphics .....	3
ENGT1134	Office Systems and Equipment .....	3
MATH1020	Intermediate Algebra .....	3

## Civil Engineering Technology

Pending MnSCU Approval

AAS 66 Credits

D

Students completing the Civil Engineering Technology program are prepared for employment in the civil engineering field. Civil engineering technicians plan, design and 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 also will be provided with recommendations in general education classes selected to build a foundation for their technical courses. The Civil Engineering Technology program articulates to a BS degree in Operations or Construction Management at Minnesota State University, Moorhead.

Course #	Course Title	Crds
	MN Transfer Electives .....	9
BLDG1114	Blueprint Reading I .....	2
CADD1102	Fundamentals of CADD .....	4
CIVL1100	Survey I: Fundamentals .....	3
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
CIVL2242	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
ENGT1126	Engineering Graphics .....	3
ENGT1134	Office Systems and Equipment .....	3
MATH1020	Intermediate Algebra .....	3

## Survey Technician

Diploma 33 Credits

D

This diploma provides the student with a basic study of Civil Engineering Surveying including survey equipment setup and training, surveying principles and an introduction to Civil Engineering survey practices and uses. Survey I and II provide the students knowledge of property and land surveys. Civil Engineering surveys for project design, construction are examined in the program content. Classroom instruction and field training in level surveys, total station and global positioning equipment prepare students to apply survey principles. Courses in Road Design and Construction Inspection explain those principles relating to the field of Civil Engineering.

Course #	Course Title	Crds
BLDG1114	Blueprint Reading I .....	2
CADD1102	Fundamentals of CADD .....	4
CIVL1100	Survey I: Fundamentals .....	3
CIVL1119	Survey II: Land Surveys .....	3
CIVL1138	CADD II: Plan Layout .....	3
CIVL2209	Construction Inspection .....	3
CIVL2210	Road Design .....	3
ENGL1101	College Writing .....	3
ENGT1134	Office Systems and Equipment .....	3
ENGT1126	Engineering Graphics .....	3
MATH1020	Intermediate Algebra .....	3

## Engineering

AS 60 Credits

M

The Associate of Science 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.

## Mechanical Drafting and Design

Diploma 60 Credits

M

Mechanical Drafting and Design technicians use software to generate parts and assemblies of parts and machines to the specifications necessary for manufacturing. They create designs and translate the ideas into the two-dimensional working plans and three-dimensional geometry used in manufacturing those products.

Course #	Course Title	Crds
	MN Transfer Electives .....	9
CADD1102	Fundamentals of CADD.....	4
CADD1114	Intro to Solids and Parametric Modeling.....	4
ENGR1118	Engineering Applications.....	3
MCDD1104	Mechanical Engineering Drawing I.....	4
MCDD1106	Mechanical Engineering Drawing II.....	4
MCDD1114	Manufacturing Process.....	2
MCDD1124	Mechanical Drafting Applications I.....	3
MCDD1210	Drafting Practices.....	1
MCDD2112	Geometric Dimensioning and Tolerancing.....	2
MCDD2200	Advanced Modeling with Solidworks.....	3
MCDD2204	Mechanical Engineering Drawing III.....	4
MCDD2206	Mechanical Engineering Drawing IV.....	2
MCDD2210	Advanced Modeling with Inventor.....	3
MCDD2230	Rapid Prototyping.....	2
MCDD2246	Tool Design .....	3
MCDD2248	CNC Application.....	3
MCDD2252	Mechanical Drafting Applications II.....	4

## Drafting and 3D Technologies

AAS 66 Credits

M

Mechanical Drafting and Design technicians use software to generate parts and assemblies of parts and machines to the specifications necessary for manufacturing. They create designs and translate the ideas into the two-dimensional working plans and three-dimensional geometry used in manufacturing those products.

Course #	Course Title	Crds
CADD1102	Fundamentals of CADD.....	4
CADD1114	Intro to Solids and Parametric Modeling.....	4
COMM1120	Introduction to Public Speaking.....	3
ECON2210	Macroeconomics .....	3
ENGL1101	College Writing .....	3
ENGL1215	Professional and Technical Writing.....	3
ENGR1118	Engineering Applications.....	3
MCDD1104	Mech Engineering Drawing I.....	4
MCDD1106	Mech Engineering Drawing II.....	4
MCDD1114	Manufacturing Process.....	2
MCDD1124	Mechanical Drafting Applications I.....	3
MCDD1210	Drafting Practices.....	1
MCDD2112	Geometric Dimensioning and Tolerancing.....	2
MCDD2200	Advanced Modeling with Solidworks.....	3
MCDD2204	Mech Engineering Drawing III.....	4
MCDD2206	Mechanical Engineering Drawing IV.....	2
MCDD2210	Advanced Modeling with Inventor.....	3
MCDD2230	Rapid Prototyping.....	2
MCDD2246	Tool Design .....	3
MCDD2248	CNC Application.....	3
MCDD2252	Mechanical Drafting Applications II.....	4
SOC1111	Intro to Sociology.....	3

## Construction and Utilities

### Carpentry

Program not offered academic year 2015-2016

AAS 69 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 .....	12
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
CARP1111	Floors and Roofs.....	2
CARP1112	Exterior Finish I.....	3
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 or Higher.....	3

### Carpentry

Program not offered academic year 2015-2016

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
CARP1111	Floors and Roofs.....	2
CARP1112	Exterior Finish I.....	3
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 or Higher.....	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
BLDG1115	Carpentry Blueprints .....	3
BLDG1120	Construction Estimating I.....	2
CARP1102	Prin of Framing .....	3
CARP1104	Framing I.....	6
CARP1109	Interior Finish I.....	3
CARP1110	Introduction to Cabinet Building .....	3
CARP1112	Exterior Finish I.....	3
CARP1115	Floors and Roofs .....	3
CARP2220	Carpentry Internship .....	3

## Construction Management

**AAS 66 Credits**

M

Construction Management is a growing segment of the construction industry focusing on the flow of labor, materials, equipment, time and money from the conception of a project through completion. This AAS program represents a combination of skills in construction, engineering, business and management areas. The skills learned in these areas can enable a graduate to pursue a variety of careers in construction: supervision, management, estimating, safety or testing.

Course #	Course Title	Crds
	MN Transfer Electives .....	3
* ACCT1101	Payroll .....	3
or		
BUS2204	Principles of Management.....	3
* ACCT1120	Business Law.....	3
or		
BLDG1000	Introduction to the Construction Trades .....	3
BIOL1107	Environmental Science Issues.....	3
CADD1102	Fundamentals of CADD.....	4
* COMM1120	Introduction to Public Speaking.....	3
or		
COMM1130	Small Group Communication.....	3
CONM1101	Construction Documents & Codes.....	3
CONM1102	Site/Building Layout.....	2
CONM1104	Construction Management Principles .....	2
CONM1108	Principles of Estimating .....	4
CONM1124	Building Systems.....	3
CONM2204	Materials Testing.....	3
CONM2210	Construction Scheduling.....	3
CONM2212	Site Management .....	3
CONM2213	Safety Management .....	2
CONM2217	Computer Estimating & Bidding .....	3
CONM2222	Construction Mgmt Internship .....	2
* CPTR1104	Intro to Computer Tech .....	3
or		
CSCI1110	Informatics.....	3
ENGL1101	College Writing .....	3
ENGL1215	Professional & Technical Writing .....	3
ENGT1118	Construction and Manufacturing Math.....	3
ENGT1126	Engineering Graphics.....	3
MCDD2206	Mechanical Engineering Drawing IV .....	2

\* Take three credits from the specified courses.

## Electrical Line Worker Technology

**AAS 70 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 .....	3
BIOL1107	Environmental Science Issues.....	3
ELEC1102	Introduction to Electric Circuit Theory .....	4
ELEC2234	Hydraulics/Pneumatics.....	2
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
PSYC1101	Human Interaction.....	3
SUPL1118	Lead and Facilitate Teams.....	3
TRDR1101	CDL1.....	1
TRDR1103	CDL2.....	2

\* Take three credits from the specified courses.

## Electrical Line Worker 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 - Electrician Emphasis

**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
	Electrical Technology Electives .....	5

	MN Transfer Electives .....	6
ELEC1100	Electrical Safety .....	1
ELEC1102	Introduction to Electric Circuit Theory .....	4
ELEC1104	Introduction to National Electrical Code .....	2
ELEC1107	Introduction to Residential Wiring .....	3
ELEC1108	Electrical Circuit Theory .....	4
ELEC1110	Electric Motors and Generators.....	4
ELEC1112	Residential Wiring.....	3
ELEC1114	National Electrical Code.....	2
ELEC1116	Conduit/Tool Applications .....	2
ELEC1118	Electrical Services .....	3
ELEC1122	Introduction to Electrical Materials .....	1
ELEC1124	Introduction to Electrical Blueprint Reading.....	2
ELEC1130	Electrical Blueprints.....	3
ELEC2202	Heating/Cooling Controls .....	3
ELEC2205	Introduction to Commercial Wiring.....	3
ELEC2206	Introduction to Motor Control Applications.....	3
ELEC2208	Programmable Logic Controllers .....	2
ELEC2211	Electronic Motor Control.....	3
ELEC2212	Commercial Wiring .....	3
ELEC2214	Industrial Wiring.....	2
ELEC2216	Motor Control Application.....	3
ELEC2225	Transformers.....	2
ELEC2248	Code Applications.....	2
MATH1000	Technical Mathematics .....	3

## Electrical Technology - Industrial Electrician Emphasis

**Diploma 74 Credits**

W

The Electrical Technology - Industrial Maintenance Emphasis 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 comprehensive 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
	Electrical Technology Electives .....	6
	MN Transfer Electives .....	6
ELEC1100	Electrical Safety .....	1
ELEC1102	Introduction to Electric Circuit Theory .....	4
ELEC1104	Introduction to National Electrical Code .....	2
ELEC1108	Electrical Circuit Theory.....	4
ELEC1110	Electric Motors and Generators.....	4
ELEC1114	National Electrical Code.....	2
ELEC1116	Conduit/Tool Applications .....	2
ELEC1122	Introduction to Electrical Materials .....	1
ELEC1124	Introduction to Electrical Blueprint Reading.....	2
ELEC1130	Electrical Blueprints.....	3
ELEC2202	Heating/Cooling Controls .....	3
ELEC2205	Introduction to Commercial Wiring.....	3
ELEC2206	Introduction to Motor Control Applications.....	3
ELEC2208	Programmable Logic Controllers .....	2
ELEC2211	Electronic Motor Control.....	3
ELEC2212	Commercial Wiring .....	3
ELEC2214	Industrial Wiring.....	2
ELEC2216	Motor Control Application.....	3
ELEC2222	Advanced Programmable Logic Controllers.....	3
ELEC2225	Transformers.....	2
ELEC2228	Electrical Troubleshooting .....	1
ELEC2234	Hydraulics/Pneumatics.....	2
ELEC2236	Industrial Motor Maintenance .....	2
ELEC2246	Advanced Electronics.....	2
MATH1000	Technical Mathematics .....	3

## Gas Utility Construction and Service

**Diploma 32 Credits**

W

The Gas Utility Construction and Service program prepares students to install, maintain and operate both high- and low-pressure natural gas distribution systems used to supply residential, commercial and industrial companies. Program graduates will be qualified to enter one of the most technologically intensive industries in today's economy with potential ca-

reers in gas construction mechanics, gas meter mechanics, gas service mechanics, gas clerk estimation, gas regulator maintenance mechanics, gas appliance repair and underground facilities location.

Course #	Course Title	Crds
GAS1000	Gas Utility Field Training I .....	4
GAS1002	Gas Service Welding I .....	3
GAS1004	Gas Utility Field Training II .....	4
GAS1005	Gas Service Welding II .....	3
GAS1500	Metallurgy .....	1
GAS2002	Gas Utility Field Training III .....	5
GAS2600	Electric and Gas Appliances.....	4
MATH1000	Technical Mathematics .....	3
METC2208	Basic Electricity and Electronics.....	3
TRDR1101	Commercial Driver License I .....	1
TRDR1103	Commercial Drivers License II.....	1

## Heating, Ventilation and Air Conditioning/ Refrigeration

**Diploma 36 Credits**

W

Students in this program work with both residential and light commercial heating, ventilation, ducting, air conditioning and refrigeration equipment. This extensive background, together with hands-on skills in layout, fabrication, installation and repair, qualifies graduates to enter one of the world's fastest-growing industries. Employment exists with manufacturers, engineers, contractors and specialized service firms. Students learn and develop applications skills of more efficient, cost-effective equipment and their application procedures. Many new, exciting and energy-saving innovations are being developed. Technicians train in this industry to provide the latest technologies to control the environment in any enclosed area, from residential homes to light commercial buildings. This includes controlling indoor air quality by utilizing mechanical means to remove pollutants and maintain desired humidity and temperature settings.

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.....	2
HVAC2212	Hot Water Heating.....	3
HVAC2221	Heat Pump Theory and Operation.....	3
HVAC2290	Heating, Ventilating, and Air Conditioning Internship .....	1
MATH1000	Technical Mathematics .....	3
REFR1110	Refrig, A/C & Htg Prin .....	3
REFR1112	Refrig, A/C & Htg Lab.....	3

## Commercial Refrigeration

**Diploma 35 Credits**

M

Students in this program will gain the skills and knowledge to be able to service and maintain commercial refrigeration equipment, which includes walk-in coolers and freezers, grocery stores, and ice-makers. Students will gain skills in layout, installation, and repair. Employment exists with manufacturers, engineers, contractors, and specialized service firms. Students learn to research and develop applications of more efficient, cost-effective equipment and procedures. The knowledge to design, install, and maintain these special environments for people, products, and perishables is essential today.

Course #	Course Title	Crds
COMM1130	Small Group Communication.....	3
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
REFR2217	Commercial Grocery Store Principles .....	3

### Special Requirement:

Students must complete the HVAC/R program to enroll into the Commercial Refrigeration program.

## Industrial Maintenance

**Program not offered academic year 2015-2016**

**Diploma 31 Credits**

M W CT

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 and most of the students' time is spent performing hands-on tasks related to the industry.

Course #	Course Title	Crds
	Technical Electives .....	3
COMM1130	Small Group Communication.....	3
CPTR1100	Fund Computer Concepts.....	1
ELEC1100	Electrical Safety .....	1
ELEC1110	Electric Motors and Generators.....	4
ELEC1170	Predictive Maintenance Technology.....	2
ELEC2208	Programmable Logic Controllers .....	2
ELEC2236	Industrial Motor Maintenance .....	2
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

## Industrial Workplace

**Certificate 16 Credits**

D F M W

This certificate is designed to ensure that students are workplace-ready for the industrial workplace. This course of study will provide basic communication, computer, technical math and safety skills, as well as elective technical skills needed in the industrial workplace. In addition, students will be introduced to the work habits and attitudes that lead to success in the industrial workplace.

Course #	Course Title	Crds
* BUS1120	Spreadsheet & Database Concepts .....	4
or		
CADD1102	Fundamentals of CADD.....	4
or		
CHEM1100	Fundamental Concepts of Chemistry .....	4
or		
ENGR1100	Project Management .....	4
or		
IHS1293	OSHA 10-Hour General Industry Safety.....	4
or		
IHS2292	OSHA 30-Hour General Industry Safety.....	4
or		
IMMA1110	Intro Power and Mechanical Systems.....	4
or		
IMMA1112	Mechanical Blueprint Reading.....	4
or		
IND1500	Introduction to Steel Welding.....	4
or		
IND1501	Basic Steel Welding.....	4
or		
METC1118	Manufacturing Basics .....	4
or		
PHIL1200	Applied and Professional Ethics.....	4
** COMM1100	Communication and Effective Human Relations.....	3
or		
IND1100	Introduction to the Industrial Workplace .....	3
** COMM1130	Small Group Communication.....	3
or		
COMM2230	Intercultural Communication.....	3
CPTR1104	Intro to Computer Tech .....	3
MATH1000	Technical Mathematics.....	3

\* Take four credits from the specified courses.

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

## Plumbing Technology

**Program not offered academic year 2015-2016**

**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

\* Take three credits from the specified courses.

## Plumbing Technology

**Program not offered academic year 2015-2016**

**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.

# Transportation, Distribution and Logistics

## Auto Body Collision Technology

*Program not offered academic year 2015-2016*

**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

*Program not offered academic year 2015-2016*

**Diploma 60 Credits**

D

The Auto Body Collision Technology program is designed to prepare students for work as collision damage repair specialists. Students entering the program should have good mechanical aptitude and communications skills. Students in the second year will expand their knowledge of auto body theory and work on projects that are increasingly more complex, which will enhance their skill level. Due to advancements in automobile technology across the industry in recent years, formal training in auto body collision technology is essential to the success of our graduates in pursuing vocational opportunities in the industry. Graduates of the program will be ready to enter the collision repair industry with confidence based on their knowledge and experience gained in the lab. Students will have gained more experience in the use of frame pulling equipment, increased skill level in painting methods and overall damage repair procedures.

Course #	Course Title	Crds
	MN Transfer Electives .....	3
ABCT1500	Introduction to Auto Body.....	2
ABCT1510	Welding.....	3
ABCT1520	Auto Body Lab I.....	4
ABCT1530	Refinishing Lab I.....	3
ABCT1540	Basic Electrical and Glass.....	2
ABCT1550	Body Shop Operations .....	3
ABCT1560	Mechanical Components I.....	3
ABCT1570	Auto Body Lab II.....	5
ABCT1580	Refinishing Lab II.....	4
ABCT2500	Auto Body Internship.....	1
ABCT2500	Auto Body Internship.....	1

ABCT2510	Auto Body Lab III.....	2
ABCT2520	Mechanical Components II.....	3
ABCT2530	Refinishing Lab III.....	3
ABCT2540	Unibody and Frame Alignment.....	4
ABCT2550	Collision Damage Repair.....	3
ABCT2560	Auto Body Lab IV .....	4
ABCT2570	Refinishing Lab IV .....	4
COMM1100	Communication and Effective Human Relations.....	3

## Auto Body Collision Technology

*Program not offered academic year 2015-2016*

**Certificate 30 Credits**

D

The Auto Body Collision Technology certificate prepares students to perform non-structural repairs. This program prepares students for entry-level work as a repair technician. This includes panel repairs of four hours or less, bolt-on panel replacements and weld-on panel replacements. Students entering the program should have good mechanical aptitude and communications skills. Graduates of the program learn how to replace and repair portions of automobiles, sand, mask, and paint using the latest refinishing materials and techniques. They also learn how to inspect drive train components, perform electrical diagnostics, replace glass, and perform wheel alignments, while working on late model vehicles using the latest technology and equipment.

Course #	Course Title	Crds
ABCT1500	Introduction to Auto Body.....	2
ABCT1510	Welding.....	3
ABCT1520	Auto Body Lab I.....	4
ABCT1530	Refinishing Lab I.....	3
ABCT1540	Basic Electrical and Glass .....	2
ABCT1560	Mechanical Components I.....	3
ABCT1570	Auto Body Lab II.....	5
ABCT1580	Refinishing Lab II.....	4
ABCT2500	Auto Body Internship.....	1
COMM1100	Communication and Effective Human Relations.....	3

## 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. The AAS degree includes additional credits to their degree if one were to pursue management opportunities in the automotive industry.

Course #	Course Title	Crds
	MN Transfer Electives .....	6
	Humanities, Philosophy or Sociology Electives.....	3
	Business or Economics Electives.....	3
	Communication or English Electives.....	3
AMST1102	Alignment and Suspension I .....	3
AMST1105	Brakes I .....	3
AMST1110	Batteries, Starting and Charging Systems .....	2
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
AMST2210	Body Electrical and Mechanical II.....	2
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
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
AMST1110	Batteries, Starting and Charging Systems .....	2
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
AMST2210	Body Electrical and Mechanical II .....	2
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
TRNS1102	Introduction to Transportation .....	2

## Light Duty Maintenance Technician

Certificate 69 Credits

D M

This certificate is an entry-level skills and knowledge based program that will meet industry standards to start employment as a Light Duty Maintenance Technician. 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.

Course #	Course Title	Crds
AMST1102	Alignment and Suspension I .....	3
AMST1105	Brakes I .....	3
AMST1109	Starting & Charging.....	3
AMST1111	Automotive Electronics .....	3
TRNS1102	Introduction to Transportation .....	2

## 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
CPTR1100	Fund Computer Concepts.....	1
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 ...	4
DCNH2238	Transmissions and Drive Systems .....	3
DCNH2242	Advanced Engines and Fuel Systems .....	6
DSET1100	Diesel Equipment Fundamentals .....	2
DSET1101	Software Systems in Transportation .....	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
CPTR1100	Fund Computer Concepts.....	1
DSET1100	Diesel Equipment Fundamentals.....	2
DSET1101	Software Systems in Transportation .....	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 - General Option

### 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 trucks 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	Crd
* BIOL1107	Environmental Science Issues.....	3
or		
HUM2236	Technology in the Humanities .....	3
COMM1120	Introduction to Public Speaking.....	3
CPTR1100	Fund Computer Concepts.....	1
DSET1100	Diesel Equipment Fundamentals .....	2
DSET1101	Software Systems in Transportation .....	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	Crd
BIOL1107	Environmental Science Issues.....	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 Technology

### AAS 69 Credits

D

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. Career opportunities include working in dealerships as technicians, with many having opportunities to move into management, self-employment and factory representative positions.

Course #	Course Title	Crd
	MN Transfer Electives .....	6
	English Electives.....	3
	Political Science Electives .....	3
	Psychology Electives .....	3
MRNT1105	Introduction to Marine.....	2
MRNT1107	Drive Systems 1.....	3
MRNT2001	Marine Internship.....	1
MRNT2107	Drive Systems 2.....	3
MRNT2205	Marine Advanced Fuel Systems.....	3
MRNT2206	EFI Systems .....	3
MRNT2211	Engine Service .....	2
MRNT2212	Performance Testing.....	1
MRNT2218	Adv Electrical Diagnosis .....	3
MRNT2223	Advanced Drives.....	3
MRNT2227	Transom Plate and Mid-Sections 1 .....	2
MRNT2228	Transom Plate and Mid-Sections 2 .....	2
MRNT2230	Engine Performance Rebuild and Diagnostics .....	4
TRNS1001	Fuel Systems I .....	3
TRNS1003	Off-Road Literature and Computer Systems .....	2
TRNS1005	Off-Road Electrical Systems .....	2
TRNS1006	Off-Road Vehicle Maintenance .....	4
TRNS1015	Ignition, Charging and Starter Systems Lab .....	2
TRNS1016	Ignition, Charging and Starting Systems Theory .....	1
TRNS1102	Introduction to Transportation.....	2
TRNS1104	Transportation Electronics.....	3
TRNS1193	Fuel Systems II Lab.....	1
TRNS1194	Fuel Systems II Theory .....	2

## Marine Engine Technology

Diploma 60 Credits

D

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. Career opportunities include working 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
MRNT1105	Introduction to Marine .....	2
MRNT1107	Drive Systems 1.....	3
MRNT2001	Marine Internship.....	1
MRNT2107	Drive Systems 2.....	3
MRNT2205	Marine Advanced Fuel Systems.....	3
MRNT2206	EFI Systems .....	3
MRNT2211	Engine Service .....	2
MRNT2212	Performance Testing.....	1
MRNT2218	Adv Electrical Diagnosis .....	3
MRNT2223	Advanced Drives .....	3
MRNT2227	Transom Plate and Mid-Sections 1 .....	2
MRNT2228	Transom Plate and Mid-Sections 2 .....	2
MRNT2230	Engine Performance Rebuild and Diagnostics .....	4
TRNS1001	Fuel Systems I .....	3
TRNS1003	Off-Road Literature and Computer Systems .....	2
TRNS1005	Off-Road Electrical Systems .....	2
TRNS1006	Off-Road Vehicle Maintenance .....	4
TRNS1015	Ignition, Charging and Starter Systems Lab .....	2
TRNS1016	Ignition, Charging and Starting Systems Theory .....	1
TRNS1102	Introduction to Transportation .....	2
TRNS1104	Transportation Electronics.....	3
TRNS1193	Fuel Systems II Lab.....	1
TRNS1194	Fuel Systems II Theory .....	2

## Marine/Powersports Maintenance Specialist

Certificate 16 Credits

D

The purpose of this certificate is for the student to gain mechanical confidence in marine and powersport products. This will allow the student to attain an entry-level position at a local dealership. This certificate also can be applied to recreational outdoor powersport or boating enthusiasts who want to get a grasp on maintaining their own equipment. This is a beginners certificate to build the mechanical abilities needed when working on recreational products.

Course #	Course Title	Crds
TRNS1001	Fuel Systems I .....	3
TRNS1003	Off-Road Literature and Computer Systems .....	2
TRNS1005	Off-Road Electrical Systems .....	2
TRNS1006	Off-Road Vehicle Maintenance .....	4
TRNS1102	Introduction to Transportation .....	2
TRNS1104	Transportation Electronics.....	3

## 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 a 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. Many industry training opportunities are available.

Course #	Course Title	Crds
	MN Transfer Electives .....	6
MRNT2230	Engine Performance Rebuild and Diagnostics .....	4
PWST1302	Snowmobile I.....	5
PWST1304	Snowmobile Clutching.....	2
PWST1406	Chainsaws and Generators .....	2
PWST2302	Advanced Power Equipment .....	4
PWST2304	Motorcycles I .....	3

PWST2306	Snowmobile Drives and Suspensions .....	3
PWST2308	Advanced Snowmobiles.....	3
PWST2311	Motorcycles II .....	3
PWST2312	Advanced Motorcycle Systems .....	3
TRNS1001	Fuel Systems I .....	3
TRNS1003	Off-Road Literature and Computer Systems .....	2
TRNS1005	Off-Road Electrical Systems .....	2
TRNS1006	Off-Road Vehicle Maintenance .....	4
TRNS1015	Ignition, Charging and Starter Systems Lab .....	2
TRNS1016	Ignition, Charging and Starting Systems Theory .....	1
TRNS1102	Introduction to Transportation .....	2
TRNS1104	Transportation Electronics.....	3
TRNS1193	Fuel Systems II Lab.....	1
TRNS1194	Fuel Systems II Theory .....	2

## PowerSports Technology

Certificate 30 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. Many industry training opportunities are available.

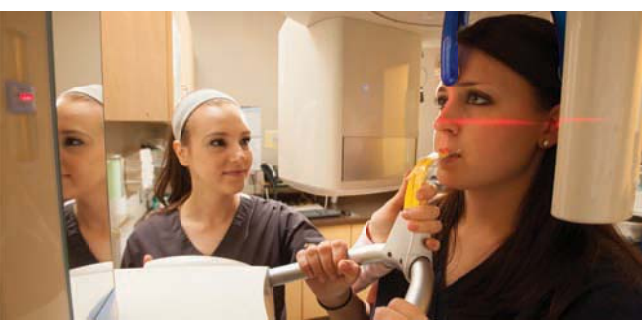
Course #	Course Title	Crds
	MN Transfer Electives .....	3
PWST1302	Snowmobile I .....	5
TRNS1001	Fuel Systems I .....	3
TRNS1003	Off-Road Literature and Computer Systems .....	2
TRNS1005	Off-Road Electrical Systems .....	2
TRNS1006	Off-Road Vehicle Maintenance .....	4
TRNS1015	Ignition, Charging and Starter Systems Lab .....	2
TRNS1016	Ignition, Charging and Starting Systems Theory .....	1
TRNS1102	Introduction to Transportation .....	2
TRNS1104	Transportation Electronics.....	3
TRNS1193	Fuel Systems II Lab.....	1
TRNS1194	Fuel Systems II Theory .....	2

NOTES

Lined area for notes



# HEALTH SCIENCE TECHNOLOGY

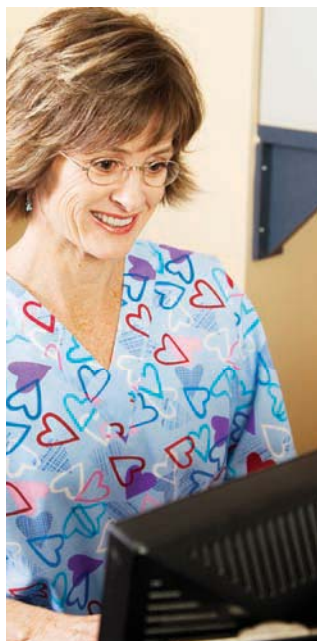


+ Not offered academic year 2015-2016

Learn more at [minnesota.edu](http://minnesota.edu)

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## Biological Sciences

### 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 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 an advisor. 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
* ENGL205	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.

### Biological Sciences - Ecology and Evolutionary Biology Emphasis

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 advisor. 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

## 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	Dental Assisting 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. Individuals entering the program must begin the Hepatitis B vaccination series. PLEASE NOTE: The following required courses must be taken PRIOR TO enrolling in the core Dental Assisting courses: BIOL2230, DENT1102 and ENGL1101. Dental Assisting program minimum admission requirements: 1. Academic transcript with a minimum 2.5 GPA. If applicant has completed 8 or more college credits, admission will be determined based on college transcript. If applicant has not completed 8 or more college credits, admission will be determined based on \*high school transcript or \*\*GED.

\*If applicant is currently in the process of completing high school, a final transcript must be submitted prior to March 1 of the year in which the applicant wishes to start the program. A minimum 2.5 GPA is required.

\*\* GED completion transcript with a minimum average of 500 (50 on older tests) on each of the five tested areas. 2 a. Completion of all developmental course work based on assessment results prior to acceptance into the Dental Assisting program. Students must earn a C or better in all developmental course work to be eligible for acceptance to the program. Developmental Courses: DVCM00006 Comprehension Building, ENGL0050 Writing Fundamentals, MATH0052 Developmental Math OR Accuplacer assessment scores as follows (or be eligible for an assessment waiver): Arithmetic = 57 Reading = 77.5 Writing = 77.5.

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	Dental Assisting 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

The 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 and public health clinics. 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. The Minnesota Board of Dentistry requires BCA and FBI criminal background checks and fingerprint analysis prior to initial licensure in the state of Minnesota.

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

## Health Information Technology

### Health Information Technology/Coding

**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, International Classification of Diseases and Current Procedural Terminology coding, 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.

Course #	Course Title	Crds
BIOL2260	MN Transfer Electives.....	3
BIOL2261	Human Anatomy and Physiology I.....	3
BIOL2262	Human Anatomy and Physiology II.....	1
BIOL2263	Human Anatomy and Physiology II Lab.....	3
COMM1120	Introduction to Public Speaking.....	1
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 utilizing information technology to meet legal, medical, efficiency and ethical requirements.

Course #	Course Title	Crds
CPTR1001	Introduction to Programming and Scripting.....	3
CPTR1106	Microcomputer Databases.....	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

## Medical Laboratory Technology

### Medical Laboratory Technology

**AS 60 Credits**

F

Medical lab technicians perform a wide range of routine laboratory procedures associated with blood and body-fluid analysis. In cooperation with affiliate healthcare facilities, the college offers a two-year hybrid (online lectures, campus-based labs) program for training medical laboratory technicians. The curriculum includes general education, science, medical laboratory technician courses, and a 20-week clinical experience at an affiliate healthcare laboratory. Upon completion of the program, students are prepared for the MLT National Board of Certification exam and employment. The majority of Medical Laboratory Technician graduates work in hospitals and clinics. 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	Fundamental Concepts of Chemistry .....	3
CHEM1105	Medical Chemistry .....	3
ENGL1101	College Writing .....	3
ENGL1215	Professional & 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 & Phlebotomy .....	1
MLT2220	Clinical Blood Bank .....	2
MLT2221	Clinical Microbiology .....	3
MLT2222	Clinical Chemistry and Special Chemistry .....	2
MLT2230	Clinical Applications .....	1
ZOO1122	Hematology & Coagulation .....	4
ZOO1123	Immunohematology .....	3
ZOO1126	Urinalysis & Body Fluids .....	2

ADMM1122	Medical Office Procedures .....	4
ADMM1140	Medical Language Applications .....	3
ADMM1150	Medical Billing/Insurance .....	4
ADMM1152	Outpatient Coding .....	4
ADMM1200	Medical Office Technology Tools .....	2
ADMM2130	Medical Office Career Insight .....	2
ADMM2150	Medicare Coding and Billing Applications .....	3
ADMM2152	Advanced Coding .....	4
ADMM2154	Hospital Billing .....	2
ADMM2256	Certified Professional Biller Examination .....	1
ADMM2258	Certified Professional Coder Examination Review .....	1
ADMM2320	Medical Office Capstone .....	1
ENGL1101	College Writing .....	3
HLTH1110	Introduction to Anatomy and Physiology .....	3
HLTH1116	Medical Terminology .....	3
HLTH2208	Pathophysiology .....	3

## Medical Office

### 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 practices, 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
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
ADMM1200	Medical Office Technology Tools .....	2
ADMM2122	Medical Office Management .....	3
ADMM2130	Medical Office Career Insight .....	2
ADMM2150	Medicare Coding and Billing Applications .....	3
ADMM2320	Medical Office Capstone .....	1
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. Graduates of the program may be eligible to take several of the national coding certification exams. Courses in the program incorporate the skills needed for employment in the coding and insurance departments of medical facilities.

Course #	Course Title	Crds
	MN Transfer Electives .....	3
ADMM1110	Medical Documentation Fundamentals .....	4

### 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
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
ADMM1200	Medical Office Technology Tools .....	2
ADMM2130	Medical Office Career Insight .....	2
ADMS1116	Business Communications I .....	3
ENGL1101	College Writing .....	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
ADMM1110	Medical Documentation Fundamentals .....	4
ADMM1122	Medical Office Procedures .....	4
ADMM1140	Medical Language Applications .....	3
ADMM1150	Medical Billing/Insurance .....	4
ADMM1200	Medical Office Technology Tools .....	2
ADMM2130	Medical Office Career Insight .....	2
ADMS1116	Business Communications I .....	3
ENGL1101	College Writing .....	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 competen-

cies. Graduates of this program will be eligible to write the national exam for registered medical transcriptionists.

Course #	Course Title	Crds
	Technical Electives .....	1
ADMM1110	Medical Documentation Fundamentals .....	4
ADMM1140	Medical Language Applications .....	3
ADMM1160	Beginning Medical Transcription .....	3
ADMM1162	Intermediate Medical Transcription .....	3
ADMM1200	Medical Office Technology Tools .....	2
ADMM2130	Medical Office Career Insight .....	2
ADMM2235	RMT Exam Review .....	1
ADMM2268	Advanced Medical Transcription .....	3
ADMM2272	Medical Transcription Practicum .....	3
ADMS1116	Business Communications I .....	3
ENGL1101	College Writing .....	3
HLTH1110	Introduction to Anatomy and Physiology .....	3
HLTH1116	Medical Terminology .....	3
HLTH2208	Pathophysiology .....	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

## Mental Health Behavioral Aide

### Mental Health Behavioral Aide II

**Certificate 16 Credits**

E

This certificate prepares learners to enter the mental health workplace as Mental Health Behavioral Aide II. It provides foundational knowledge for entry level workers (beyond the Mental Health Behavioral Aide I level) under the supervision of psychiatrists, psychologists, nurses and other mental health professionals to provide direct patient care for children with mental illnesses and perform related functions. Individuals who hold this certificate will also be required to have an associate or bachelor's degree or 4,000 hours of experience in delivering clinical services in the treatment of mental illnesses concerning children or adolescents and meet preservice and continuing education requirements as prescribed by statute.

Course #	Course Title	Crds
CDEV1105	Development/Guidance .....	3
* HLTH1201	Introduction to Mental Health Behavioral Aide .....	4
or		
PSYC1201	Introduction to Mental Health Behavioral Aide .....	4
MCS2230	Multicultural America .....	3
PSYC2220	Abnormal Psychology .....	3
PSYC2222	Developmental Psychology .....	3

\* Take four credits from the specified courses.

### Nursing - Advanced Standing

**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 a variety of settings. The graduating nurse will be able to provide nursing care in hospitals, 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. Individuals entering the program must complete the 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

## Nursing

### Nursing - Generic Option

**AS 64 Credits**

D F W

The Associate Degree Nursing program is designed for students with no previous nursing experience seeking to become registered nurses. The Detroit Lakes, Fergus Falls and Wadena campuses offer the two-year generic program. The Associate Degree Nursing Program is designed to prepare students to deliver nursing care in a variety of settings as registered nurses. The graduating nurse will be able to provide nursing care in hospitals, long-term care centers, clinics, community health and other health-related facilities. Upon completion of the nursing program, an Associate in 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 pass the background check required by the Minnesota Human Services licensing division and depending upon particular clinical partner expectations may also be required to pass an annual national background check. The Minnesota Board of Nursing has officially approved the Associate Degree Nursing program at M State.

Course #	Course Title	Crds
	MN Transfer Electives .....	3
BIOL2202	Principles of Nutrition .....	3

### Practical Nursing

**Program not offered academic year 2015-2016**

**AAS 60 Credits**

D F M W

The Practical Nursing program prepares the student to practice within the scope of the practical 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 License Examination for the Practical Nurse. The Minnesota Board of Nursing has officially approved the Practical Nursing program on all four campuses of M State. Individuals entering the program must complete the annual background check required by the Minnesota Human Services licensing division.

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
PNSG1207	Health Promotion I .....	5
PNSG1209	Maternal Child Health .....	3
PNSG1215	Practical Nursing Pharmacology .....	2
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 40 Credits

D F W

The Practical Nursing program prepares the student to practice within the scope of the practical nurse. The student is taught to use the nursing process in the maintenance of health and prevention of illness, the observation and nursing care of individuals experiencing changes in health status and the administration of prescribed medication and treatments. The student will receive supervised learning experiences in caring for individuals in a variety of health care settings such as hospitals, long-term care facilities and physician clinic settings. Practical Nursing graduates may apply to take the National Council Licensing Exam-PN (NCLEX-PN) following graduation. Individuals entering the program must pass the background check required by the Minnesota Human Services licensing division and depending upon particular clinical partner expectations also may be required to pass an annual national background check. The Practical Nursing program is offered on the Detroit Lakes, Fergus Falls, Moorhead and Wadena campuses. The Minnesota Board of Nursing has officially approved the Practical Nursing program at M State.

Course #	Course Title	Crds
BIOL2260	Human Anatomy and Physiology I .....	3
BIOL2262	Human Anatomy and Physiology II .....	3
ENGL1101	College Writing .....	3
PNSG1500	Nursing Care of Adults I .....	3
PNSG1510	Practical Nursing Foundations .....	5
PNSG1512	Practical Nursing Pharmacology .....	2
PNSG1514	Clinical I Practical Nurse Foundations .....	4
PNSG1520	Nursing Care of Women/Newborns/Children .....	2
PNSG1524	Psychosocial Nursing .....	2
PNSG1526	Clinical II Practical Nursing .....	5
PNSG1530	Nursing Care of Adults II .....	5
PSYC2222	Developmental Psychology .....	3

## Pharmacy Technology

### 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
ENGL1101	College Writing .....	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

## Phlebotomy Technician

### 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 (bed-side) 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

# Radiologic Technology

## Radiologic Technology

AAS 79 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 the 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 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
BIOL2262	Human Anatomy and Physiology II.....	3
COMM1140	Interpersonal Communication.....	3
MATH1114	College Algebra.....	4
PHYS1105	Fundamental Concepts in Physics.....	3
RADT1102	Fundamental Concepts of Radiologic Technology.....	2
RADT1112	Introduction to Radiologic Technology and Patient Care.....	4
RADT1116	Radiographic Procedures I.....	5
RADT1124	Radiographic Procedures II.....	4
RADT1132	Principles of Radiobiology.....	4
RADT1140	Radiographic Imaging.....	4
RADT1146	Radiographic Procedures III.....	4
RADT1180	Radiographic Clinical I.....	5
RADT1190	Radiographic Clinical II.....	5
RADT2100	Radiographic Clinical III.....	5
RADT2110	Radiographic Clinical IV.....	5
RADT2120	Radiographic Clinical V.....	5
RADT2130	Radiographic Clinical VI.....	5
RADT2224	Imaging Equipment.....	4
RADT2280	Radiologic Technology Registry Review.....	2

HLTH1116	Medical Terminology.....	3
HLTH2208	Pathophysiology.....	3
PHIL1200	Applied and Professional Ethics.....	3
PSYC2222	Developmental Psychology.....	3
SURT1200	Introduction to Surgical Technology.....	3
SURT1210	Surgical Technology.....	6
SURT1215	Surgical Pharmacology.....	3
SURT1220	Surgical Technology II.....	5
SURT1230	Surgical Technology III.....	4
SURT1250	Surgical Clinical I.....	6
SURT1255	Surgical Clinical II.....	6

# Surgical Technology

## Surgical Technology

AAS 60 Credits

M

The Surgical Technology program prepares competent entry-level surgical technologists in the cognitive (knowledge), psychomotor (skills) and affective (behavior) learning domains. Graduates will have the entry-level knowledge to assist the physician, anesthesiologist and registered nurse throughout the perioperative experience while demonstrating proficiency with sterile techniques and the preparation and use of surgical equipment, instruments and supplies, and demonstrating an understanding of anatomy, physiology, pathophysiology and microbiology.

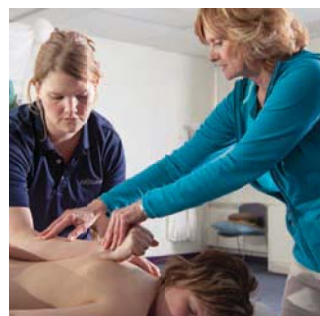
### Special Requirements:

- Program Prerequisites: American Heart Association Health Care Provider CPR MDH Background Check National Background Check Developmental Education with C or better Health Form/Immunization documentation
- Test out or pass with a "C" or better Math 1020
- Eligibility Criteria: GPA 2.0 or higher or a C in required 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
BIOL2267	Medical Microbiology.....	3
BIOL2268	Medical Microbiology Lab.....	1
ENGL1101	College Writing.....	3



# HUMAN SERVICES



+ Not offered academic year 2015-2016

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## Child Care and Education

Early Childhood and Paraprofessional Education .....	90
Child Care and Education Certificate .....	90

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North Dakota Licensure Certificate .....	90

## Correctional Officer

Correctional Officer Certificate.....	90
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## Culinary Arts

Culinary Arts Diploma.....	91
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## Fire Service

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## Manicurist

Manicurist Certificate .....	92
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## Massage Therapy

Massage Therapy Diploma .....	92
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## Childcare and Education

### Early Childhood and Paraprofessional Education

AS 60 Credits

D

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 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

### Child Care and Education

Certificate 24 Credits

D

This certificate 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

## 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. (Note: 33 credits in Salon Practicum is the maximum number of credits which can be applied toward the diploma.)

Course #	Course Title	Crds
	Cosmetology Electives (Choose from: COSM1000, COSM1185 COSM1200, COSM2700, 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 .....	3
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

### North Dakota Licensure

Certificate 9 Credits

W

This program provides the student the 250 additional hours and educational requirements needed to satisfy the North Dakota cosmetology licensure guidelines. Students must have completed 1550 hours for licensure in Minnesota or already have a current license and have worked in Minnesota less than 3000 hours.

Course #	Course Title	Crds
COSM1153	North Dakota Laws and Rules .....	1
COSM1200	Salon Practicum .....	8

## Correctional Officer

### 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. Stu-

dents 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 Associate of Science 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

## 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
	Culinary 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 .....	3
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

## Estheticist

### Estheticist

#### Certificate 21 Credits

W

Esthetics is the non-medical treatment of the skin, its disorders and its 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 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.

## Manicurist

### 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.

<u>Course #</u>	<u>Course Title</u>	<u>Crds</u>
	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

## 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.

<u>Course #</u>	<u>Course Title</u>	<u>Crds</u>
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



# COURSE DESCRIPTIONS

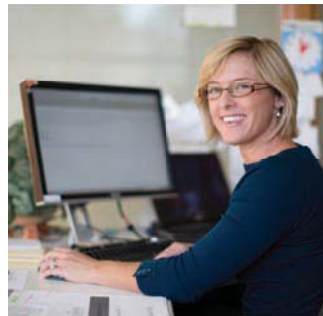


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Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
<b>Auto Body Collision Technology</b>							
ABCT 1500	<b>Introduction to Auto Body</b>	2	1/1/0				
	This course includes the study of auto body safety and shop operation procedures. It will cover topics such as power and hand tool use, shop equipment applications and introduction to estimating guides. Students will gain an understanding of general service knowledge, industry standards and expectations, and professional work habits.						
	<b>Prerequisite:</b> None						
	<b>Corequisite:</b> None						
ABCT 1510	<b>Welding</b>	3	1/2/0				
	This course introduces students to welding safety and cutting fundamentals. The course provides training to develop the necessary skills to cut and weld metal. This course teaches skills needed to weld metal in a variety of positions. Students will be introduced to aluminum welding.						
	<b>Prerequisite:</b> None						
	<b>Corequisite:</b> None						
ABCT 1520	<b>Auto Body Lab I</b>	4	1/3/0				
	This lab course will build proficiency in basic auto body skills. Students will conduct sheet metal repair, heat shrink methods, and hammer and dolly repair. They will also apply body filler and corrosion protection materials.						
	<b>Prerequisite:</b> None						
	<b>Corequisite:</b> None						
ABCT 1530	<b>Refinishing Lab I</b>	3	1/2/0				
	This course teaches preparation for undercoat procedures. Students will be introduced to the proper use and care of a paint gun. Students will learn proper metal preparation and sanding techniques.						
	<b>Prerequisite:</b> None						
	<b>Corequisite:</b> None						
ABCT 1540	<b>Basic Electrical and Glass</b>	2	1/1/0				
	This course involves the understanding of Ohm's law, multi-meter use and wiring repairs. Students will understand daily power window and door lock problems. This course covers safe glass removal and replacement procedures and up-to-date installation methods. Students will select various methods for molding and trim removal.						
	<b>Prerequisite:</b> None						
	<b>Corequisite:</b> None						
ABCT 1550	<b>Body Shop Operations</b>	3	1/2/0				
	This course emphasizes proper shop operation procedures. Topics covered will include vehicle estimating, insurance procedures and parts ordering. Students will learn shop hiring and dismissal procedures, payment methods and customer relations.						
	<b>Prerequisite:</b> None						
	<b>Corequisite:</b> None						
ABCT 1560	<b>Mechanical Components I</b>	3	1/2/0				
	Students will learn principles of removing and installing mechanical parts on front-wheel and rear-wheel drive vehicles. Students will also study principles of air conditioning, evacuation and recharge, and replacement components. Students will learn proper airbag removal and installation procedures. Two- and four-wheel vehicle alignments will be covered.						
	<b>Prerequisite:</b> None						
	<b>Corequisite:</b> None						
ABCT 1570	<b>Auto Body Lab II</b>	5	2/3/0				
	In this course, students will build proficiency in minor collision damage repair. Topics covered will include the removal and replacement of bolt-on panels and bumper covers. Emphasis will focus on the utilization of frame rack and measuring equipment for minor body pulls.						
	<b>Prerequisite:</b> ABCT1520						
	<b>Corequisite:</b> None						
ABCT 1580	<b>Refinishing Lab II</b>	4	1/3/0				
	This course covers the proper use of sandpaper, masking techniques and paint booth procedures. Students will locate vehicle paint codes and proper use of color variance decks in establishing correct color match. Students will develop skills in spot repair, blending, and proper sanding and buffing techniques.						
	<b>Prerequisite:</b> ABCT1530						
	<b>Corequisite:</b> None						
ABCT 2500	<b>Auto Body Internship</b>	1	0/0/1				
	This course is a one week internship at a collision repair facility. Students will observe and may participate in on-the-job training. 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. Students will gain a better understanding of the work environment.						
	<b>Prerequisite:</b> ABCT1500						
	<b>Corequisite:</b> None						
ABCT 2510	<b>Auto Body Lab III</b>	2	1/1/0				
	Students will reinforce their auto body repair skills in this lab course. Emphasis is on major collision repair and minor everyday vehicle problems. Many types of vehicle repairs will occur including panel replacement or repair. Students will develop critical thinking skills in relation to collision damage procedures.						
	<b>Prerequisite:</b> ABCT1570						
	<b>Corequisite:</b> None						
ABCT 2520	<b>Mechanical Components II</b>	3	1/2/0				
	Suspension and other mechanical parts often are damaged as the result of accidents. Auto body collision technicians must be able to identify and replace damaged parts.						
	Students will learn correct procedures to ensure proper repair of suspension and other mechanical parts frequently damaged as the result of accidents.						
	<b>Prerequisite:</b> ABCT1560						
	<b>Corequisite:</b> None						
ABCT 2530	<b>Refinishing Lab III</b>	3	1/2/0				
	This course requires the student to perform spot repairs with an emphasis on paint blending procedures. Students will make decisions between blending procedures or panel painting. Students will refine their paint gun techniques, which will help the student gain confidence in their painting skills.						
	<b>Prerequisite:</b> ABCT1570						
	<b>Corequisite:</b> None						
ABCT 2540	<b>Unibody and Frame Alignment</b>	4	1/3/0				
	This course will focus on repair of unibody and conventional frame vehicles. Instruction will include tie down and clamping techniques, measuring and clamping procedures to repair damage. Students will identify and perform repairs on structural components in accordance with industry standards.						
	<b>Prerequisite:</b> ABCT1500						
	<b>Corequisite:</b> None						
ABCT 2550	<b>Collision Damage Repair</b>	3	1/2/0				
	Students will choose projects that enable them to develop and refine their skills in preparation for entering the workforce. Students will work independently while emphasizing timely vehicle repair. This course will enable students to integrate the skills, knowledge and concepts gained in previous classes.						
	<b>Prerequisite:</b> None						
	<b>Corequisite:</b> None						
ABCT 2560	<b>Auto Body Lab IV</b>	4	1/3/0				
	In this lab course, students will reinforce proficiency in major collision repair. Students will become more familiar with unibody measuring systems. Students will analyze repair diagnosis in order to establish proper procedure.						
	<b>Prerequisite:</b> ABCT2510						
	<b>Corequisite:</b> None						
ABCT 2570	<b>Refinishing Lab IV</b>	4	1/3/0				
	This is an advanced painting course that provides a self-paced, self-directed experience for students who have mastered the fundamentals of painting and refinishing. Students will perform increasingly more advanced techniques of the painting and refinishing process under the supervision of the instructor.						
	<b>Prerequisite:</b> ABCT2530						
	<b>Corequisite:</b> None						
<b>Accounting</b>							
ACCT 1012	<b>Principles of Bookkeeping</b>	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.						
	<b>Prerequisite:</b> None						
	<b>Corequisite:</b> None						
ACCT 1101	<b>Payroll</b>	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.						
	<b>Prerequisite:</b> None						
	<b>Corequisite:</b> None						
ACCT 1108	<b>Business Math/Calculators</b>	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 system on the computer number pad keyboard.						
	<b>Prerequisite:</b> None						
	<b>Corequisite:</b> None						
ACCT 1120	<b>Business Law</b>	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.						
	<b>Prerequisite:</b> None						
	<b>Corequisite:</b> None						
ACCT 1124	<b>Spreadsheet Applications</b>	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.						
	<b>Prerequisite:</b> CPTR1104						
	<b>Corequisite:</b> None						
ACCT 2201	<b>Financial Accounting I Lab</b>	1	0/1/0				
	This course is the lab course associated with Financial Accounting I (ACCT2211). Students must be enrolled in ACCT2211 to enroll in this course. Major content will be the practical application of concepts introduced in the lecture course.						
	<b>Prerequisite:</b> None						
	<b>Corequisite:</b> None						

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
ACCT 2202	<b>Financial Accounting II Lab</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> ACCT2212	1	0/1/0	ACCT 2630	<b>Fund/Nonprofit Accounting</b> 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. <b>Prerequisite:</b> ACCT2212 <b>Corequisite:</b> None	3	2/1/0
ACCT 2203	<b>Managerial Accounting Lab</b> 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. <b>Prerequisite:</b> ACCT2212 <b>Corequisite:</b> None	1	0/1/0	ACCT 2640	<b>Accounting Internship</b> This course provides students with actual work experience in accounting careers. Student is responsible for obtaining accounting internship. <b>Prerequisite:</b> This internship is for currently enrolled Accounting majors only and must be approved by instructor. <b>Corequisite:</b> None	1-4	None
ACCT 2211	<b>Financial Accounting I</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	ACCT 2643	<b>Accounting Internship</b> This course provides students with actual work experiences in accounting careers. A competency-based internship plan is developed for each student. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	0/0/3
ACCT 2212	<b>Financial Accounting II</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> ACCT2211	3	3/0/0	ACCT 2800	<b>Accreditation Council for Accountancy and Taxation Exam Review</b> 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. <b>Prerequisite:</b> ACCT1101 AND ACCT1120 AND ACCT2213 AND ACCT2255 AND ACCT2620 <b>Corequisite:</b> ACCT2622	3	2/1/0
ACCT 2213	<b>Managerial Accounting</b> This course focuses on strategic decision-making related to cost analysis and cost management. <b>Prerequisite:</b> ACCT2212 OR ACCT2211 <b>Corequisite:</b> None	3	3/0/0	<b>Medical Administrative Assistant</b>			
ACCT 2215	<b>Computerized Acct App</b> 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. <b>Prerequisite:</b> ACCT2211 AND CPTR1104 OR ACCT1012 AND CPTR1104 OR ACCT1012 AND BUS1120 OR ACCT2211 AND BUS1120 OR ACCT1012 AND CSC1155 OR ACCT2211 AND CSC1155 <b>Corequisite:</b> None	3	2/1/0	ADMM 1110	<b>Medical Documentation Fundamentals</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	4	2/2/0
ACCT 2216	<b>QuickBooks</b> 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. <b>Prerequisite:</b> BUS1120 AND ACCT2211 OR CPTR1104 AND ACCT2211 <b>Corequisite:</b> None	3	2/1/0	ADMM 1122	<b>Medical Office Procedures</b> 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 including telephone techniques, health information responsibilities, meeting and travel arrangements, introduction to medical office management and career search strategies. <b>Prerequisite:</b> None <b>Corequisite:</b> HLTH1116	4	3/1/0
ACCT 2217	<b>Microsoft Dynamics GP</b> This course covers the use of computerized accounting applications and software used in a mid-sized business environment. <b>Prerequisite:</b> ACCT2211 AND CPTR1104 <b>Corequisite:</b> None	3	2/1/0	ADMM 1140	<b>Medical Language Applications</b> 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. <b>Prerequisite:</b> HLTH1116 <b>Corequisite:</b> None	3	3/0/0
ACCT 2255	<b>Income Tax-Individual</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0	ADMM 1150	<b>Medical Billing/Insurance</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> HLTH1116	4	3/1/0
ACCT 2256	<b>Income Tax-Business</b> 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. <b>Prerequisite:</b> ACCT2255 <b>Corequisite:</b> None	3	2/1/0	ADMM 1152	<b>Outpatient Coding</b> 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. <b>Prerequisite:</b> HLTH1116 Medical Terminology OR HLTH1108 Introduction to Anatomy and Physiology <b>Corequisite:</b> None	4	3/1/0
ACCT 2620	<b>Intermediate Accounting I</b> 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. <b>Prerequisite:</b> ACCT2212 <b>Corequisite:</b> None	4	3/1/0	ADMM 1160	<b>Beginning Medical Transcription</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> HLTH1116 AND ADMM1110	3	1/2/0
ACCT 2622	<b>Intermediate Accounting II</b> 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. <b>Prerequisite:</b> ACCT2620 <b>Corequisite:</b> None	4	3/1/0	ADMM 1162	<b>Intermediate Medical Transcription</b> This course is designed to teach the transcription of intermediate original health care dictation using intermediate proofreading, editing and research skills, while meeting	3	1/2/0

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
	progressively demanding accuracy and productivity standards. <b>Prerequisite:</b> ADMM1160 <b>Corequisite:</b> None						
ADMM 1200	<b>Medical Office Technology Tools</b> Students will utilize technology that is commonly used in a medical office setting and develop 10-key skills necessary for billing and insurance practices. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	1/1/0				
ADMM 2122	<b>Medical Office Management</b> 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. <b>Prerequisite:</b> ADMM1122 <b>Corequisite:</b> None	3	3/0/0	ADMM 2260	<b>Certified Professional Coder - Hospital Examination Review</b> 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. <b>Prerequisite:</b> ADMM2252 <b>Corequisite:</b> None	1	1/0/0
ADMM 2130	<b>Medical Office Career Insight</b> This course explores topics in the health care industry as they impact the medical administrative professional. Students will have the opportunity to focus on local, regional or national topics in preparation for a medical office career. Students will learn to appropriately present their acquired skills, knowledge and personal attributes to prospective health care employers. <b>Prerequisite:</b> ADMM1122 OR ADMM1160 <b>Corequisite:</b> None	2	2/0/0	ADMM 2268	<b>Advanced Medical Transcription</b> 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. <b>Prerequisite:</b> ADMM1162 <b>Corequisite:</b> None	3	1/2/0
ADMM 2150	<b>Medicare Coding and Billing Applications</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> ADMM1152	3	2/1/0	ADMM 2270	<b>Medical Office Simulation</b> 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. <b>Prerequisite:</b> ADMM1122 <b>Corequisite:</b> None	2	1/1/0
ADMM 2152	<b>Advanced Coding</b> This course is a continuation of ADMM1152 Outpatient Coding. Students will learn to extract coding information from medical records. This course emphasizes correct application of diagnosis and procedure coding guidelines and provides an introduction to computer coding applications. <b>Prerequisite:</b> ADMM1152 <b>Corequisite:</b> None	4	2/2/0	ADMM 2272	<b>Medical Transcription Practicum</b> 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. <b>Prerequisite:</b> ADMM1162 <b>Corequisite:</b> None	3	0/3/0
ADMM 2154	<b>Hospital Billing</b> This course covers billing processes related to the hospital claim form. Billing for inpatient, ambulatory surgery and hospital-based outpatient services is covered. <b>Prerequisite:</b> ADMM1150 OR ADMM1152 <b>Corequisite:</b> None	2	1/1/0	ADMM 2276	<b>Evaluation and Management Coding Practices</b> 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. <b>Prerequisite:</b> ADMM1152 <b>Corequisite:</b> None	3	2/1/0
ADMM 2234	<b>Professional Development</b> 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. <b>Prerequisite:</b> ADMM1122 Medical Office Procedures or ADMM1152 Medical Billing and Insurance or ADMM1162 Intermediate Medical Transcription <b>Corequisite:</b> None	2	2/0/0	ADMM 2290	<b>Medical Administrative Internship</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	0/0/3
ADMM 2235	<b>RMT Exam Review</b> 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. <b>Prerequisite:</b> ADMM1162 Intermediate Medical Transcription <b>Corequisite:</b> None	1	1/0/0	ADMM 2320	<b>Medical Office Capstone</b> 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. It is recommended that students take this course near the end of their program. <b>Prerequisite:</b> ADMM1122 <b>Corequisite:</b> None	1	0/1/0
ADMM 2252	<b>Advanced Coding</b> This course is a continuation of ADMM1152 Outpatient Coding. The student will apply coding knowledge by abstracting information from outpatient records for billing and insurance purposes. The course utilizes practical examples to reinforce coding principles and provides an introduction to computer applications related to coding. <b>Prerequisite:</b> ADMM1152 <b>Corequisite:</b> None	3	2/1/0				
ADMM 2256	<b>Certified Professional Biller Examination</b> This course prepares students to take the Certified Professional Biller (CPB) examination offered by the American Academy of Professional Coding (AAPC). 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. <b>Prerequisite:</b> ADMM1150 <b>Corequisite:</b> None	1	1/0/0				
ADMM 2258	<b>Certified Professional Coder Examination Review</b> This course prepares students to take the Certified Professional Coder (CPC) examination offered by the American Academy of Professional Coders (AAPC). Review	1	1/0/0				

### Administrative Support

ADMS 1100	<b>Keyboarding I</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	1/2/0
ADMS 1102	<b>Keyboarding II</b> 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. <b>Prerequisite:</b> ADMS1100 <b>Corequisite:</b> None	3	1/2/0

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
ADMS 1104	<b>Skillbuilding</b> This course is designed to increase keyboarding speed and improve accuracy through personal goal setting, error analysis and intensive corrective practice work. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	0/1/0	ADMS 1300	<b>Word Processing/Advanced Word Processing</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	4	2/2/0
ADMS 1110	<b>Word Processing</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0	ADMS 2124	<b>Computer Technology Information</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0
ADMS 1112	<b>Desktop Publishing</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	1/2/0	ADMS 2205	<b>Advanced Word Processing</b> 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. <b>Prerequisite:</b> ADMS1110 <b>Corequisite:</b> None	1	0/1/0
ADMS 1116	<b>Business Communications I</b> 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. <b>Prerequisite:</b> 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. <b>Corequisite:</b> None	3	2/1/0	ADMS 2212	<b>Integrated Office Software Applications</b> 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. <b>Prerequisite:</b> ADMS1130 OR CPTR1104 <b>Corequisite:</b> None	3	2/1/0
ADMS 1120	<b>Office Procedures</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0	ADMS 2216	<b>Business Communications II</b> 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. <b>Prerequisite:</b> ADMS1116 <b>Corequisite:</b> None	3	2/1/0
ADMS 1128	<b>Records/Database Management</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0	ADMS 2240	<b>Internship</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	0/0/3
ADMS 1130	<b>Office Software Applications</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0	<b>Administrative Management Technology</b>			
ADMS 1142	<b>Career Internship I</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	0/0/2	ADMT 1174	<b>Microsoft Office PowerPoint Certification</b> 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. <b>Prerequisite:</b> CPTR1104 <b>Corequisite:</b> None	1	0/1/0
ADMS 1190	<b>Keyboarding II</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> ADMS1100	1	0/1/0	ADMT 2222	<b>Event Planning</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	2/0/0
ADMS 1200	<b>Keyboarding I/Keyboarding II</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	4	2/2/0	ADMT 2224	<b>Applied Event Management</b> 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. <b>Prerequisite:</b> ADMT2222 <b>Corequisite:</b> None	1	0/1/0



Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
<b>ADMT 2236</b>	<b>Administrative Project Management</b>	<b>3</b>	<b>2/1/0</b>	<b>AMST 1114</b>	<b>Basic Maintenance Service</b>	<b>1</b>	<b>1/0/0</b>
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.				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.			
<b>Prerequisite:</b> CPTR1104				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>ADMT 2300</b>	<b>Office Graphics and Presentations</b>	<b>3</b>	<b>2/1/0</b>	<b>AMST 1116</b>	<b>General Automotive Service</b>	<b>5</b>	<b>3/2/0</b>
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.				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.			
<b>Prerequisite:</b> CPTR1104				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>ADMT 2600</b>	<b>Trends in Office Technology</b>	<b>3</b>	<b>2/1/0</b>	<b>AMST 1122</b>	<b>Engines I</b>	<b>3</b>	<b>2/1/0</b>
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.				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.			
<b>Prerequisite:</b> CPTR1104				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> TRNS1102			
<b>AMST 1126</b>				<b>Engines II</b>			
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.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>AMST 1132</b>				<b>Drive Trains I</b>			
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.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>AMST 1136</b>				<b>Drive Trains II</b>			
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.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>AMST 2201</b>				<b>Alignment and Suspension II</b>			
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.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>AMST 2206</b>				<b>Body Electrical/Mechanical I</b>			
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.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> TRNS1102				<b>Corequisite:</b> None			
<b>AMST 2210</b>				<b>Body Electrical and Mechanical II</b>			
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.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>AMST 2211</b>				<b>Exhaust Analysis Fuel Sys</b>			
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.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>AMST 2214</b>				<b>Electronic Powertrain Control I</b>			
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.				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			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>AMST 2218</b>				<b>Electronic Powertrain Control II</b>			
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							
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			

## Agriculture

<b>AGRI 1400</b>	<b>Farm Marketing and Management</b>	<b>3</b>	<b>3/0/0</b>
This course is an introduction to concepts, strategies and technology for farm planning, economic accounting systems and marketing techniques.			
<b>Prerequisite:</b> None			
<b>Corequisite:</b> None			

## Automotive Service Technology

<b>AMST 1102</b>	<b>Alignment and Suspension I</b>	<b>3</b>	<b>1/2/0</b>
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.			
<b>Prerequisite:</b> None			
<b>Corequisite:</b> TRNS1102			
<b>AMST 1105</b>	<b>Brakes I</b>	<b>3</b>	<b>1/2/0</b>
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.			
<b>Prerequisite:</b> None			
<b>Corequisite:</b> TRNS1102			
<b>AMST 1109</b>	<b>Starting &amp; Charging</b>	<b>3</b>	<b>2/1/0</b>
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.			
<b>Prerequisite:</b> None			
<b>Corequisite:</b> TRNS1102			
<b>AMST 1110</b>	<b>Batteries, Starting and Charging Systems</b>	<b>2</b>	<b>1/1/0</b>
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. Students also will disassemble and reassemble components so they have an understanding of how those items operate. Students will determine cost of replacement verses repair.			
<b>Prerequisite:</b> None			
<b>Corequisite:</b> TRNS1102			
<b>AMST 1111</b>	<b>Automotive Electronics</b>	<b>3</b>	<b>2/1/0</b>
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.			
<b>Prerequisite:</b> None			
<b>Corequisite:</b> TRNS1102			

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
	technology, high pressure gas fuel injection, and diesel injection operation and testing. <b>Prerequisite:</b> TRNS1102 AND AMST1111 <b>Corequisite:</b> None						
AMST 2220	<b>Ignition Systems</b>	3	2/1/0				
	This course will cover the operation of the ignition system. Student will learn how various ignition systems work so they will have the understanding to diagnose and repair ignition problems. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
AMST 2225	<b>Brakes II</b>	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
AMST 2233	<b>Automatic Transmission I</b>	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. <b>Prerequisite:</b> AMST1111 AND TRNS1102 <b>Corequisite:</b> None						
AMST 2237	<b>Automatic Transmissions II</b>	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. <b>Prerequisite:</b> None <b>Corequisite:</b> AMST2233						
AMST 2240	<b>Heating Ventilation and Air Conditioning</b>	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. <b>Prerequisite:</b> None <b>Corequisite:</b> TRNS1102						
AMST 2292	<b>Internship</b>	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. <b>Prerequisite:</b> TRNS1102 <b>Corequisite:</b> None						
<b>Anthropology</b>							
ANTH 1100	<b>Introduction to Anthropology</b>	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
ANTH 1300	<b>Cultural Anthropology</b>	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
ANTH 1400	<b>Physical Anthropology</b>	3	3/0/0				
	Meets MnTC Goal Areas 3 and 10. 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
<b>Architectural Technology</b>							
ARCH 1122	<b>Computer Aided Drafting for Architecture</b>	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. <b>Prerequisite:</b> CADD1102 AND ENGR1134 <b>Corequisite:</b> None						
ARCH 1126	<b>Residential Project I</b>	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. <b>Prerequisite:</b> ENGR1126 AND ENGR1134 <b>Corequisite:</b> None						
ARCH 2218	<b>Architectural Internship</b>	3	0/0/3				
	This course provides the student with an occupational experience in the architectural technology field. Each internship is an individualized experience. <b>Prerequisite:</b> ARCH1126 <b>Corequisite:</b> None						
ARCH 2220	<b>Specification Writing for Construction</b>	3	1/2/0				
	This course covers the implementation and inclusion of specifications, construction materials and finishes into a set of construction documents. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
ARCH 2226	<b>Residential Project II</b>	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. <b>Prerequisite:</b> ARCH1122 AND ARCH1126 <b>Corequisite:</b> None						
ARCH 2230	<b>Mechanical and Electrical Integration</b>	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. <b>Prerequisite:</b> ARCH1122 AND ARCH1126 <b>Corequisite:</b> None						
ARCH 2232	<b>Civil and Structural Integration</b>	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. <b>Prerequisite:</b> ARCH2230 <b>Corequisite:</b> None						
ARCH 2236	<b>Architectural Presentation</b>	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. <b>Prerequisite:</b> ARCH1122 AND ARCH1126 <b>Corequisite:</b> None						
ARCH 2244	<b>Commercial Projects</b>	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. <b>Prerequisite:</b> ARCH2226 AND ARCH2240 <b>Corequisite:</b> None						
ARCH 2248	<b>CADD Alternatives</b>	3	1/2/0				
	This course will familiarize the student with computer drafting and modeling software for the graphic design of residential construction. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
ARCH 2250	<b>Project Administration</b>	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. <b>Prerequisite:</b> ARCH2226 <b>Corequisite:</b> None						
<b>Art</b>							
ART 1107	<b>Foundations of Art, 2-D</b>	3	2/1/0				
	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 introduced. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
ART 1108	<b>Foundations of Art, 3-D</b>	3	2/1/0				
	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
ART 1110	<b>Introduction to Art</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0	ART 2112	<b>Painting II</b> 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 <b>Prerequisite:</b> ART1112 <b>Corequisite:</b> None	3	2/1/0
ART 1111	<b>Drawing I</b> 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, drafters and illustrators and are subsequently guided through a wide variety of drawing experiences and applications. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0	ART 2114	<b>Photographic Art I</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0
ART 1112	<b>Painting I</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0	ART 2116	<b>Mixed Media I</b> Meets MnTC Goal areas 2 and 6F. Multimedia art exploration is a problem-solving art studio experience involving the use of a variety of traditional and non-traditional art materials. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0
ART 1117	<b>Printmaking I</b> Meets MnTC Goal Areas 2 and 6F. Students will create original works in a variety of printmaking techniques with emphasis on relief and serigraphy. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0	ART 2241	<b>Advanced Ceramics</b> 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. <b>Prerequisite:</b> ART1141 <b>Corequisite:</b> None	3	2/1/0
ART 1118	<b>Watercolor I</b> Meets MnTC Goal Area 6F. This course will introduce students to the fundamental principals, 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0	ART 2260	<b>Art, Portfolio Design and Professional Development</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	0/0/1
ART 1121	<b>World of Art I</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	ART 2261	<b>Art Portfolio Design and Professional Development Internship</b> 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/internships in the field of art. <b>Prerequisite:</b> ENGL1101 <b>Corequisite:</b> None	2	1/0/1
ART 1122	<b>World of Art II</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	ART 2912	<b>Art Studio Topics</b> This course is for intermediate artists interested in developing their own body of work. Students research and examine historical and contemporary art 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. <b>Prerequisite:</b> Instructor permission required <b>Corequisite:</b> None	1-3	
ART 1123	<b>Global Art History: Asian, Islamic, African, Mesoamerican</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	ART 2999	<b>AFA-Visual Art Capstone Exhibition</b> This class serves as the conceptual and technical culmination of the AFA-Visual Arts program. Students will complete a self-directed project that results in an individual or group exhibition. Advanced study, research and individualized art-making required. <b>Prerequisite:</b> This course must be taken in the semester of graduation. This course requires instructor approval. <b>Corequisite:</b> ART2260 AND Must be taken in the semester of graduation of the AFA-Visual Art	1	0/1/0
ART 1124	<b>American Art</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0				
ART 1140	<b>Handbuilt Ceramics</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0				
ART 1141	<b>Ceramics I</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0				
ART 2111	<b>Drawing II</b> 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. Intermediate use of composition and color is emphasized. <b>Prerequisite:</b> ART1111 <b>Corequisite:</b> None	3	2/1/0				

### American Sign Language

ASL 1111	<b>American Sign Language and Deaf Culture I</b> 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. <b>Prerequisite:</b> ELL 1080 or ENGL 0096 or ENGL 0097 or placement by assessment <b>Corequisite:</b> None	3	3/0/0
ASL 1112	<b>American Sign Language and Deaf Culture II</b> 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. <b>Prerequisite:</b> ASL1111 AND Grade of C or better in ASL1111 <b>Corequisite:</b> None	3	3/0/0
ASL 1113	<b>American Sign Language and Deaf Culture III</b> This course is designed to offer continued study of American Sign Language (ASL) and	4	4/0/0

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
	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. <b>Prerequisite:</b> ASL1112 AND Grade of B or better in ASL1112 <b>Corequisite:</b> None			<b>BIOL 1123</b>	<b>General Biology II</b>	4	3/1/0
<b>ASL 1114</b>	<b>American Sign Language and Deaf Culture IV</b>	4	4/0/0	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. <b>Prerequisite:</b> Assessment into ENGL 1101 or college-level writing equivalent <b>Corequisite:</b> None			
<b>ASL 1115</b>	<b>American Sign Language and Deaf Culture V</b>	3	3/0/0	<b>BIOL 1125</b>	<b>Basic Immunology</b>	2	1/1/0
This course focuses on advanced vocabulary, communicative functions and language techniques for effective expression of meaning and context of ASL. <b>Prerequisite:</b> ASL1114 AND Grade of C or better in ASL1114 <b>Corequisite:</b> None				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. <b>Prerequisite:</b> None <b>Corequisite:</b> None			
<b>ASL 2000</b>	<b>Advanced Fingerspelling, Numbers, and Classifiers</b>	2	2/0/0	<b>BIOL 1152</b>	<b>Food Science</b>	3	3/0/0
This course focuses on enhancement of receptive and expressive fingerspelling and number skills. It also includes the fundamentals of American Sign Language classifiers. <b>Prerequisite:</b> ASL1114 AND Grade of C or better in ASL1114 <b>Corequisite:</b> None				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. <b>Prerequisite:</b> None <b>Corequisite:</b> None			
<b>ASL 2100</b>	<b>Linguistics of American Sign Language</b>	3	3/0/0	<b>BIOL 2010</b>	<b>General Ecology</b>	4	3/1/0
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. <b>Prerequisite:</b> ASL1115 AND Grade of B or better in ASL1115 <b>Corequisite:</b> None				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. <b>Prerequisite:</b> Completion of MATH 1020 or placement into MATH 1114 AND BIOL1122 AND BIOL1123 <b>Corequisite:</b> None			
<b>Biological Sciences</b>							
<b>BIOL 1104</b>	<b>Biology of Human Concerns</b>	3	2/1/0	<b>BIOL 2202</b>	<b>Principles of Nutrition</b>	3	3/0/0
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None				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. <b>Prerequisite:</b> CHEM1100 OR CHEM1111 OR BIOL2260 OR BIOL1122 OR instructor permission <b>Corequisite:</b> None			
<b>BIOL 1107</b>	<b>Environmental Science Issues</b>	3	3/0/0	<b>BIOL 2220</b>	<b>General Microbiology</b>	4	3/1/0
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None				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. <b>Prerequisite:</b> BIOL1122 <b>Corequisite:</b> None			
<b>BIOL 1108</b>	<b>Env Science Issues Lab</b>	1	0/1/0	<b>BIOL 2240</b>	<b>Genetics</b>	4	3/1/0
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None				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. <b>Prerequisite:</b> CHEM1100 AND BIOL1122 OR CHEM1101 AND BIOL1122 OR CHEM1111 AND BIOL1122 <b>Corequisite:</b> None			
<b>BIOL 1115</b>	<b>Introduction to Biotechnology</b>	3	3/0/0	<b>BIOL 2257</b>	<b>Medical Microbiology</b>	3	2/1/0
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None				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. This course emphasizes the transmission of disease agents, signs and symptoms of disease, immunization, control of microbial growth, specimen collection/transport and methods of identification. An integrated lab includes basic techniques of culture, staining, biochemical testing and identification of known and unknown bacterial specimens, and identification of fungi and parasites from prepared slides. The course includes two hours of lecture and one two-hour lab per week. <b>Prerequisite:</b> Assessment into or successful completion of ENGL 1101 or college-level writing equivalent <b>Corequisite:</b> None			
<b>BIOL 1122</b>	<b>General Biology I</b>	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. <b>Prerequisite:</b> Assessment into ENGL 1101 or college-level writing equivalent <b>Corequisite:</b> None							



Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
<b>BIOL 2260</b>	<b>Human Anatomy and Physiology I</b>	<b>3</b>	<b>3/0/0</b>				
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.							
<b>Prerequisite:</b> Assessment into ENGL 1101 or college-level writing equivalent							
<b>Corequisite:</b> None							
<b>BIOL 2261</b>	<b>Human Anatomy and Physiology I Lab</b>	<b>1</b>	<b>0/1/0</b>				
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.							
<b>Prerequisite:</b> Assessment into ENGL 1101 or college-level writing equivalent							
<b>Corequisite:</b> BIOL 2260							
<b>BIOL 2262</b>	<b>Human Anatomy and Physiology II</b>	<b>3</b>	<b>3/0/0</b>				
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.							
<b>Prerequisite:</b> Assessment into ENGL 1101 or college-level writing equivalent AND BIOL2260 AND BIOL2261							
<b>Corequisite:</b> None							
<b>BIOL 2263</b>	<b>Human Anatomy and Physiology II Lab</b>	<b>1</b>	<b>0/1/0</b>				
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.							
<b>Prerequisite:</b> BIOL2260 AND BIOL2261 AND assessment into ENGL 1101 or College Level writing equivalent							
<b>Corequisite:</b> BIOL2262							
<b>BIOL 2265</b>	<b>Diagnostic Microbiology</b>	<b>4</b>	<b>3/1/0</b>				
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.							
<b>Prerequisite:</b> Assessment into or successful completion of ENGL 1101 or college level reading and writing equivalent							
<b>Corequisite:</b> None							
<b>BIOL 2267</b>	<b>Medical Microbiology</b>	<b>3</b>	<b>3/0/0</b>				
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.							
<b>Prerequisite:</b> Assessment into ENGL 1101							
<b>Corequisite:</b> None							
<b>BIOL 2268</b>	<b>Medical Microbiology Lab</b>	<b>1</b>	<b>0/1/0</b>				
Meets MnTC Goal Area 3. 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.							
<b>Prerequisite:</b> Assessment into ENGL1101 or college-level writing equivalent							
<b>Corequisite:</b> BIOL2267							
<b>Construction</b>							
<b>BLDG 1000</b>	<b>Introduction to the Construction Trades</b>	<b>3</b>	<b>0/3/0</b>				
This course is designed to give students a hands-on introduction to the construction building trades. Students will construct building systems related to carpentry, plumbing, heating, refrigeration, electrical and construction management.							
<b>Prerequisite:</b> None							
<b>Corequisite:</b> None							
<b>BLDG 1102</b>	<b>Construction Safety</b>	<b>1</b>	<b>1/0/0</b>				
This course provides students with an understanding of occupational safety practices, basic requirements, purpose and enforcement of general safety rules.							
<b>Prerequisite:</b> None							
<b>Corequisite:</b> None							
<b>BLDG 1110</b>	<b>Principles of Residential &amp; Commercial Construction</b>	<b>3</b>	<b>1/2/0</b>				
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.							
<b>Prerequisite:</b> Instructor approval							
<b>Corequisite:</b> None							
<b>BLDG 1114</b>	<b>Blueprint Reading I</b>	<b>2</b>	<b>2/0/0</b>				
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.							
<b>Prerequisite:</b> None							
<b>Corequisite:</b> None							
<b>BLDG 1115</b>	<b>Carpentry Blueprint Reading</b>	<b>3</b>	<b>1/2/0</b>				
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.							
<b>Prerequisite:</b> None							
<b>Corequisite:</b> None							
<b>BLDG 1120</b>	<b>Construction Estimating I</b>	<b>2</b>	<b>1/1/0</b>				
This course covers the mathematical procedures used in material estimating and completing quantity takeoffs for building projects.							
<b>Prerequisite:</b> None							
<b>Corequisite:</b> None							
<b>Business Management</b>							
<b>BMGT 1112</b>	<b>Business Plan Development</b>	<b>2</b>	<b>1/1/0</b>				
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.							
<b>Prerequisite:</b> None							
<b>Corequisite:</b> None							
<b>Business</b>							
<b>BUS 1120</b>	<b>Spreadsheet &amp; Database Concepts</b>	<b>3</b>	<b>3/0/0</b>				
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.							
<b>Prerequisite:</b> None							
<b>Corequisite:</b> None							
<b>BUS 1141</b>	<b>Introduction to Business</b>	<b>3</b>	<b>3/0/0</b>				
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.							
<b>Prerequisite:</b> None							
<b>Corequisite:</b> None							
<b>BUS 1143</b>	<b>Office Procedures</b>	<b>3</b>	<b>3/0/0</b>				
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.							
<b>Prerequisite:</b> None							
<b>Corequisite:</b> None							
<b>BUS 1146</b>	<b>Personal Finance</b>	<b>3</b>	<b>3/0/0</b>				
This course is an introduction to personal financial management and planning. Topics covered in this course 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.							
<b>Prerequisite:</b> None							
<b>Corequisite:</b> None							
<b>BUS 1300</b>	<b>Financial Statement Analysis</b>	<b>3</b>	<b>3/0/0</b>				
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.							
<b>Prerequisite:</b> None							
<b>Corequisite:</b> None							
<b>BUS 2150</b>	<b>Legal Environment of Business</b>	<b>3</b>	<b>3/0/0</b>				
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							

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	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None			<b>CARP 1109</b>	<b>Interior Finish I</b> This course provides an understanding of the materials used for interior finishing, plus hands-on experience in the application of these materials. <b>Prerequisite:</b> CARP1104 <b>Corequisite:</b> None	3	1/2/0
<b>BUS 2202</b>	<b>Mgmt Information Sys</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	<b>CARP 1110</b>	<b>Introduction to Cabinet Building</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	1/2/0
<b>BUS 2204</b>	<b>Principles of Management</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	<b>CARP 1111</b>	<b>Floors and Roofs</b> This course is designed to provide an understanding of complex floor and roof systems. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	1/1/0
<b>BUS 2206</b>	<b>Principles of Marketing</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	<b>CARP 1112</b>	<b>Exterior Finish I</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	1/2/0
<b>BUS 2220</b>	<b>Global Business</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	<b>CARP 1115</b>	<b>Floors and Roofs</b> This course is designed to provide an understanding of complex floor and roof systems. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	1/2/0
				<b>CARP 2106</b>	<b>Footings &amp; Foundations</b> This course prepares the student with the knowledge and skills necessary to complete site layout, footings and foundations for residential construction. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	1/1/0
				<b>CARP 2202</b>	<b>Prin of Framing II</b> 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. <b>Prerequisite:</b> CARP1102 AND CARP1104 <b>Corequisite:</b> None	3	3/0/0
				<b>CARP 2204</b>	<b>Concrete Technology</b> 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. <b>Prerequisite:</b> CARP2106 <b>Corequisite:</b> None	2	0/2/0
				<b>CARP 2206</b>	<b>Adv Framing Applications</b> 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. <b>Prerequisite:</b> CARP1104 <b>Corequisite:</b> None	6	0/6/0
				<b>CARP 2208</b>	<b>Exterior Finish II</b> This course is designed to increase the student's knowledge, skills and proficiency in the application of windows, doors and roofing. <b>Prerequisite:</b> CARP1112 <b>Corequisite:</b> None	3	0/3/0
				<b>CARP 2210</b>	<b>Interior/Exterior Finish Prin</b> 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. <b>Prerequisite:</b> CARP1108 AND CARP1112 <b>Corequisite:</b> None	3	3/0/0
				<b>CARP 2212</b>	<b>Interior Finish II</b> 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. <b>Prerequisite:</b> CARP1108 <b>Corequisite:</b> None	4	0/4/0
				<b>CARP 2214</b>	<b>Exterior Siding</b> This course provides the student an opportunity to install common window and exterior door units, exterior trim and exterior wall finish materials. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	0/2/0
				<b>CARP 2216</b>	<b>Deck Construction</b> This course focuses on application and techniques necessary to select materials and construct decks, railings and stairs according to a predetermined plan. <b>Prerequisite:</b> CARP1112 AND CARP2210 <b>Corequisite:</b> None	2	0/2/0
<b>Computer-Aided Drafting (CAD)</b>							
<b>CADD 1102</b>	<b>Fundamentals of CADD</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	4	2/2/0				
<b>CADD 1114</b>	<b>Intro to Solids &amp; Parametric Modeling</b> 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. <b>Prerequisite:</b> CADD1102 AND MCDD1102 <b>Corequisite:</b> None	4	2/2/0				
<b>CADD 2214</b>	<b>Advanced Solids &amp; Parametric Modeling</b> This course covers advanced part modeling, assembly modeling, sheet metal and presentation files in the latest versions of the Inventor and Solidworks drawing software. <b>Prerequisite:</b> CADD1114 <b>Corequisite:</b> None	4	2/2/0				
<b>Carpentry</b>							
<b>CARP 1102</b>	<b>Prin of Framing</b> This course is designed to provide an understanding of the principles of floor, wall, stair and roof framing. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0				
<b>CARP 1104</b>	<b>Framing I</b> This course is designed to provide experience in constructing basic floor frames, wall frames, stair frames, and ceiling and roof frames. <b>Prerequisite:</b> None <b>Corequisite:</b> None	6	0/6/0				

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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							
<b>Child Care Education</b>							
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 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							
<b>Chemistry</b>							
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: MATH0095							
Corequisite: None							
CHEM 1100	Fundamental Concepts of 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: MATH0095 OR placement by assessment							
Corequisite: None							
CHEM 1101	Principles 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: MATH0095 OR placement by assessment							
Corequisite: None							
CHEM 1105	Medical Chemistry	3	2/1/0				
This 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 result 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							

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
<b>CHEM 1112</b>	<b>General Inorganic Chemistry II</b>	5	4/1/0	<b>CIVL 2209</b>	<b>Construction Inspection</b>	3	2/1/0
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. <b>Prerequisite:</b> CHEM1111 <b>Corequisite:</b> None				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. <b>Prerequisite:</b> CIVL1102 OR CIVL1102 <b>Corequisite:</b> None			
<b>CHEM 1115</b>	<b>Introduction to Organic and Biochemistry</b>	4	3/1/0	<b>CIVL 2210</b>	<b>Road Design</b>	3	2/1/0
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. <b>Prerequisite:</b> CHEM1100 <b>Corequisite:</b> None				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. <b>Prerequisite:</b> CIVL1119 AND CIVL1138 <b>Corequisite:</b> None			
<b>CHEM 2224</b>	<b>Organic Chemistry I</b>	5	4/1/0	<b>CIVL 2230</b>	<b>Civil Engineering Technology Internship</b>	3	0/0/3
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. <b>Prerequisite:</b> CHEM1112 <b>Corequisite:</b> None				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. <b>Prerequisite:</b> CIVL1138 <b>Corequisite:</b> None			
<b>CHEM 2225</b>	<b>Organic Chemistry II</b>	5	4/1/0	<b>CIVL 2232</b>	<b>Survey III: Legal Surveys</b>	3	2/1/0
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. <b>Prerequisite:</b> CHEM2224 <b>Corequisite:</b> None				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. <b>Prerequisite:</b> CIVL1119 <b>Corequisite:</b> None			
<b>CHEM 2970</b>	<b>Internship Experience</b>	1-3	0/0/1-3	<b>CIVL 2234</b>	<b>Utility Design</b>	3	2/1/0
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. <b>Prerequisite:</b> Instructor approval <b>Corequisite:</b> None				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. <b>Prerequisite:</b> CIVL1119 AND CIVL1138 <b>Corequisite:</b> None			
<b>Civil Engineering Technology</b>				<b>CIVL 2238</b>	<b>CADD III: Project Design</b>	3	2/1/0
<b>CIVL 1000</b>	<b>Introduction to Civil Engineering Technology</b>	2	2/0/0	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. <b>Prerequisite:</b> CIVL1138 <b>Corequisite:</b> None			
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None				<b>CIVL 2240</b>	<b>Introduction to Geographic Information Systems</b>	3	3/0/0
<b>CIVL 1100</b>	<b>Survey I: Fundamentals</b>	3	2/1/0	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. <b>Prerequisite:</b> CPTR1100 OR CPTR1104 <b>Corequisite:</b> None			
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None				<b>CIVL 2242</b>	<b>Survey III: Global Positioning System Technology and Equipment</b>	3	2/1/0
<b>CIVL 1119</b>	<b>Survey II: Land Surveys</b>	3	1/2/0	This course covers the instruction and application of Global Positioning System (GPS) technology and GPS equipment for surveying. Students will learn surveying principles, equipment and software used in GPS to meet current-day technological practices. <b>Prerequisite:</b> CIVL1119 <b>Corequisite:</b> None			
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. <b>Prerequisite:</b> CIVL1102 <b>Corequisite:</b> None				<b>CIVL 2244</b>	<b>Survey IV: Equipment Software</b>	3	2/1/0
<b>CIVL 1138</b>	<b>CADD II: Plan Layout</b>	3	2/1/0	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. <b>Prerequisite:</b> CIVL1102 <b>Corequisite:</b> None			
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. <b>Prerequisite:</b> CADD1102 <b>Corequisite:</b> None				<b>CIVL 2246</b>	<b>Introduction to Hydrology</b>	3	3/0/0
				This course will include introduction to hydraulic principles, hydrology, pipe and open channel flow, watershed analysis and storm water regulations. <b>Prerequisite:</b> CIVL2234 AND CIVL2240 <b>Corequisite:</b> None			
				<b>Communication</b>			
				<b>COMM 1100</b>	<b>Communication and Effective Human Relations</b>	3	3/0/0
				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. <b>Prerequisite:</b> ENGL0096 OR ENGL0040 AND ENGL0050 OR by assessment <b>Corequisite:</b> None			



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<b>COMM 1120</b>	<b>Introduction to Public Speaking</b> 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. <b>Prerequisite:</b> Assessment into ENGL 1101 <b>Corequisite:</b> None	3	3/0/0	<b>CONM 1124</b>	<b>Building Systems</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0
<b>COMM 1130</b>	<b>Small Group Communication</b> 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. <b>Prerequisite:</b> Assessment into ENGL 1101 <b>Corequisite:</b> None	3	3/0/0	<b>CONM 2204</b>	<b>Materials Testing</b> This course covers inspection techniques, methods of material measurement, documentation, material sampling and testing methods for soils and concrete. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	1/2/0
<b>COMM 1140</b>	<b>Interpersonal Communication</b> 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. <b>Prerequisite:</b> Assessment into ENGL 1101 <b>Corequisite:</b> None	3	3/0/0	<b>CONM 2206</b>	<b>Building Codes</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	2/0/0
<b>COMM 2230</b>	<b>Intercultural Communication</b> 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. <b>Prerequisite:</b> Assessment into ENGL 1101 <b>Corequisite:</b> None	3	3/0/0	<b>CONM 2208</b>	<b>Construction Bidding</b> This course will explore standard construction contract documents and project estimating procedures and their use in building a competitive bid. <b>Prerequisite:</b> CONM1108 <b>Corequisite:</b> None	2	1/1/0
<b>COMM 2240</b>	<b>Family Communication</b> Meets MnTC Goal Area 2. This course provides an introduction to communication functions in various families. The course will include theoretical and practical applications of family communication in our everyday lives, with an emphasis on how effective communication may enhance family relationships and how destructive communication may harm family relationships. <b>Prerequisite:</b> Assessment into ENGL 1101 <b>Corequisite:</b> None	3	3/0/0	<b>CONM 2210</b>	<b>Construction Scheduling</b> 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. <b>Prerequisite:</b> BLDG1120 OR CONM2208 <b>Corequisite:</b> None	3	2/1/0
<b>COMM 2250</b>	<b>Gender Communication</b> 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. <b>Prerequisite:</b> Assessment into ENGL 1101 <b>Corequisite:</b> None	3	3/0/0	<b>CONM 2212</b>	<b>Site Management</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0
<b>Construction Management</b>				<b>CONM 2213</b>	<b>Safety Management</b> This course includes construction management applications in the areas of safety and health. Students will have an opportunity to earn OSHA 30-hour authorization for successful course completion. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	2/0/0
<b>CONM 1101</b>	<b>Construction Documents &amp; Codes</b> This course provides an introduction to understanding construction drawings, specifications, processes and building codes. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0	<b>CONM 2214</b>	<b>Safety Management</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0
<b>CONM 1102</b>	<b>Site/Building Layout</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	1/1/0	<b>CONM 2216</b>	<b>Computer Estimating</b> 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. <b>Prerequisite:</b> CONM2208 AND CPTR1104 OR MCDD2204 AND CPTR1104 <b>Corequisite:</b> None	2	1/1/0
<b>CONM 1104</b>	<b>Construction Management Principles</b> This course provides an overview of the construction management industry and introduces the students to the duties and responsibilities of the construction professional. The emphasis of this course will be on the importance of the industry, the industry's impact and responsibilities to society, and career opportunities for successful students. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	2/0/0	<b>CONM 2217</b>	<b>Computer Estimating &amp; Bidding</b> This course is designed to utilize computer estimating software such as spreadsheets, databases and industry-leading software to produce competitive, timely and complete construction bids. <b>Prerequisite:</b> CONM1108 AND CONM1124 <b>Corequisite:</b> CONM2210	3	2/1/0
<b>CONM 1108</b>	<b>Principles of Estimating</b> This course focuses on the basics of material, labor and equipment estimating. Students will learn to calculate the quantities of material comprising a project. These quantities will determine the primary portion of the direct costs used in a construction bid. This process will be the first step in completing accurate bids for construction projects of all sizes. <b>Prerequisite:</b> CONM1101 <b>Corequisite:</b> None	4	2/2/0	<b>CONM 2222</b>	<b>Construction Mgmt Internship</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	0/0/2
<b>Cosmetology</b>				<b>COSM 1000</b>	<b>Principles and Practices</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0

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<b>COSM 1001</b>	<b>Introduction to Cosmetology</b> In this course students will learn some of the basic techniques pertaining to hair, skin and nails and meet a portion of the required hours toward the State Board of Cosmetology. The course content will provide a brief overview of all the cosmetology topics that are required by the State Board of Cosmetology for licensure. Upon completion of this course, students attending one year will earn 90 hours toward their cosmetology license. Students who elect to take the course a second time will earn 180 hours toward their cosmetology license. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>3</b>	<b>0/3/0</b>		type of damage the hair has experienced and prescribe corrective treatment. <b>Prerequisite:</b> None <b>Corequisite:</b> None		
<b>COSM 1103</b>	<b>Shampooing &amp; Rinsing</b> This course covers shampooing and draping. Students will learn the importance of selecting the correct shampoo for various hair types. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>	<b>COSM 1133</b>	<b>Anatomy of the Head, Face &amp; Neck</b> In this course students will learn basic anatomy of the head, face and neck so that they can perform all the services for which they are trained and qualified. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>2</b>	<b>1/1/0</b>
<b>COSM 1105</b>	<b>Hairstyling</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>	<b>COSM 1137</b>	<b>Principles of Hair Design</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>
<b>COSM 1107</b>	<b>Haircutting</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>	<b>COSM 1141</b>	<b>Chemistry/Electricity</b> In this course students will learn the two types of electricity, how they are measured and 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>
<b>COSM 1111</b>	<b>Properties of the Hair &amp; Scalp</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>	<b>COSM 1145</b>	<b>Infection Control</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>
<b>COSM 1117</b>	<b>Shampooing and Rinsing</b> This course covers shampooing and draping. Students will learn the importance of selecting the correct shampoo for various hair types. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>	<b>COSM 1149</b>	<b>Advanced Hair Design</b> This course provides advanced skill training in hair cutting, chemical control and hair color. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>0/1/0</b>
<b>COSM 1119</b>	<b>Haircutting</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>	<b>COSM 1153</b>	<b>North Dakota Laws and Rules</b> This course prepares students for the North Dakota Laws and Rules portion of their state license examination. <b>Prerequisite:</b> Graduate from a Minnesota cosmetology program or hold a valid Mn license <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>
<b>COSM 1121</b>	<b>Histology of the Skin</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>	<b>COSM 1155</b>	<b>Professional Image</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>
<b>COSM 1123</b>	<b>Facials/Make-Up/Hair Removal</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>	<b>COSM 1157</b>	<b>Histology of the Skin</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>
<b>COSM 1125</b>	<b>Nail Structure &amp; Growth</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>	<b>COSM 1159</b>	<b>Facials, Make-Up, and Hair Removal</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>
<b>COSM 1127</b>	<b>Hair Color</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>	<b>COSM 1161</b>	<b>Nail Structure and Growth</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>
<b>COSM 1129</b>	<b>Hairstyling</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>	<b>COSM 1163</b>	<b>Hair Color</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>
<b>COSM 1130</b>	<b>Properties of the Hair and Scalp</b> 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	<b>1</b>	<b>1/0/0</b>	<b>COSM 1166</b>	<b>Alexandria Body Sugaring</b> In this course students will learn how to remove hair using the Alexandria Professional Body Sugaring advanced system. Theory and thorough knowledge of the correct techniques employed in the practice of body sugaring will be taught. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>
				<b>COSM 1171</b>	<b>Principles of Hair Design</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	<b>1</b>	<b>1/0/0</b>

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COSM 1173	<b>Chemistry and Electricity</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0	COSM 2800	<b>Alexandria Body Sugaring</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0
COSM 1177	<b>Infection Control</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0	<b>Computer</b>			
COSM 1179	<b>Minnesota Cosmetology Laws and Rules</b> This course prepares students for the Laws and Rules portion of their state license examination. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0	CPTR 1001	<b>Introduction To Programming and Scripting</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	1/2/0
COSM 1185	<b>The Art of Clipper Cutting</b> In this course students will learn the art of clipper cutting and beard design. This course will include client consultation, safety and sanitation. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	0/1/0	CPTR 1100	<b>Fund Computer Concepts</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	0/1/0
COSM 1200	<b>Salon Practicum</b> 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 works in order to meet the state requirements. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1-18	None	CPTR 1102	<b>Introduction to Macintosh</b> This course covers the operation of Macintosh computer hardware and software, the Macintosh operating system and an introduction to Microsoft Office Suite software. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0
COSM 2000	<b>Artistry in Hairstyling</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0	CPTR 1104	<b>Intro to Computer Tech</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0
COSM 2100	<b>Chemical Texture Services</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0	CPTR 1106	<b>Microcomputer Databases</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0
COSM 2200	<b>Manicuring/Pedicuring</b> In this course students will learn basic manicuring and pedicuring procedures. Students will understand the importance of providing services in a safe environment. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0	CPTR 1108	<b>CISCO 1</b> This is an introduction to networking. This course covers a network model, basic networking math, basic network devices and an introduction to network design. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	1/2/0
COSM 2300	<b>Anatomy of the Head, Face &amp; Neck</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0	CPTR 1110	<b>Visual Basic Program I</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0
COSM 2400	<b>Advanced Nail Techniques</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0	CPTR 1112	<b>Visual Basic Program II</b> This course is the second and final course in the BASIC programming language. Topics include looping, menus, arrays, subroutines, sorting, strings and files. <b>Prerequisite:</b> CPTR1110 <b>Corequisite:</b> None	3	2/1/0
COSM 2500	<b>Salon Business</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0	CPTR 1114	<b>COBOL Programming I</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0
COSM 2600	<b>Professional Image</b> In this course students will learn about the importance of physical presentation, beauty and wellness, and ergonomics in the salon. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0	CPTR 1115	<b>COBOL Programming</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	4	3/1/0
COSM 2700	<b>Nail Art</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	0/1/0	CPTR 1118	<b>CISCO 2</b> This course covers additional OSI layer topics, network routing and auditing. Students learn and practice accepted router configuration procedures. <b>Prerequisite:</b> CPTR1108 OR CSCI1205 <b>Corequisite:</b> None	3	2/1/0

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<b>CPTR 1122</b>	<b>Microcomputer Maintenance</b>	<b>3</b>	<b>1/2/0</b>	<b>CPTR 2200</b>	<b>CISCO 3</b>	<b>3</b>	<b>2/1/0</b>
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None				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. <b>Prerequisite:</b> CPTR1118 <b>Corequisite:</b> None			
<b>CPTR 1125</b>	<b>IT Essentials</b>	<b>3</b>	<b>1/2/0</b>	<b>CPTR 2208</b>	<b>CISCO 4</b>	<b>3</b>	<b>2/1/0</b>
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None				This course covers WAN configuration and remote access configuration. Students will practice design and configuration of systems to solve WAN and remote access problems. <b>Prerequisite:</b> CPTR2200 <b>Corequisite:</b> None			
<b>CPTR 1129</b>	<b>RPG Programming</b>	<b>4</b>	<b>2/2/0</b>	<b>CPTR 2214</b>	<b>Topics in Network Security</b>	<b>3</b>	<b>2/1/0</b>
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None				The goal of this course is to allow the investigation of a topic chosen from the current network security landscape. The topic will vary each offering depending on current trends in network security. <b>Prerequisite:</b> CPTR2236 <b>Corequisite:</b> None			
<b>CPTR 1130</b>	<b>IT Essentials 2</b>	<b>3</b>	<b>1/2/0</b>	<b>CPTR 2220</b>	<b>COBOL Programming II</b>	<b>3</b>	<b>2/1/0</b>
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. <b>Prerequisite:</b> CPTR1125 <b>Corequisite:</b> None				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. <b>Prerequisite:</b> CPTR1114 <b>Corequisite:</b> None			
<b>CPTR 1138</b>	<b>Information Systems</b>	<b>3</b>	<b>2/1/0</b>	<b>CPTR 2224</b>	<b>Linux I</b>	<b>3</b>	<b>2/1/0</b>
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None				This course deals with Linux installation, configuration and system administration. This course lays the groundwork for continued study of Linux. <b>Prerequisite:</b> None <b>Corequisite:</b> None			
<b>CPTR 1142</b>	<b>Network Essentials</b>	<b>3</b>	<b>2/1/0</b>	<b>CPTR 2228</b>	<b>RPG/OS400 II</b>	<b>4</b>	<b>2/2/0</b>
This course gives students both the knowledge and hands-on skills necessary to work with network operating systems in a network administration environment. <b>Prerequisite:</b> None <b>Corequisite:</b> None				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. <b>Prerequisite:</b> CPTR1128 <b>Corequisite:</b> None			
<b>CPTR 1148</b>	<b>Microcomputer Operating System</b>	<b>3</b>	<b>1/2/0</b>	<b>CPTR 2230</b>	<b>Structured Query Language</b>	<b>3</b>	<b>2/1/0</b>
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None				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 and relational database management systems to store, retrieve, edit, manipulate and format data for end users and decision makers. <b>Prerequisite:</b> CPTR1106 <b>Corequisite:</b> None			
<b>CPTR 1166</b>	<b>Word Processing and Spreadsheets</b>	<b>4</b>	<b>2/2/0</b>	<b>CPTR 2234</b>	<b>Linux II</b>	<b>3</b>	<b>2/1/0</b>
This course covers the basics of word processing and spreadsheet concepts, development and use. <b>Prerequisite:</b> None <b>Corequisite:</b> None				The primary focus of this course is Linux networking, security, ethics and privacy. <b>Prerequisite:</b> CPTR2224 <b>Corequisite:</b> None			
<b>CPTR 1170</b>	<b>Web Engineering I</b>	<b>3</b>	<b>2/1/0</b>	<b>CPTR 2236</b>	<b>Network Security</b>	<b>3</b>	<b>2/1/0</b>
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None				This course deals with the understanding of basic network security. Students learn how to manage systems to guard against various security threats. <b>Prerequisite:</b> CPTR1148 AND CPTR2272 <b>Corequisite:</b> None			
<b>CPTR 1178</b>	<b>Robotics</b>	<b>3</b>	<b>2/1/0</b>	<b>CPTR 2238</b>	<b>Database Integration</b>	<b>3</b>	<b>2/1/0</b>
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None				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. <b>Prerequisite:</b> CPTR2230 AND CPTR2242 <b>Corequisite:</b> None			
<b>CPTR 2000</b>	<b>Mobile Application Development</b>	<b>3</b>	<b>1/2/0</b>	<b>CPTR 2242</b>	<b>Java Programming</b>	<b>3</b>	<b>2/1/0</b>
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. <b>Prerequisite:</b> CPTR2242 OR CSC12010 <b>Corequisite:</b> None				In this course the student utilizes the Java programming language to create both Internet applets and applications. <b>Prerequisite:</b> None <b>Corequisite:</b> None			
				<b>CPTR 2245</b>	<b>Enterprise Network Technologies</b>	<b>3</b>	<b>2/1/0</b>
				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. <b>Prerequisite:</b> CPTR2272 <b>Corequisite:</b> None			
				<b>CPTR 2252</b>	<b>Microcomputer Systems Project</b>	<b>3</b>	<b>1/2/0</b>
				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. <b>Prerequisite:</b> CPTR2272 <b>Corequisite:</b> None			



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<b>CPTR 2258</b>	<b>Microcomputer System Projects</b>	<b>2</b>	<b>0/2/0</b>	<b>CRJU 1108</b>	<b>Physical Control Tactics for Corrections</b>	<b>3</b>	<b>2/1/0</b>
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. <b>Prerequisite:</b> CPTR2272 <b>Corequisite:</b> None				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. <b>Prerequisite:</b> None <b>Corequisite:</b> None			
<b>CPTR 2262</b>	<b>Internet Protocol Version 6</b>	<b>3</b>	<b>2/1/0</b>	<b>CRJU 1109</b>	<b>Law Enforcement Behavioral Science</b>	<b>3</b>	<b>3/0/0</b>
This course teaches the management of systems using Internet Protocol Version 6. The emphasis is protocol management on networking devices. <b>Prerequisite:</b> CPTR1108 <b>Corequisite:</b> None				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. <b>Prerequisite:</b> None <b>Corequisite:</b> None			
<b>CPTR 2272</b>	<b>Network Operating Systems</b>	<b>3</b>	<b>2/1/0</b>	<b>CRJU 1117</b>	<b>Special Topics in Criminal Justice</b>	<b>3</b>	<b>3/0/0</b>
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. <b>Prerequisite:</b> CPTR1148 OR CPTR1138 OR CPTR1125 OR CPTR2224 <b>Corequisite:</b> None				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. <b>Prerequisite:</b> None <b>Corequisite:</b> None			
<b>CPTR 2282</b>	<b>E-mail Administration</b>	<b>3</b>	<b>2/1/0</b>	<b>CRJU 2201</b>	<b>Criminal Law</b>	<b>3</b>	<b>3/0/0</b>
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. <b>Prerequisite:</b> CPTR2272 <b>Corequisite:</b> None				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. <b>Prerequisite:</b> None <b>Corequisite:</b> None			
<b>CPTR 2294</b>	<b>Internship</b>	<b>3</b>	<b>0/0/3</b>	<b>CRJU 2202</b>	<b>Criminal Procedures</b>	<b>3</b>	<b>3/0/0</b>
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. <b>Prerequisite:</b> CPTR1138 <b>Corequisite:</b> None				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. <b>Prerequisite:</b> None <b>Corequisite:</b> None			
<b>CPTR 2296</b>	<b>Topics in Computers</b>	<b>3</b>	<b>1/2/0</b>	<b>CRJU 2206</b>	<b>Police Report Writing</b>	<b>3</b>	<b>3/0/0</b>
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 in the field of computer programming or networking. Topics will vary each semester. Course may be repeated for credit with a change in subtitle. <b>Prerequisite:</b> None <b>Corequisite:</b> None				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. <b>Prerequisite:</b> ENGL1101 OR GSCO1102 <b>Corequisite:</b> None			
<b>CPTR 2400</b>	<b>Web Integration</b>	<b>3</b>	<b>1/2/0</b>	<b>CRJU 2209</b>	<b>Criminal Investigations</b>	<b>3</b>	<b>3/0/0</b>
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. <b>Prerequisite:</b> CPTR1170 OR instructor's approval <b>Corequisite:</b> CPTR2230 AND CPTR2242 OR instructor's approval				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. <b>Prerequisite:</b> None <b>Corequisite:</b> None			
<b>Criminal Justice</b>							
<b>CRJU 1101</b>	<b>Introduction to Criminal Justice</b>	<b>3</b>	<b>3/0/0</b>	<b>CRJU 2210</b>	<b>Introduction to Criminalistics</b>	<b>3</b>	<b>2/1/0</b>
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None				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. <b>Prerequisite:</b> None <b>Corequisite:</b> None			
<b>CRJU 1102</b>	<b>Policing and Practices</b>	<b>3</b>	<b>3/0/0</b>	<b>CRJU 2235</b>	<b>Criminal Justice Internship</b>	<b>3</b>	<b>0/0/3</b>
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None				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. <b>Prerequisite:</b> None <b>Corequisite:</b> None			
<b>CRJU 1104</b>	<b>Juvenile Justice and Delinquency</b>	<b>3</b>	<b>3/0/0</b>	<b>Computer Science</b>			
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None				<b>CSCI 1101</b> <b>Computer Essentials</b> <b>1</b> <b>1/0/0</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None			
<b>CRJU 1106</b>	<b>Introduction to Corrections/Probation</b>	<b>3</b>	<b>3/0/0</b>				
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None							

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CSCI 1110	<b>Informatics</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0		and managing the deployment of security solutions. <b>Prerequisite:</b> CPTR2224 AND CPTR2272 <b>Corequisite:</b> None		
CSCI 1121	<b>Computer Science I</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	4	4/0/0	CSEC 2218	<b>Disaster Recovery</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	1/1/0
CSCI 1122	<b>Computer Science II</b> This course focuses on advanced programming concepts including an introduction to data structures, analysis of algorithms, recursion, searching, sorting and memory management. <b>Prerequisite:</b> CSCI1121 <b>Corequisite:</b> None	4	4/0/0	CSEC 2222	<b>Network Security Design</b> 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. <b>Prerequisite:</b> CSEC2204 <b>Corequisite:</b> CSEC2210	3	2/1/0
CSCI 1155	<b>Computer Utilization in Business &amp; Society</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	CSEC 2228	<b>Network Defense</b> 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. <b>Prerequisite:</b> CSEC1110 AND CSEC2210 <b>Corequisite:</b> None	3	2/1/0
<b>Computer Network Security</b>				<b>Computer Technical Support</b>			
CSEC 1102	<b>Careers in Information Systems</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0	CTEC 2204	<b>Advanced Technical Support</b> 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. <b>Prerequisite:</b> ITSS1100 <b>Corequisite:</b> None	3	2/1/0
CSEC 1110	<b>Fundamentals of IT Security</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0	CTEC 2240	<b>Technical Support Internship</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	0/0/3
CSEC 2202	<b>Introduction to Wireless Networking</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0	<b>Culinary Arts</b>			
CSEC 2204	<b>Managing Directory Services</b> 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. <b>Prerequisite:</b> CPTR2272 <b>Corequisite:</b> None	3	2/1/0	CULN 1100	<b>Introduction to Wine</b> This is a basic foundation course in the area of Wine Studies. The course will help students understand the process of how wine is made and gain fundamental knowledge to evaluate wine. Students will study the classical wine varietals of the world and learn wine service techniques according to the professional standards of sommelier. Note: All persons must be at least 21 years of age and have a photo ID as proof of age before enrolling. <b>Prerequisite:</b> All persons enrolling must be of at least 21 years of age and present a photo ID. <b>Corequisite:</b> None	3	3/0/0
CSEC 2210	<b>Security Breaches and Countermeasures</b> 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. <b>Prerequisite:</b> CSEC1110 <b>Corequisite:</b> None	3	2/1/0	CULN 1102	<b>Introduction to Foodservice Preparation</b> This course covers terminology, equipment, basic food products and cooking techniques and kitchen safety. <b>Prerequisite:</b> None <b>Corequisite:</b> None	4	4/0/0
CSEC 2212	<b>Web Security</b> 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	3	2/1/0	CULN 1104	<b>Soups, Stocks and Sauces</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	2/0/0
				CULN 1106	<b>Salad and Baking Lab</b> 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 and pantry/salad areas in a commercial kitchen. <b>Prerequisite:</b> Instructor permission required <b>Corequisite:</b> None	6	0/6/0
				CULN 1112	<b>Poultry and Seafood</b> This course is an introduction to poultry, fish and seafood from basic classifications to preparation methods, handling techniques, market forms and accompaniments. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0

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CULN 1118	Fry and Broiler Lab 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. <b>Prerequisite:</b> Instructor permission required <b>Corequisite:</b> None	5	0/5/0		<b>Prerequisite:</b> CULN1102 AND instructor permission required <b>Corequisite:</b> None		
CULN 1120	Kitchen Math and Formulas 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0				
CULN 1122	Sanitation Certification 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0				
CULN 1124	Menu Planning and Merchandising 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	2/0/0				
CULN 2202	Meats 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	2/0/0				
CULN 2204	Breakfast Preparation Lab 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. <b>Prerequisite:</b> Instructor permission required <b>Corequisite:</b> None	5	0/5/0				
CULN 2206	Buffet and Garde Manger Lab 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. <b>Prerequisite:</b> CULN1102 <b>Corequisite:</b> None	3	0/3/0				
CULN 2214	Quantity Food Preparation and Butcher Lab 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. <b>Prerequisite:</b> Instructor permission required <b>Corequisite:</b> None	6	0/6/0				
CULN 2222	Production and Planning Supervision Lab 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. <b>Prerequisite:</b> CULN1102 AND CULN1120 AND CULN1104 <b>Corequisite:</b> None	6	2/4/0				
CULN 2228	Food Cost Control This course covers the cost structure of food service operations and provides methods and applications to monitor and control food and labor costs. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0				
CULN 2236	Ethnic Foods This course covers the history, origin and preparation methods of food products of various countries and ethnic groups. <b>Prerequisite:</b> CULN1102 AND CULN1122 <b>Corequisite:</b> None	2	1/1/0				
CULN 2238	Confectionery Art This course covers the skills and techniques required to decorate and present cakes, pastries and desserts. <b>Prerequisite:</b> CULN1102 AND CULN1122 AND CULN1106 <b>Corequisite:</b> None	2	1/1/0				
CULN 2240	Internship This course provides the student with an internship experience 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.	2	0/0/2				
				<b>Voice and Video Over Internet Protocol</b>			
				<b>CVNP 2210 Voice, Video &amp; Data Convergence</b> 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. <b>Prerequisite:</b> CPTR1108 OR TECH1106 <b>Corequisite:</b> None			
				<b>CVNP 2212 Voice Over IP and IP Telephony</b> 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. <b>Prerequisite:</b> CPTR1118 <b>Corequisite:</b> None			
				<b>CVNP 2216 Voice over Internet Protocol (VoIP) and IP Telephony</b> 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. <b>Prerequisite:</b> CPTR1118 <b>Corequisite:</b> None			
				<b>CVNP 2220 Video Over Internet Protocol</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None			
				<b>CVNP 2222 Voice Video Over IP Project</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None			
				<b>Diesel Equipment Technology - Case IH and New Holland</b>			
				<b>DCNH 1116 CNH (Case New Holland) Supervised Occupational Experience (SOE) I</b> 3 0/0/3			
				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. <b>Prerequisite:</b> None <b>Corequisite:</b> None			
				<b>DCNH 1118 CNH (Case New Holland) Supervised Occupational Experience (SOE) II</b> 7 0/0/7			
				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. <b>Prerequisite:</b> None <b>Corequisite:</b> None			
				<b>DCNH 2210 Mobile Hydraulics</b> 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. <b>Prerequisite:</b> DSET1112 AND DSET1100 <b>Corequisite:</b> None			

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DCNH 2218	<b>CNH (Case New Holland) Supervised Occupational Experience (SOE) III</b>	3	0/0/3				
	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.						
	<b>Prerequisite:</b> None <b>Corequisite:</b> None						
DCNH 2230	<b>Adv Engines &amp; Fuel Systems I</b>	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.						
	<b>Prerequisite:</b> None <b>Corequisite:</b> None						
DCNH 2238	<b>Transmissions &amp; Drive Systems</b>	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.						
	<b>Prerequisite:</b> DSET1110 <b>Corequisite:</b> None						
DCNH 2242	<b>Advanced Engines and Fuel Systems</b>	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						
	<b>Prerequisite:</b> DSET1132 AND DSET1134 <b>Corequisite:</b> None						
<b>Dental</b>				<b>Dental Assisting</b>			
DENT 1100	<b>Biomaterials</b>	3	2/1/0	DNAS 1103	<b>Clinical Assisting I</b>	6	3/3/0
	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.				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.		
	<b>Prerequisite:</b> None <b>Corequisite:</b> None				<b>Prerequisite:</b> None <b>Corequisite:</b> None		
DENT 1102	<b>Dental Anatomy</b>	2	2/0/0	DNAS 1105	<b>Clinical Assisting II</b>	5	1/4/0
	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.				Dental assisting students apply skills in a clinical setting. 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, Biomedical Science and Dental Practice Management as they apply to the practice of dental assisting.		
	<b>Prerequisite:</b> None <b>Corequisite:</b> None				<b>Prerequisite:</b> DNAS1103 <b>Corequisite:</b> None		
DENT 1103	<b>Introduction for Dental Health Care Providers</b>	2	1/1/0	DNAS 1106	<b>Biodental Science</b>	3	3/0/0
	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.				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.		
	<b>Prerequisite:</b> None <b>Corequisite:</b> None				<b>Prerequisite:</b> DENT1103 <b>Corequisite:</b> None		
DENT 1104	<b>Dental Health Care Providers II</b>	1	1/0/0	DNAS 1114	<b>Dental Prac Management</b>	2	2/0/0
	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.				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.		
	<b>Prerequisite:</b> None <b>Corequisite:</b> None				<b>Prerequisite:</b> None <b>Corequisite:</b> None		
DENT 1106	<b>Dental Radiology Lecture</b>	3	3/0/0	DNAS 1119	<b>Advanced Functions</b>	5	2/3/0
	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.				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.		
	<b>Prerequisite:</b> None <b>Corequisite:</b> None				<b>Prerequisite:</b> DNAS1103 OR DENT1114 <b>Corequisite:</b> None		
DENT 1122	<b>Dental Ethics &amp; Jurisprudence</b>	1	1/0/0	DNAS 1144	<b>Clinical Affiliations</b>	6	0/0/6
	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.				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.		
	<b>Prerequisite:</b> None <b>Corequisite:</b> None				<b>Prerequisite:</b> Acceptance into the dental assisting program <b>Corequisite:</b> None		
				DNAS 1210	<b>Radiology Lab</b>	1	0/1/0
					In this course 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.		
					<b>Prerequisite:</b> DENT1106 <b>Corequisite:</b> DNAS1106		
				DNAS 1212	<b>Radiology Lab II</b>	1	0/1/0
					In this course 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.		
					<b>Prerequisite:</b> DNAS1210 <b>Corequisite:</b> None		
				DNAS 1215	<b>Dental Specialties</b>	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		



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	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
<b>Dental Hygiene</b>							
<b>DNHY 1104</b>	<b>Dental Anatomy Lab</b>	<b>1</b>	<b>0/1/0</b>				
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None							
<b>DNHY 1106</b>	<b>Head and Neck Anatomy</b>	<b>2</b>	<b>2/0/0</b>				
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. <b>Prerequisite:</b> Acceptance into the dental hygiene program <b>Corequisite:</b> None							
<b>DNHY 1108</b>	<b>Oral Histology and Embryology</b>	<b>2</b>	<b>2/0/0</b>				
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None							
<b>DNHY 1109</b>	<b>Radiology Lab</b>	<b>2</b>	<b>2/0/0</b>				
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None							
<b>DNHY 1110</b>	<b>Principles I</b>	<b>2</b>	<b>2/0/0</b>				
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None							
<b>DNHY 1112</b>	<b>Dental Hygiene Practice I</b>	<b>3</b>	<b>0/3/0</b>				
This course provides an introduction to dental hygiene with emphasis on the practice of preventive dentistry, care and use of equipment, sterilization techniques and an introduction to instrumentation. <b>Prerequisite:</b> None <b>Corequisite:</b> None							
<b>DNHY 1118</b>	<b>Oral Pathology</b>	<b>2</b>	<b>2/0/0</b>				
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. <b>Prerequisite:</b> Accepted into the dental hygiene program and successful completion of Principles I, II, III; Head and Neck Anatomy; and Oral Histology and Embryology <b>Corequisite:</b> None							
<b>DNHY 1119</b>	<b>Dental Hygiene Principles II</b>	<b>4</b>	<b>4/0/0</b>				
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. <b>Prerequisite:</b> DNHY1110 <b>Corequisite:</b> None							
<b>DNHY 1123</b>	<b>Dental Hygiene Practice II</b>	<b>5</b>	<b>0/5/0</b>				
This course is a continuation of DNHY 1112, 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 opportunity for the student to develop competence in clinical procedures. <b>Prerequisite:</b> DNHY1112 <b>Corequisite:</b> None							
<b>DNHY 1124</b>	<b>Pain Control Lab</b>	<b>2</b>	<b>0/2/0</b>				
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. <b>Prerequisite:</b> DNHY1106 AND DNHY1136 <b>Corequisite:</b> None							
<b>DNHY 1130</b>	<b>Dent Hygiene Prin III</b>	<b>1</b>	<b>1/0/0</b>				
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. <b>Prerequisite:</b> DNHY1123 <b>Corequisite:</b> None						
<b>DNHY 1132</b>	<b>Dent Hygiene Prac III</b>	<b>1</b>	<b>0/1/0</b>				
This lab course is a continuation of DNHY1123 with emphasis on Minnesota Board of Dentistry allowable procedures for dental hygienists. <b>Prerequisite:</b> DNHY1123 <b>Corequisite:</b> None							
<b>DNHY 1136</b>	<b>Dental Pharmacology</b>	<b>2</b>	<b>2/0/0</b>				
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None							
<b>DNHY 2210</b>	<b>Dent Hygiene Prin IV</b>	<b>2</b>	<b>2/0/0</b>				
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. <b>Prerequisite:</b> DNHY1130 <b>Corequisite:</b> None							
<b>DNHY 2213</b>	<b>Dent Hygiene Prac IV</b>	<b>6</b>	<b>0/6/0</b>				
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. <b>Prerequisite:</b> DNHY1132 AND The student must be accepted into the dental hygiene program and comply with the Dental Program Student/Faculty Handbook. <b>Corequisite:</b> DNHY2240							
<b>DNHY 2219</b>	<b>Periodontology</b>	<b>2</b>	<b>2/0/0</b>				
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None							
<b>DNHY 2220</b>	<b>Dent Hygiene Prin V</b>	<b>1</b>	<b>1/0/0</b>				
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. <b>Prerequisite:</b> DNHY2210 <b>Corequisite:</b> None							
<b>DNHY 2223</b>	<b>Dent Hygiene Prac V</b>	<b>6</b>	<b>0/6/0</b>				
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. <b>Prerequisite:</b> DNHY2213 AND The student must be accepted into the dental hygiene program and comply with the Dental Program Student/Faculty Handbook. <b>Corequisite:</b> DNHY2246							
<b>DNHY 2226</b>	<b>Community Dental Hygiene</b>	<b>4</b>	<b>3/1/0</b>				
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None							
<b>DNHY 2232</b>	<b>Dental Hygiene Review</b>	<b>1</b>	<b>1/0/0</b>				
This course is designed to assist students in reviewing content in preparation to write the National Board Dental Hygiene Examination. <b>Prerequisite:</b> DNHY2213 <b>Corequisite:</b> None							
<b>DNHY 2240</b>	<b>Clinical Affiliation I</b>	<b>1</b>	<b>0/0/1</b>				
This course consists of 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. <b>Prerequisite:</b> None <b>Corequisite:</b> DNHY2213							
<b>DNHY 2246</b>	<b>Clinical Affiliation II</b>	<b>1</b>	<b>0/0/1</b>				
This course consists of 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. <b>Prerequisite:</b> None <b>Corequisite:</b> DNHY2223							

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
<b>Diesel Equipment Technology</b>							
DSET 1100	<b>Diesel Equipment Fundamentals</b>	2	1/1/0	DSET 2204	<b>Advanced Electrical and Equipment Systems</b>	3	1/2/0
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 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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> DSET1100 AND DSET1130			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
DSET 1101	<b>Software Systems in Transportation</b>	2	1/1/0	DSET 2206	<b>Electronic Controls</b>	3	1/2/0
This course introduces students to proprietary software used in the diesel technology industry. Students will become familiar with various software from industry-leading manufacturers.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> DSET1130 AND TRNS1102 OR DSET1100 AND DSET1130			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
DSET 1106	<b>Fuel Systems</b>	2	1/1/0	DSET 2210	<b>Mobile Hydraulics</b>	4	2/2/0
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 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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> DSET1112 AND DSET1100			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
DSET 1110	<b>Power Train I</b>	3	1/2/0	DSET 2214	<b>Suspension and Alignment</b>	3	1/2/0
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 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.			
<b>Prerequisite:</b> TRNS1102 OR DSET1100				<b>Prerequisite:</b> DSET1100			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
DSET 1112	<b>Hydraulics I</b>	4	2/2/0	DSET 2218	<b>Advanced Fuels</b>	3	1/2/0
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 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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> DSET1106			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
DSET 1114	<b>Vehicle Brakes</b>	3	1/2/0	DSET 2220	<b>Internship</b>	3	0/0/3
This course covers hydraulic and air brake system operation, service and diagnosis. Anti-lock braking systems will also be covered.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> TRNS1102 AND TRNS1106 AND TRNS1110 OR DSET1100			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
DSET 1124	<b>Diesel Shop Management</b>	1	1/0/0	DSET 2230	<b>Adv Engines &amp; Fuel Systems I</b>	3	1/2/0
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 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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
DSET 1130	<b>Trans Elec/Start/Charge</b>	4	2/2/0	DSET 2238	<b>Transmissions &amp; Drive Systems</b>	4	1/3/0
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.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> DSET1110			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
DSET 1132	<b>Introduction to Engine Theory</b>	2	2/0/0	DSET 2240	<b>Supervised Occupational Experience II</b>	3	0/0/3
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.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
DSET 1134	<b>Introduction to Engines</b>	3	0/3/0	DSET 2242	<b>Advanced Engines and Fuel Systems</b>	6	2/4/0
This course teaches students how to disassemble, analyze, rebuild, measure and adjust diesel engines and their components.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> DSET1134 AND DSET1132			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
DSET 1140	<b>Supervised Occupational Experience 1</b>	7	0/0/7				
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.							
<b>Prerequisite:</b> None							
<b>Corequisite:</b> None							
DSET 1144	<b>Electrical Troubleshooting</b>	3	1/2/0				
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.							
<b>Prerequisite:</b> DSET1130							
<b>Corequisite:</b> None							
				<b>Diesel Equipment Technology - Truck Option</b>			
				DTRK 1140	<b>Supervised Occupational Experience 1</b>	7	0/0/7
				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.			
				<b>Prerequisite:</b> None			
				<b>Corequisite:</b> None			

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
DTRK 2214	<b>Suspension and Alignment</b>	3	1/2/0				
<p>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.</p> <p><b>Prerequisite:</b> TRNS1102 OR DSET1100  <b>Corequisite:</b> None</p>							
DTRK 2230	<b>Advanced Engines I</b>	3	1/2/0				
<p>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.</p> <p><b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>							
DTRK 2238	<b>Transmissions &amp; Drive Systems</b>	4	1/3/0				
<p>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.</p> <p><b>Prerequisite:</b> DSET1110  <b>Corequisite:</b> None</p>							
DTRK 2240	<b>Supervised Occupational Experience II</b>	4	0/0/4				
<p>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.</p> <p><b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>							
DTRK 2242	<b>Advanced Engines and Fuel Systems</b>	6	2/4/0				
<p>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.</p> <p><b>Prerequisite:</b> DSET1132 AND DSET1134  <b>Corequisite:</b>None</p>							

## English for Academic Purposes

EAP 0095	<b>Editing Strategies I</b>	2	2/0/0
<p>This course is for students in their first semester of study in the English for Academic Purposes (EAP) cohort and enrolled in ENGL0097: Express English. The course will focus on helping students identify specific patterns of error in their writing and apply strategies for increasing sentence-level accuracy.</p> <p><b>Prerequisite:</b> Course placement is determined by assessment  <b>Corequisite:</b> ENGL0097</p>			
EAP 0096	<b>Reading Strategies I</b>	2	2/0/0
<p>This course is for students in their first semester of study in the English for Academic Purposes (EAP) cohort and pairs with an academic content course. Students will learn specific strategies for building vocabulary, taking notes and analyzing texts from a specific field.</p> <p><b>Prerequisite:</b> Course placement is determined by assessment  <b>Corequisite:</b> Enrollment in paired MnTC course is required for students registering for this course</p>			
EAP 0097	<b>Reading Strategies II</b>	2	2/0/0
<p>This course is for students in their second semester of study in the English for Academic Purposes (EAP) cohort and pairs with a content course. Students will continue to develop language skills necessary to read and understand field-specific texts.</p> <p><b>Prerequisite:</b> EAP0096 AND Course placement is determined by assessment  <b>Corequisite:</b> Enrollment in paired MnTC course is required for students registering for this course</p>			
EAP 0098	<b>Editing Strategies II</b>	2	2/0/0
<p>This course is for students in their second semester of study in the English for Academic Purposes (EAP) cohort and enrolled in ENGL1101: College Writing. The course will continue student development of editing skills as well as build a strong foundation of research skills, including the critical analysis of sources. Students will write responses to sources: summarizing, paraphrasing and quoting materially responsibly.</p> <p><b>Prerequisite:</b> EAP0095  <b>Corequisite:</b> ENGL1101</p>			

## Economics

ECON 1150	<b>Essentials of Economics</b>	3	3/0/0
<p>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</p>			

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	<b>Macroeconomics</b>	3	3/0/0
<p>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.</p> <p><b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>			

ECON 2222	<b>Microeconomics</b>	3	3/0/0
<p>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.</p> <p><b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>			

## Education

ED 2205	<b>Introduction to Education and Technology</b>	2	2/0/0
<p>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. This course is to be taken concurrently with ED 2206.</p> <p><b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>			

ED 2206	<b>Early Field Experience</b>	1	0/0/1
<p>This course is an early educational field experience. Students will be placed at 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.</p> <p><b>Prerequisite:</b> None  <b>Corequisite:</b> ED2205</p>			

ED 2294	<b>Educational Psychology</b>	3	3/0/0
<p>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.</p> <p><b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>			

EDUC 1113	<b>Career and Life Planning</b>	2	2/0/0
<p>This course is designed to assist students in developing career exploration skills and strategies through self-exploration, cultural perceptions, and career and college major identification. Students will identify potential major and career possibilities.</p> <p><b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>			

## Electrical Technology

ELEC 1100	<b>Electrical Safety</b>	1	1/0/0
<p>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.</p> <p><b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>			

ELEC 1102	<b>Introduction to Electric Circuit Theory</b>	4	2/2/0
<p>This introductory course provides the student with knowledge of electrical theory including atomic structure, Ohm's Law, series circuits, parallel circuits, complex circuits</p>			

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
	and sine wave principles as related to the National Electrical Code. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
ELEC 1104	<b>Introduction to National Electrical Code</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	2/0/0				
ELEC 1107	<b>Introduction to Residential Wiring</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	1/2/0				
ELEC 1108	<b>Electrical Circuit Theory</b> This course provides the student with an understanding of complex AC circuits, single-phase and three-phase circuit connections, transformer principles and calculations. <b>Prerequisite:</b> ELEC1102 <b>Corequisite:</b> None	4	2/2/0				
ELEC 1110	<b>Electric Motors and Generators</b> 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. <b>Prerequisite:</b> ELEC1102 <b>Corequisite:</b> None	4	2/2/0				
ELEC 1112	<b>Residential Wiring</b> 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. <b>Prerequisite:</b> ELEC1107 <b>Corequisite:</b> None	3	1/2/0				
ELEC 1114	<b>National Electrical Code</b> 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. <b>Prerequisite:</b> ELEC1104 <b>Corequisite:</b> None	2	2/0/0				
ELEC 1116	<b>Conduit/Tool Applications</b> 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. <b>Prerequisite:</b> ELEC1100 <b>Corequisite:</b> None	2	0/2/0				
ELEC 1118	<b>Electrical Services</b> 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. <b>Prerequisite:</b> ELEC1104 <b>Corequisite:</b> None	3	2/1/0				
ELEC 1120	<b>Electrical Blueprints</b> 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. <b>Prerequisite:</b> ELEC1124 <b>Corequisite:</b> None	3	2/1/0				
ELEC 1122	<b>Introduction to Electrical Materials</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	0/1/0				
ELEC 1124	<b>Introduction to Electrical Blueprint Reading</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	1/1/0				
ELEC 1130	<b>Electrical Blueprints</b> 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. <b>Prerequisite:</b> ELEC1124 <b>Corequisite:</b> None	3	2/1/0				
ELEC 1170	<b>Predictive Maintenance Technology</b> This course is designed to introduce students to the current predictive maintenance	2	1/1/0				
	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
ELEC 2202	<b>Heating/Cooling Controls</b> 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. <b>Prerequisite:</b> ELEC1107 <b>Corequisite:</b> None	3	1/2/0				
ELEC 2205	<b>Introduction to Commercial Wiring</b> 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. <b>Prerequisite:</b> ELEC1104 AND ELEC1122 <b>Corequisite:</b> None	3	1/2/0				
ELEC 2206	<b>Introduction to Motor Control Applications</b> 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. <b>Prerequisite:</b> ELEC1108 AND ELEC1110 <b>Corequisite:</b> None	3	2/1/0				
ELEC 2208	<b>Programmable Logic Controllers</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	1/1/0				
ELEC 2211	<b>Electronic Motor Control</b> This course provides application of basic theory and operation to electronic motor control including semi-conductors, rectifiers, regulators and amplifiers. <b>Prerequisite:</b> ELEC1108 <b>Corequisite:</b> None	3	2/1/0				
ELEC 2212	<b>Commercial Wiring</b> 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. <b>Prerequisite:</b> ELEC2205 <b>Corequisite:</b> None	3	1/2/0				
ELEC 2214	<b>Industrial Wiring</b> 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. <b>Prerequisite:</b> ELEC1114 <b>Corequisite:</b> None	2	1/1/0				
ELEC 2216	<b>Motor Control Application</b> 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. <b>Prerequisite:</b> ELEC2206 <b>Corequisite:</b> None	3	1/2/0				
ELEC 2222	<b>Advanced Programmable Logic Controllers</b> 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. <b>Prerequisite:</b> ELEC2208 <b>Corequisite:</b> None	3	1/2/0				
ELEC 2225	<b>Transformers</b> 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. <b>Prerequisite:</b> ELEC1108 <b>Corequisite:</b> None	2	0/2/0				
ELEC 2228	<b>Electrical Troubleshooting</b> This course provides an application of principles of construction electricity to a variety	1	0/1/0				



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	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. <b>Prerequisite:</b> 36 credits of ELEC courses <b>Corequisite:</b> None						
ELEC 2234	<b>Hydraulics/Pneumatics</b>	2	1/1/0				
	This course provides the knowledge of pneumatic and hydraulic controls necessary for the electrician employed in an industrial setting. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
ELEC 2236	<b>Industrial Motor Maintenance</b>	2	1/1/0				
	This course includes principles of industrial motor maintenance and experience with maintenance and troubleshooting situations common to industrial settings. <b>Prerequisite:</b> ELEC1110 <b>Corequisite:</b> None						
ELEC 2246	<b>Advanced Electronics</b>	2	1/1/0				
	This course provides theory, operation and practical applications of various field-effect transistors, thyristors, photosensitive devices, sensing devices and wave chopping circuitry. <b>Prerequisite:</b> ELEC2211 <b>Corequisite:</b> None						
ELEC 2248	<b>Code Applications</b>	2	1/1/0				
	This course applies the principles of the National Electrical Code to job-specific situations. <b>Prerequisite:</b> ELEC1104 AND ELEC1114 <b>Corequisite:</b> None						
ELEC 2250	<b>Special Topics/Projects</b>	2	0/2/0				
	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
<b>English Language Learners</b>							
ELL 0050	<b>English Language Learner Foundations</b>	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
ELL 0060	<b>English Language Learner Reading</b>	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
ELL 1060	<b>English Language Learner Writing I</b>	4	3/1/0				
	This writing course is for non-native learners of English and is designed to prepare students for ELL1080: ELL Writing II. Students will learn the short essay form for expository writing, emphasizing sentence and paragraph structures as well as editing for increased accuracy. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
ELL 1080	<b>English Language Learner Writing II</b>	3	3/0/0				
	This writing course is for non-native learners of English and is designed to prepare students for college-level writing tasks and/or courses. Students will learn multiple-paragraph essay forms with an emphasis on paraphrasing, summarizing, quoting and analyzing sources. Students will inventory patterns of error and create an individual plan for increasing accuracy. <b>Prerequisite:</b> ELL1060 OR Placement into the course <b>Corequisite:</b> None						
ELL 1120	<b>English Language Learner Writing</b>	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
ELL 1175	<b>English Language Learner Listening Comprehension and Speaking</b>	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
<b>Electrical Lineworker</b>							
ELWT 1102	<b>Electrical Line Worker Theory I</b>	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
ELWT 1104	<b>Electrical Structure Installation</b>	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
ELWT 1106	<b>Climbing Electrical Structure</b>	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
ELWT 1108	<b>Construction of Overhead Structures</b>	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
ELWT 1110	<b>Line Worker Theory II</b>	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 pre-formed ties, overvoltage and overcurrent installations, and street lighting circuits. <b>Prerequisite:</b> ELWT1102 <b>Corequisite:</b> None						
ELWT 1112	<b>Transformers</b>	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. <b>Prerequisite:</b> ELWT1108 <b>Corequisite:</b> ELWT1110						
ELWT 1114	<b>Line Construction Reports</b>	2	2/0/0				
	This course provides the student with an understanding of the design of line work construction drawings and equipment installation orders. <b>Prerequisite:</b> ELWT1108 AND ELWT1110 <b>Corequisite:</b> None						
ELWT 1116	<b>Pole Top and Bucket Rescue</b>	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. <b>Prerequisite:</b> ELWT1106 <b>Corequisite:</b> None						
ELWT 1118	<b>Field Construction I</b>	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. <b>Prerequisite:</b> ELWT1106 <b>Corequisite:</b> None						
ELWT 1120	<b>Field Construction II</b>	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT				
ELWT 1122	<b>Field Construction III</b> 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. <b>Prerequisite:</b> ELWT1120 <b>Corequisite:</b> None	3	0/3/0		<b>Prerequisite:</b> ENGL 1101 College Writing <b>Corequisite:</b> None						
ELWT 1130	<b>Electrical Line Worker Internship</b> This course will concentrate on the student receiving apprentice line work skills under the supervision of an appropriate industry representative. <b>Prerequisite:</b> Instructor approval <b>Corequisite:</b> None	2	0/0/2								
ELWT 1132	<b>Electrical Line Worker Internship</b> In this course, the student will learn apprentice line work skills under the supervision of an appropriate industry representative. <b>Prerequisite:</b> Instructor approval <b>Corequisite:</b> None	3	0/0/3								
<b>English</b>											
ENGL 0096	<b>Academic Literacy</b> 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. <b>Prerequisite:</b> Placement by assessment <b>Corequisite:</b> None	6	6/0/0								
ENGL 0097	<b>Express English Strategies</b> This course is designed to prepare students for college-level reading and writing tasks across the disciplines. Students will practice strategies in order to develop reading proficiency and writing skills. They also will engage in all stages of the writing process, from invention and drafting to revising and editing, as they respond to texts and specific writing situations. <b>Prerequisite:</b> Course placement is determined by assessment <b>Corequisite:</b> None	3	3/0/0								
ENGL 0098	<b>Accelerated English</b> This course must be taken in conjunction with a linked section of College Writing (ENGL1101) taught by the same instructor. It is designed to prepare students for college-level reading and writing tasks across the disciplines. Students will practice strategies in order to develop reading proficiency and writing skills. They also will engage in all stages of the writing process, from invention and drafting to revising and editing, as they respond to texts and specific writing situations. <b>Prerequisite:</b> Course placement is determined by assessment <b>Corequisite:</b> None	3	3/0/0								
ENGL 1101	<b>College Writing</b> 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 academic sources and a short research project. <b>Prerequisite:</b> Completion of ELL1080, ENGL0096, or ENGL0097 with a grade of C or higher OR placement into college-level English. <b>Corequisite:</b> None	3	3/0/0								
ENGL 1205	<b>Writing About Literature</b> 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 academic research and respond through discussion and writing. <b>Prerequisite:</b> ENGL1101 <b>Corequisite:</b> None	3	3/0/0								
ENGL 1210	<b>Writing About Current Issues</b> 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 academic research and responding through discussion and writing. <b>Prerequisite:</b> ENGL1101 <b>Corequisite:</b> None	3	3/0/0								
ENGL 1215	<b>Professional &amp; Technical Writing</b> 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.	3	3/0/0								
				ENGL 2200	<b>Introduction to Creative Writing</b> 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 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. <b>Prerequisite:</b> ENGL1101 <b>Corequisite:</b> None	3	3/0/0				
				ENGL 2221	<b>Creative Writing: Poetry</b> Meets MnTC Goal Area 6F. This creative writing course focuses on the writing of poetry. It is a workshop designed to offer students practice in the composition of poetry and poetic modes of writing. Emphasis will be on writing original work and on learning the skills needed to write successful poetry. 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. <b>Prerequisite:</b> ENGL1101 <b>Corequisite:</b> None	3	3/0/0				
				ENGL 2222	<b>Creative Writing: Fiction</b> 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. The course may include analyzing masterpiece models, writing in the genre of short fiction and possibly creative essays, biography, autobiography, and/or travelogues. Students will present and submit manuscripts, discuss each other's work in a workshop format and will be expected to edit and critique both their own and fellow students' works. <b>Prerequisite:</b> ENGL1101 <b>Corequisite:</b> None	3	3/0/0				
				ENGL 2228	<b>A Well Examined Life: Reading and Writing Memoir</b> 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. <b>Prerequisite:</b> ENGL1101 <b>Corequisite:</b> None	3	3/0/0				
				ENGL 2230	<b>Environmental Literature</b> 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. <b>Prerequisite:</b> ENGL 1101 <b>Corequisite:</b> None	3	3/0/0				
				ENGL 2234	<b>Introduction to Literature: Short Stories</b> 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. <b>Prerequisite:</b> ENGL0075 OR ENGL0050 OR ENGL1101 <b>Corequisite:</b> None	3	3/0/0				
				ENGL 2235	<b>Intro to Literature: Drama</b> 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. <b>Prerequisite:</b> ENGL1101 <b>Corequisite:</b> None	3	3/0/0				
				ENGL 2236	<b>Introduction to Literature: Novel</b> 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	3	3/0/0				

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
	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 also will be studied. <b>Prerequisite:</b> ENGL1101 <b>Corequisite:</b> None						
<b>ENGL 2238</b>	<b>Literature, Illness and the Human Condition</b>	<b>3</b>	<b>3/0/0</b>				
	This course meets MnTC Goal Areas 6 and 9. Students will read fiction and nonfiction literary texts as a means for understanding issues related to health, illness and the human condition. Through discussions, writings and projects, students will analyze the readings in order to learn about the literary genres, explore the range of responses to the issues (including their own) and identify and reflect about ways people exercise their roles as responsible members of their communities and citizens of the world. <b>Prerequisite:</b> ENGL1101 <b>Corequisite:</b> None						
<b>ENGL 2239</b>	<b>Nature Writers</b>	<b>3</b>	<b>3/0/0</b>				
	This course 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. <b>Prerequisite:</b> ENGL1101 <b>Corequisite:</b> None						
<b>ENGL 2302</b>	<b>American Ethnic Literature</b>	<b>3</b>	<b>3/0/0</b>				
	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. <b>Prerequisite:</b> ENGL1101 <b>Corequisite:</b> None						
<b>ENGL 2310</b>	<b>Introduction to Mythology</b>	<b>3</b>	<b>3/0/0</b>				
	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). <b>Prerequisite:</b> ENGL1101 <b>Corequisite:</b> None						
<b>ENGL 2314</b>	<b>Introduction to Shakespeare</b>	<b>3</b>	<b>3/0/0</b>				
	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. <b>Prerequisite:</b> ENGL1101 <b>Corequisite:</b> None						
<b>ENGL 2321</b>	<b>Women in Literature</b>	<b>3</b>	<b>3/0/0</b>				
	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. <b>Prerequisite:</b> ENGL1101 <b>Corequisite:</b> None						
<b>ENGL 2322</b>	<b>Banned Literature</b>	<b>3</b>	<b>3/0/0</b>				
	Meets MnTC Goal Area 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. <b>Prerequisite:</b> ENGL1101 <b>Corequisite:</b> None						
<b>ENGL 2323</b>	<b>Horror and Supernatural Fiction</b>	<b>3</b>	<b>3/0/0</b>				
	This course 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. <b>Prerequisite:</b> ENGL1101 <b>Corequisite:</b> None						
<b>ENGL 2372</b>	<b>Children's Literature</b>	<b>3</b>	<b>3/0/0</b>				
	This course 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. <b>Prerequisite:</b> ENGL1101 <b>Corequisite:</b> None						
<b>ENGL 2374</b>	<b>The Poetics of Rock Lyrics</b>	<b>3</b>	<b>3/0/0</b>				
	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). <b>Prerequisite:</b> ENGL1101 AND/OR concurrent enrollment <b>Corequisite:</b> None						
				<b>Engineering</b>			
				<b>ENGR 2210</b>	<b>Engineering Mechanics I</b>	<b>3</b>	<b>3/0/0</b>
					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. <b>Prerequisite:</b> MATH1134 <b>Corequisite:</b> None		
				<b>ENGR 2220</b>	<b>Engineering Mechanics II</b>	<b>3</b>	<b>3/0/0</b>
					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. <b>Prerequisite:</b> ENGR2210 AND MATH1135 <b>Corequisite:</b> None		
				<b>ENGR 2230</b>	<b>Mechanics of Materials</b>	<b>3</b>	<b>3/0/0</b>
					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. <b>Prerequisite:</b> ENGR2210 <b>Corequisite:</b> None		
				<b>ENGR 2970</b>	<b>Internship Experience</b>	<b>1-3</b>	<b>0/0/1-3</b>
					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. <b>Prerequisite:</b> Instructor approval <b>Corequisite:</b> None		
				<b>ENGT</b>			
				<b>ENGT 1118</b>	<b>Construction and Manufacturing Math</b>	<b>3</b>	<b>3/0/0</b>
					This course covers the application of common geometric and trigonometric calculations related to the construction and manufacturing industries. <b>Prerequisite:</b> MATH0055 <b>Corequisite:</b> None		
				<b>ENGT 1126</b>	<b>Engineering Graphics</b>	<b>3</b>	<b>1/2/0</b>
					This course introduces and develops basic skills in drawing, lettering, orthographic projection, sections and dimensioning. Students in this course will apply the basic fundamentals of pictorial drawing, including isometric, oblique, perspective, shade and shadow, and freehand sketching. <b>Prerequisite:</b> None <b>Corequisite:</b> None		
				<b>ENGT 1134</b>	<b>Office Systems and Equipment</b>	<b>3</b>	<b>1/2/0</b>
					This course covers the application of Windows software systems in coordination with AutoCAD software as well as general office equipment set-up and use. <b>Prerequisite:</b> None <b>Corequisite:</b> None		
				<b>Electrical Lineworker</b>			
				<b>ENST 2001</b>	<b>Fundamentals of Utilities</b>	<b>4</b>	<b>4/0/0</b>
					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. <b>Prerequisite:</b> None <b>Corequisite:</b> None		
				<b>ENST 2002</b>	<b>Energy Safety Principles</b>	<b>1</b>	<b>1/0/0</b>
					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  
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  
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

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

**ENTR 1400 Opportunity Analysis** 3 2/1/0

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.

**Prerequisite:** None  
**Corequisite:** None

**ENTR 1800 Business Internship** 3 0/0/3

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.

**Prerequisite:** Advisor consent  
**Corequisite:** None

**ENTR 2200 Entrepreneurial Field Studies** 3 0/3/0

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.

**Prerequisite:** None  
**Corequisite:** None

**ENTR 2220 Business Ethics/Professionalism** 3 3/0/0

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.

**Prerequisite:** None  
**Corequisite:** None

**ENTR 2222 Business Plan Development** 3 2/1/0

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.

**Prerequisite:** None  
**Corequisite:** None

## Equine Science

**EQSC 1001 Introduction to Equine Science** 1 1/0/0

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.

**Prerequisite:** None  
**Corequisite:** None

**EQSC 1050 Equine Anatomy** 3 2/1/0

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.

**Prerequisite:** None  
**Corequisite:** None

**EQSC 1060 Equine Reproduction and Nutrition** 3 3/0/0

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.

**Prerequisite:** None  
**Corequisite:** None

**EQSC 1130 Stable Operations I** 1 0/1/0

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.

**Prerequisite:** None  
**Corequisite:** None

**EQSC 1131 Stable Operations II** 2 1/1/0

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.

**Prerequisite:** None  
**Corequisite:** None

**EQSC 1140 Western Horsemanship** 3 1/2/0

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.

**Prerequisite:** None  
**Corequisite:** None

**EQSC 1150 Fundamentals of Riding Instruction** 2 1/1/0

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.

**Prerequisite:** None  
**Corequisite:** None

**EQSC 1160 English Equitation** 3 1/2/0

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.

**Prerequisite:** None  
**Corequisite:** None

**EQSC 1170 Introduction to Horse Training** 1 0/1/0

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.

**Prerequisite:** None  
**Corequisite:** None

**EQSC 1180 Equine Evaluation** 2 2/0/0

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.

**Prerequisite:** None  
**Corequisite:** None

**EQSC 1190 Farrier Science** 2 1/1/0

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



Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
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introduced and demonstrated.

**Prerequisite:** None  
**Corequisite:** None

**EQSC 1200 Equine Events Management 1 1/0/0**

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, recordkeeping, facility preparation, set-up and tear-down, and day-of-show management. This course is repeatable for credit.

**Prerequisite:** None  
**Corequisite:** None

**EQSC 2200 Recognition and Management of Equine Disorders 3 3/0/0**

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.

**Prerequisite:** EQSC1050 AND EQSC1060  
**Corequisite:** None

**EQSC 2300 Applied Stable Operations 3 3/0/0**

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.

**Prerequisite:** EQSC1130 AND EQSC1131  
**Corequisite:** None

**EQSC 2501 Equine Internship 6 0/0/6**

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.

**Prerequisite:** EQSC1001 AND EQSC1050 AND EQSC1060 AND EQSC1130 AND EQSC1131 AND EQSC1140 AND EQSC1150 AND EQSC1160 AND EQSC1170  
**Corequisite:** None

## Esthetist

**ESTH 1801 Advanced Skin Treatments 1 1/0/0**

In this course students learn about advanced skin care techniques including lymph drainage, chemical peels, microdermabrasion and spa body treatments.

**Prerequisite:** None  
**Corequisite:** None

**ESTH 1808 Advanced Skin Treatments 3 1/2/0**

In this course students will learn advanced skin care techniques including lymph drainage, peels, microdermabrasion and spa body treatments.

**Prerequisite:** None  
**Corequisite:** None

## Fire Department Company Officer

**FIRE 1100 Introduction to Fire Service 2 2/0/0**

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.

**Prerequisite:** None  
**Corequisite:** None

**FIRE 1106 Firefighter I and II 3 3/0/0**

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.

**Prerequisite:** None  
**Corequisite:** None

**FIRE 1108 Firefighter I and II Skills 4 0/4/0**

This course covers the objectives of the Minnesota State Fire Chiefs Association (MNFCFA) for certification as a Firefighter I and II. The MNFCFA 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.

**Prerequisite:** None  
**Corequisite:** None

**FIRE 1130 Technical Rescue 3 1/2/0**

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.

**Prerequisite:** FIRE1100 AND FIRE1106 AND FIRE1108  
**Corequisite:** None

**FIRE 1140 Fire Inspection and Code Enforcement 3 1/2/0**

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.

**Prerequisite:** FIRE1100 AND FIRE1106 AND FIRE1108  
**Corequisite:** None

**FIRE 1150 HazMat Operational 3 2/1/0**

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.

**Prerequisite:** None  
**Corequisite:** None

**FIRE 1152 Building Construction 3 2/1/0**

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.

**Prerequisite:** FIRE1100 AND FIRE1106 AND FIRE1108  
**Corequisite:** None

**FIRE 1180 Building Construction for Fire Protection 3 3/0/0**

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.

**Prerequisite:** None  
**Corequisite:** None

**FIRE 2020 Fire and Emergency Services Administration 3 3/0/0**

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.

**Prerequisite:** None  
**Corequisite:** None

**FIRE 2030 Fire Instructor I 2 2/0/0**

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.

**Prerequisite:** None  
**Corequisite:** None

**FIRE 2040 Fire Protection Systems 3 3/0/0**

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.

**Prerequisite:** None  
**Corequisite:** None

**FIRE 2050 Fire Prevention 3 3/0/0**

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.

**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 Design Studio** 3 2/1/0  
 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 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 design projects will be assigned that 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

## 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 co-requisite course and will serve as a reinforcement of the Italian culture and provide an understanding of the integration of the arts within the culture.  
**Prerequisites:** None  
**Corequisites:** 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

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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 co-requisite course and will serve to reinforce the student's understanding of the integration of the arts in the cultures of Italy and Greece.						
	<b>Prerequisites:</b> None <b>Corequisites:</b> None						
GLST 1510	<b>Global Studies: Natural Science</b>	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.						
	<b>Prerequisites:</b> Permission of the instructor is required <b>Corequisites:</b> None						
GLST 2291	<b>Humanities British Isles</b>	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.						
	<b>Prerequisites:</b> None <b>Corequisites:</b> HUM2281						
<b>Golf</b>							
GOLF 1100	<b>Rules of Golf</b>	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.						
	<b>Prerequisite:</b> None <b>Corequisite:</b> None						
GOLF 1101	<b>Golf Club Repair</b>	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.						
	<b>Prerequisite:</b> None <b>Corequisite:</b> None						
GOLF 1102	<b>Tournament Operations</b>	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.						
	<b>Prerequisite:</b> None <b>Corequisite:</b> None						
GOLF 1200	<b>Introduction to Golf Fundamentals and Methods</b>	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.						
	<b>Prerequisite:</b> None <b>Corequisite:</b> None						
GOLF 2100	<b>Pro Shop Operations and Management</b>	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.						
	<b>Prerequisite:</b> None <b>Corequisite:</b> None						
GOLF 2200	<b>Turf Management</b>	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.						
	<b>Prerequisite:</b> None <b>Corequisite:</b> None						
GOLF 2201	<b>Soils and Fertilizers</b>	3	2/1/0				
	This course is a study of soils and plant nutrition as related to golf course maintenance. Emphasis is on physical and chemical properties, water, organic matter and life of golf course soils. Process and methods of supplying nutrients to plants will be discussed.						
	<b>Prerequisite:</b> None <b>Corequisite:</b> None						
GOLF 2202	<b>Introduction to Golf Landscape and Horticulture</b>	3	2/1/0				
	This course introduces students to the industry of golf management, golf course landscape and horticulture. Students also will be introduced to the use, production and maintenance of ornamental plants. The course exposes students to regional golf landscape and garden center industries through lectures, field trips and guest speakers.						
	<b>Prerequisite:</b> None <b>Corequisite:</b> None						
GOLF 2402	<b>Golf Internship</b>	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.						
	<b>Prerequisite:</b> None <b>Corequisite:</b> None						
GOLF 2500	<b>Fundamentals of Golf Instruction</b>	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.						
	<b>Prerequisite:</b> None <b>Corequisite:</b> None						
<b>Heating</b>							
HEAT 2218	<b>Gas Heating</b>	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.						
	<b>Prerequisite:</b> None <b>Corequisite:</b> None						
HEAT 2220	<b>Oil Heating</b>	2	1/1/0				
	This course covers the use of oil as a means used to heat various media including air and water.						
	<b>Prerequisite:</b> CONE1102 AND PLBG1128 <b>Corequisite:</b> None						
<b>History</b>							
HIST 1110	<b>Western Civilization: Ancient-1400's</b>	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.						
	<b>Prerequisite:</b> None <b>Corequisite:</b> None						
HIST 1111	<b>Western Civilization: 1400's-1600's</b>	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.						
	<b>Prerequisite:</b> None <b>Corequisite:</b> None						
HIST 1112	<b>Western Civilization: 1600's-1800's</b>	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.						
	<b>Prerequisite:</b> None <b>Corequisite:</b> None						
HIST 1113	<b>Western Civilization: 20th Century</b>	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.						
	<b>Prerequisite:</b> None <b>Corequisite:</b> None						
HIST 1600	<b>History of Baseball</b>	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						

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	baseball has shaped American society and American society has shaped baseball. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
HIST 2211	<b>American History: the Colonial Period</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	HITM 1160	<b>Health Information Systems and Statistics</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0
HIST 2212	<b>American History 19th Century</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	HITM 2202	<b>Computer Applications in Healthcare</b> This course develops the health information technology student's knowledge of computer theory and application in the areas of system collection, storage and retrieval. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0
HIST 2213	<b>American History: 20th Century</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	HITM 2204	<b>Fundamentals of Electronic Health Records</b> This course focuses on systems, policies, regulations and standards for the implementation and use of electronic records within the health care delivery system. <b>Prerequisite:</b> CPTR1104 <b>Corequisite:</b> None	3	3/0/0
HIST 2220	<b>Minnesota and Northern Plains History</b> Meets MnTC Goal Areas 5 and 10. This survey course explores the cultural, social, political and economic development of Minnesota and the northern Great Plains. Topics will include the significance of geography and natural resources, relations between Native American and European populations, and key events in the economic and political development of the region. Emphasis will be placed on the interaction between human development and the natural environment. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	HITM 2211	<b>Basic Pharmacology for Coders</b> 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. <b>Prerequisite:</b> HLTH1116 <b>Corequisite:</b> None	2	2/0/0
<b>Health Information Technology</b>				HITM 2214	<b>Introduction to ICD Coding</b> This course covers an in-depth study of the International Classification of Diseases (ICD). This includes ICD-9 and an overview of ICD-10. <b>Prerequisite:</b> BIOL2230 AND HLTH1106 AND permission of instructor <b>Corequisite:</b> None	3	2/1/0
HITM 1150	<b>Introduction to Health Care Delivery</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	HITM 2216	<b>Introduction to CPT Coding</b> This course covers an in-depth study of the Physician's Current Procedural Terminology (CPT-4) coding system. <b>Prerequisite:</b> HLTH1106 AND permission of the instructor <b>Corequisite:</b> None	3	2/1/0
HITM 1152	<b>Health Information Systems</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0	HITM 2236	<b>Advanced ICD Coding</b> 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. <b>Prerequisite:</b> Permission of instructor <b>Corequisite:</b> None	2	1/1/0
HITM 1153	<b>Introduction to Electronic Health Records</b> 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. <b>Prerequisite:</b> Permission of instructor <b>Corequisite:</b> None	1	1/0/0	HITM 2238	<b>Advanced Coding CPT</b> This course is a continuation of the in-depth study of the Physician's Current Procedural Terminology (CPT) coding system. <b>Prerequisite:</b> HLTH1106 AND permission of instructor <b>Corequisite:</b> None	2	1/1/0
HITM 1155	<b>Medicolegal Aspects</b> 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. <b>Prerequisite:</b> HITM1150 <b>Corequisite:</b> None	3	3/0/0	HITM 2250	<b>Supervisory Leadership in Health</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0
HITM 1156	<b>Health Information Systems and Statistics</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0	HITM 2252	<b>Quality Management &amp; Statistics</b> 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. <b>Prerequisite:</b> HITM1152 <b>Corequisite:</b> None	3	2/1/0
HITM 1159	<b>Professional Practice Experience Functions</b> 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. <b>Prerequisite:</b> Permission of instructor <b>Corequisite:</b> None	2	0/0/2	HITM 2253	<b>Quality Management Studies</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0
				HITM 2262	<b>Reimbursement Systems</b> This course is an introduction to the current reimbursement systems that are used in inpatient and outpatient settings in the health care industry. <b>Prerequisite:</b> Permission of the instructor <b>Corequisite:</b> None	2	2/0/0
				HITM 2270	<b>Professional Practice Experience Management</b> 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. <b>Prerequisite:</b> Permission of the instructor <b>Corequisite:</b> None	1	0/0/1



Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
HITM 2272	<b>Professional Practice Experience Coding</b>	2	0/0/2	HLTH 1122	<b>CPR-First Aid</b>	1	0.5/0.5/0
<p>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.  <b>Prerequisite:</b> Permission of instructor  <b>Corequisite:</b> None</p>				<p>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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>			
HITM 2275	<b>Health Record Documentation</b>	1	1/0/0	HLTH 1130	<b>Transcultural Health Concepts</b>	1	1/0/0
<p>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.  <b>Prerequisite:</b> Permission of the instructor  <b>Corequisite:</b> None</p>				<p>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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>			
HITM 2282	<b>Introduction to the International Classification of Diseases, Tenth Edition</b>	3	2/1/0	HLTH 1201	<b>Introduction to Mental Health Behavioral Aide</b>	4	4/0/0
<p>This course covers an in-depth study of the International Classification of Diseases, 10th Edition.  <b>Prerequisite:</b> HLTH2208 AND HLTH1116 AND BIOL2230  <b>Corequisite:</b> None</p>				<p>This course will provide students with resources to enter practice as a Mental Health Behavioral Aide II with a focus on children with mental illnesses. Students will achieve entry-level competencies in providing skill-building in peer-to-peer or parent-child interactions, performing as a role-play partner, reinforcing children's accomplishments, generalizing skill-building activities in children's multiple natural settings, and developing redirection and de-escalation skills. The aide will perform these duties under the supervision of a mental health practitioner.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>			
HITM 2284	<b>Advanced International Classification</b>	2	1/1/0	HLTH 2100	<b>Wellness for Athletic Performance</b>	3	3/0/0
<p>This course is a continuation of the in-depth study of the International Classification of Diseases, 10th Edition.  <b>Prerequisite:</b> HITM2282  <b>Corequisite:</b> None</p>				<p>This course is designed to introduce the student to nutrition in relation to health and community wellness. Topics may include drug testing, hydration, fuel activation, eating disorders and the female athlete triad. There will be an emphasis on exploring the benefits and risks of sports supplements (legal and illicit).  <b>Prerequisite:</b> HLTH1110 OR BIOL2230  <b>Corequisite:</b> None</p>			
<b>Health</b>							
HLTH 1100	<b>Intro to Nutrition</b>	2	2/0/0	HLTH 2208	<b>Pathophysiology</b>	3	3/0/0
<p>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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>				<p>This course presents information related to pathophysiology of various body systems. The nature, cause, diagnosis and treatment of common disease conditions will be emphasized.  <b>Prerequisite:</b> HLTH1110 OR BIOL2230  <b>Corequisite:</b> None</p>			
HLTH 1110	<b>Introduction to Anatomy and Physiology</b>	3	3/0/0	HLTH 2212	<b>Social Seminar Drug Education</b>	3	3/0/0
<p>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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>				<p>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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>			
HLTH 1111	<b>Personal and Community Health</b>	3	3/0/0	HLTH 2213	<b>Emergency Responder</b>	3	2.5/0.5/0
<p>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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>				<p>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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>			
HLTH 1112	<b>Intro to Home Health</b>	1	1/0/0	HLTH 2215	<b>EMT Basic</b>	6	4/2/0
<p>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.  <b>Prerequisite:</b> HLTH1115  <b>Corequisite:</b> None</p>				<p>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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>			
HLTH 1115	<b>Introduction to Nursing in Long Term Care</b>	3	1/2/0	<b>Honors</b>			
<p>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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>				<hr/> <p><b>HONS 1101 Introduction to Honors</b> 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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>			
HLTH 1116	<b>Medical Terminology</b>	3	3/0/0	<hr/>			
<p>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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>							

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<b>Human Resources</b>				<b>HUM 1105 Religion in the Humanities</b> 3 3/0/0			
HRES 1122	<b>Human Resource Management</b>	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.			
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.				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
HRES 1126	<b>Employee Processes</b>	3	3/0/0	<b>HUM 1110 Native American Culture</b> 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.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
HRES 1130	<b>Benefits Administration</b>	3	3/0/0	<b>HUM 1134 Global Perspectives for Women</b> 3 3/0/0			
This course covers basic knowledge and information about the various types of benefits that are typically offered by employers for their employees.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
HRES 1134	<b>Training and Development</b>	3	3/0/0	<b>HUM 1201 Religion and the American Experience</b> 3 3/0/0			
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.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
HRES 2204	<b>Policy Administration</b>	3	3/0/0	<b>HUM 2210 Introduction to Film</b> 3 3/0/0			
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.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
HRES 2212	<b>Wage/Salary Administration</b>	3	3/0/0	<b>HUM 2230 World Cinema</b> 3 3/0/0			
This course covers basic knowledge and understanding of employee compensation and related federal laws.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
HRES 2224	<b>Employee/Labor Relations</b>	3	3/0/0	<b>HUM 2236 Technology in the Humanities</b> 3 3/0/0			
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.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
HRES 2245	<b>Human Resources Internship</b>	1-4	None	<b>HUM 2293 Field Experience: Europe</b> 3 3/0/0			
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.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
HRES 2252	<b>Human Resources Competency and Portfolio Evaluation 2</b>	1/1/0		<b>HUM 2301 Heroes, Moral and Cultural</b> 3 3/0/0			
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.				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			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
HRES 2254	<b>Human Resource Systems and Portfolio Evaluation</b>	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.							
<b>Prerequisite:</b> None							
<b>Corequisite:</b> None							
<b>Humanities</b>							
HUM 1101	<b>Introduction to the Humanities</b>	3	3/0/0				
Meets MnTC Goal Areas 2 and 6. This course serves as a general introduction to the role that humanities such as the arts, literature and philosophy play in shaping humanity's conception of itself and society. This course serves to expand the student's knowledge of the human condition and human cultures, especially the values expressed in works of human imagination and thought, giving special consideration to Europe, Asia and traditional Native African and American traditions.							
<b>Prerequisite:</b> None							
<b>Corequisite:</b> None							

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	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
<b>Heating, Ventilation and Air Conditioning/Refrigeration</b>							
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. <b>Prerequisite:</b> None <b>Corequisite:</b> 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 parallel and series combination circuits are solved using trigonometry. Capacitance is introduced and applied as a function in understanding AC motors. <b>Prerequisite:</b> None <b>Corequisite:</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> 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. <b>Prerequisite:</b> REFR1102 <b>Corequisite:</b> 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. <b>Prerequisite:</b> REFR1102 <b>Corequisite:</b> 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. <b>Prerequisite:</b> HVAC1104 AND REFR1110 AND REFR1112 <b>Corequisite:</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
HVAC 2260	Refrigerant Certification	1	1/0/0				
	This course covers the content necessary to achieve an EPA Certification rating. <b>Prerequisite:</b> None <b>Corequisite:</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
<b>Industrial Maintenance</b>							
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. <b>Prerequisite:</b> None <b>Corequisite:</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
<b>Sign Language Interpreter</b>							
IPP 1111	Introduction to Interpreting	3	3/0/0				
	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. <b>Prerequisite:</b> ASL1114 AND Grade of B or better in ASL1114 <b>Corequisite:</b> None						
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. <b>Prerequisite:</b> ASL1114 AND Grade of B or better in ASL1114 <b>Corequisite:</b> 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. <b>Prerequisite:</b> ASL1114 AND Grade of B or better in ASL1114 <b>Corequisite:</b> 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 B 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:** IPP1112 AND Grade of B or better in IPP1112

**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 B or better in IPP1111

**Corequisite:** None

**IPP 2215 Topics in Interpreting 2 2/0/0**

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.

**Prerequisite:** IPP1111 AND Grade of B or better in IPP1111

**Corequisite:** None

**IPP 2216 Practicum 1 0/0/1**

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.

**Prerequisite:** IPP1111 AND Grade of B or better in IPP1111

**Corequisite:** None

**IPP 2217 Interpreting Internship 6 0/0/6**

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.

**Prerequisite:** ASL2100 AND Grade of B or better in ASL2100

**Corequisite:** None

**IPP 2218 Internship Seminar 1 1/0/0**

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.

**Prerequisite:** IPP2216

**Corequisite:** None

## Information Technology

**ITSS 1100 Information Technology Help Desk 3 2/1/0**

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.

**Prerequisite:** None

**Corequisite:** None

**ITSS 1120 Information Technology Research and Documentation 3 1/2/0**

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.

**Prerequisite:** None

**Corequisite:** None

**ITSS 2100 Supporting End-User Applications 3 2/1/0**

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.

**Prerequisite:** ITSS1100

**Corequisite:** None

## Mathematics

**MATH 0055 Foundational Mathematics 2 2/0/0**

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.

**Prerequisite:** None

**Corequisite:** None

**MATH 0085 Elementary Algebra I 2 2/0/0**

This course provides both a foundation for further study of general and technical mathematics and preparation for applying mathematics in daily life and other college coursework. Topics include problem solving and critical thinking using properties of numbers and algebra. Through the study of mathematics, students will work on developing self-assessment and goal-setting skills, utilizing resources and gaining an understanding of the level of commitment necessary to succeed in an academic or real-world setting.

**Prerequisite:** Math 0055 Foundational Mathematics or appropriate placement test score.

**Corequisite:** None

**MATH 0095 Elementary Algebra II 2 2/0/0**

This course is the study of algebraic concepts including identifying linear and nonlinear functions, 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.

**Prerequisite:** Math 0085 or appropriate placement test score.

**Corequisite:** None

**MATH 1000 Technical Mathematics 3 3/0/0**

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.

**Prerequisite:** MATH0052 OR by placement exam

**Corequisite:** None

**MATH 1020 Intermediate Algebra 3 3/0/0**

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.

**Prerequisite:** Math 0095 with a grade of C or higher OR placement by assessment

**Corequisite:** None

**MATH 1100 World of Math 3 3/0/0**

Meets MnTC Goal Areas 2 and 4. This course will introduce you to mathematical approaches to question asking, understanding, problem solving and presentation. Practice in these areas may include problems involving sequences, methods of counting, probability, logic, statistics, general problem solving and other topics.

**Prerequisite:** MATH1020

**Corequisite:** None

**MATH 1114 College Algebra 4 4/0/0**

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.

**Prerequisite:** MATH1020 AND/OR by placement exam

**Corequisite:** None

**MATH 1115 Functions/Trigonometry 4 4/0/0**

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.

**Prerequisite:** MATH1114

**Corequisite:** None

**MATH 1116 College Trigonometry 3 3/0/0**

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.

**Prerequisite:** MATH1114

**Corequisite:** None

**MATH 1118 Precalculus 5 5/0/0**

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.

**Prerequisite:** MATH1020 AND Math 1020 with a C or better OR by placement score

**Corequisite:** None



Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
<b>MATH 1122</b>	<b>Applied Calculus and Linear Algebra</b>	<b>3</b>	<b>3/0/0</b>	<b>MCDD 1120</b>	<b>Drafting Practices</b>	<b>2</b>	<b>2/0/0</b>
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.				The objective of this course is to develop the student's knowledge of engineering change orders, engineering communications, attitudes, workforce diversity and finances.			
<b>Prerequisite:</b> MATH1114				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>MATH 1134</b>	<b>Calculus I</b>	<b>5</b>	<b>5/0/0</b>	<b>MCDD 1124</b>	<b>Mechanical Drafting Applications I</b>	<b>3</b>	<b>1/2/0</b>
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.				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.			
<b>Prerequisite:</b> MATH1115 AND/OR by placement exam OR MATH1116 OR MATH1118				<b>Prerequisite:</b> CADD1102 AND MCDD1102			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>MATH 1135</b>	<b>Calculus II</b>	<b>5</b>	<b>5/0/0</b>	<b>MCDD 1210</b>	<b>Drafting Practices</b>	<b>1</b>	<b>1/0/0</b>
Meets MnTC Goal Areas 2 and 4. This course includes integration of logarithmic, 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.				The objective of this course is to develop the student's knowledge of engineering communications, attitudes and finances.			
<b>Prerequisite:</b> MATH1134				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>MATH 1207</b>	<b>Elementary Statistics</b>	<b>3</b>	<b>3/0/0</b>	<b>MCDD 2112</b>	<b>Geometric Dimensioning and Tolerancing</b>	<b>2</b>	<b>2/0/0</b>
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.				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.			
<b>Prerequisite:</b> MATH1114 OR MATH1118 OR by placement exam				<b>Prerequisite:</b> CADD1114 AND MCDD1106			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>MATH 1213</b>	<b>Introduction to Statistics</b>	<b>4</b>	<b>4/0/0</b>	<b>MCDD 2200</b>	<b>Advanced Modeling with Solidworks</b>	<b>3</b>	<b>2/1/0</b>
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, chisquare-test, f-test and ANOVA. Optional topics may include nonparametric statistics, sampling and simulation.				This course covers advanced part modeling, assembly modeling, sheet metal and presentation files in the latest version of the Solidworks drawing software package.			
<b>Prerequisite:</b> MATH1114 AND/OR by placement exam OR MATH1118				<b>Prerequisite:</b> CADD1114 AND MCDD1106			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>MATH 2231</b>	<b>Calculus III</b>	<b>4</b>	<b>4/0/0</b>	<b>MCDD 2204</b>	<b>Mech Engineering Drawing III</b>	<b>4</b>	<b>1/3/0</b>
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.				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.			
<b>Prerequisite:</b> MATH1135				<b>Prerequisite:</b> MCDD1106			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>MATH 2259</b>	<b>Differential Equations</b>	<b>4</b>	<b>4/0/0</b>	<b>MCDD 2206</b>	<b>Mechanical Engineering Drawing IV</b>	<b>2</b>	<b>1/1/0</b>
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.				This course introduces the student to multiple specialized computer programs to create working drawings for manufacturing and construction.			
<b>Prerequisite:</b> MATH2231				<b>Prerequisite:</b> CADD1102			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>Mechanical Drafting and Design</b>							
<b>MCDD 1102</b>	<b>Mech Engineering Drawing I</b>	<b>3</b>	<b>1/2/0</b>	<b>MCDD 2210</b>	<b>Advanced Modeling with Inventor</b>	<b>3</b>	<b>2/1/0</b>
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.				This course covers advanced part modeling, assembly modeling, sheet metal and presentation files in the latest version of the Inventor drawing software package.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> CADD1114 AND MCDD1106			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>MCDD 1104</b>	<b>Mechanical Engineering Drawing I</b>	<b>4</b>	<b>1/3/0</b>	<b>MCDD 2230</b>	<b>Rapid Prototyping</b>	<b>2</b>	<b>1/1/0</b>
The objective of this course is to develop the student's knowledge and use of machine drafting, lettering, line identity and application, orthographic projection, dimensioning practices, and section and auxiliary drawings.				This course covers the basic concepts of rapid prototyping for manufacturing utilizing a three-dimensional printer.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> CADD1114			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>MCDD 1106</b>	<b>Mech Engineering Drawing II</b>	<b>4</b>	<b>0/4/0</b>	<b>MCDD 2246</b>	<b>Tool Design</b>	<b>3</b>	<b>1/2/0</b>
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.				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.			
<b>Prerequisite:</b> MCDD1102				<b>Prerequisite:</b> CADD1114 AND MCDD1106			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>MCDD 1114</b>	<b>Manufacturing Process</b>	<b>2</b>	<b>2/0/0</b>	<b>MCDD 2248</b>	<b>CNC Application</b>	<b>3</b>	<b>1/2/0</b>
The objective of this course is to develop the student's understanding of material processing, casting, molding, forming, separating operations, assembling, finishing and automation.				The objective of this course is to develop the student's knowledge of computer numerical control components and basic programming codes.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> CADD1114 AND MCDD1106			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>MCDD 1120</b>	<b>Drafting Practices</b>	<b>2</b>	<b>2/0/0</b>	<b>MCDD 2252</b>	<b>Mechanical Drafting Applications II</b>	<b>4</b>	<b>1/3/0</b>
The objective of this course is to develop the student's knowledge of engineering change orders, engineering communications, attitudes, workforce diversity and finances.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> CADD2214 AND MCDD2122			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>MCDD 1124</b>	<b>Mechanical Drafting Applications I</b>	<b>3</b>	<b>1/2/0</b>	<b>MCDD 2260</b>	<b>Mechanical Drafting Internship</b>	<b>3</b>	<b>0/0/3</b>
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.				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.			
<b>Prerequisite:</b> CADD1102 AND MCDD1102				<b>Prerequisite:</b> CADD1114 AND MCDD1106			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			

## Mass Communications

**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 1142 Popular Culture and Social Media** 3 3/0/0  
Meets MnTC Goal Area 7. 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:** None  
**Corequisite:** ENGL1101

## 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 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

## Marketing

**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 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 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 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 Mgmt** 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 2232 Marketing Management** 3 2/1/0  
This is a capstone course designed to be taken near the completion of the required marketing 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 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 Mgmt** 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 2290 Management, Marketing and Sales Internship** 3 0/0/3  
This course is designed to provide students with a valuable work experience within a business environment. This career enrichment course is designed to integrate the

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
	coursework taken and contribute to the student's personal and/or professional career goals. Each internship is a faculty-approved, individualized experience designed with a training plan to meet the professional goals of the student. Emphasis is on providing a relevant work experience that is meaningful for the student and a benefit for the participating organization. <b>Prerequisite:</b> Program faculty consent. <b>Corequisite:</b> None						
<b>MKTG 2292</b>	<b>Supervised Occup Exp II</b>	<b>3</b>	<b>0/0/3</b>				
	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
<b>MKTG 2400</b>	<b>Marketing Management</b>	<b>4</b>	<b>3/1/0</b>				
	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. <b>Prerequisite:</b> BUS2206 <b>Corequisite:</b> None						
<b>MKTG 2404</b>	<b>Management Strategy</b>	<b>3</b>	<b>3/0/0</b>				
	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. <b>Prerequisite:</b> 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 <b>Corequisite:</b> None						
<b>Medical Laboratory Technician</b>							
<b>MLT 1110</b>	<b>Prin/Proc Phlebotomy</b>	<b>2</b>	<b>1/1/0</b>				
	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
<b>MLT 1112</b>	<b>Clinical Phlebotomy</b>	<b>3</b>	<b>0/3/0</b>				
	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. <b>Prerequisite:</b> None <b>Corequisite:</b> MLT1110						
<b>MLT 1113</b>	<b>Basic Laboratory Techniques I</b>	<b>1</b>	<b>0/1/0</b>				
	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. <b>Prerequisite:</b> Assessment into or successful completion of ENGL 1101 or college level reading and writing equivalent. <b>Corequisite:</b> None						
<b>MLT 1114</b>	<b>Basic Laboratory Techniques II</b>	<b>1</b>	<b>0/1/0</b>				
	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, calculations, preparation of reagents, quality assurance and quality control, specimen collection, transportation, analysis and result reporting. <b>Prerequisite:</b> MLT1113 <b>Corequisite:</b> None						
<b>MLT 2217</b>	<b>Clinical Hematology</b>	<b>3</b>	<b>0/3/0</b>				
	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. <b>Prerequisite:</b> ZOO1122 AND ZOO1123 AND ZOO1126 AND CHEM1104 AND BIOL2257 <b>Corequisite:</b> None						
<b>MLT 2218</b>	<b>Clinical Urinalysis &amp; Phlebotomy</b>	<b>1</b>	<b>0/1/0</b>				
	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. <b>Prerequisite:</b> CHEM1104 AND ZOO1122 AND ZOO1123 AND ZOO1126 AND BIOL2257 <b>Corequisite:</b> None						
<b>MLT 2219</b>	<b>Clinical Chemistry &amp; Special Chemistry</b>	<b>3</b>	<b>0/3/0</b>				
	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. <b>Prerequisite:</b> CHEM1104 AND ZOO1122 AND ZOO1123 AND ZOO1126 AND BIOL2257 <b>Corequisite:</b> None						
<b>MLT 2220</b>	<b>Clinical Blood Bank</b>	<b>2</b>	<b>0/2/0</b>				
	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. <b>Prerequisite:</b> BIOL1125 AND ZOO1123 AND ZOO1122 AND ZOO1126 AND BIOL2257 <b>Corequisite:</b> None						
<b>MLT 2221</b>	<b>Clinical Microbiology</b>	<b>3</b>	<b>0/3/0</b>				
	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. <b>Prerequisite:</b> CHEM1104 AND ZOO1122 AND ZOO1123 AND ZOO1126 AND BIOL2268 AND BIOL2267 <b>Corequisite:</b> None						
<b>MLT 2222</b>	<b>Clinical Chemistry and Special Chemistry</b>	<b>2</b>	<b>0/2/0</b>				
	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. <b>Prerequisite:</b> ZOO1122 AND ZOO1123 AND ZOO1126 AND BIOL1125 AND BIOL2265 <b>Corequisite:</b> None						
<b>MLT 2230</b>	<b>Clinical Applications</b>	<b>1</b>	<b>1/0/0</b>				
	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. <b>Prerequisite:</b> CHEM1104 AND BIOL2257 AND ZOO1122 AND ZOO1123 AND ZOO1126 AND ENGL1101 <b>Corequisite:</b> None						
<b>Marine Engine Technology</b>							
<b>MRNT 1104</b>	<b>Drive System Theory</b>	<b>3</b>	<b>3/0/0</b>				
	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 stern 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
<b>MRNT 1105</b>	<b>Introduction to Marine</b>	<b>2</b>	<b>1/1/0</b>				
	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
<b>MRNT 1106</b>	<b>Drive System Service</b>	<b>3</b>	<b>0/3/0</b>				
	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
<b>MRNT 1107</b>	<b>Drive System I</b>	<b>3</b>	<b>2/1/0</b>				
	This course covers the operational theory and service of the (clutch-style) Mercury and MerCruiser drives units. Gear ratios, drive shaft housing and gear cases will be investigated. Complete drive disassembly, measurement, analysis, shimming and rebuilding will be performed. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
<b>MRNT 2001</b>	<b>Marine Internship</b>	<b>1</b>	<b>0/0/1</b>				
	This course is designed to provide the student with a purposeful occupational						

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	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 may be practiced at the internship site. Additional skills from completed courses also may be included in the training plan. <b>Prerequisite:</b> TRNS1015 AND TRNS1193 <b>Corequisite:</b> None						
MRNT 2002	Marine Internship	2	0/0/2				
	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 may be included in the training plan. <b>Prerequisite:</b> TRNS1015 AND TRNS1193 <b>Corequisite:</b> None						
MRNT 2107	Drive Systems 2	3	2/1/0				
	This course covers the operational theory and service of the Johnson, Evinrude and Yamaha outboard drive units. Complete drive disassembly, measurement, analysis, shimming and rebuilding will be performed. <b>Prerequisite:</b> None <b>Corequisite:</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
MRNT 2205	Marine Advanced Fuel Systems	3	1/2/0				
	This course covers the many types of fuel systems used on current two-stroke and four-stroke higher-end marine products. Most training will be on outboards above 115 horsepower and sterndrives above 135 horsepower. The main focus of this course is on larger carbureted and fuel-injected systems along with fuel distribution and associated parts of those systems. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
MRNT 2206	EFI Systems	3	1/2/0				
	This course teaches the theory of operation and service of the electronic fuel injection (EFI) and direct fuel injection (DFI) systems used on sterndrive and outboard applications. Engine predelivery inspection and service will be outlined along with seasonal service, engine preparation and inspection. Students will focus on diagnostic procedures with and without the use of laptops and scan tools. <b>Prerequisite:</b> MRNT2001 <b>Corequisite:</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
MRNT 2211	Engine Service	2	0/2/0				
	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 products based upon simulated customer requests and complaints. <b>Prerequisite:</b> MRNT2218 <b>Corequisite:</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
MRNT 2222	Transom and Mid-Section Service	4	2/2/0				
	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
MRNT 2223	Advanced Drives	3	2/1/0				
	This course teaches the service procedures for advanced technology drive systems used in stern-mounted vertical drives. 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
MRNT 2224	Marine Independent Study Lab	1	0/1/0				
	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
MRNT 2227	Transom Plate and Mid-Sections 1	2	1/1/0				
	This course teaches the various methods used to couple the MerCruiser engine to the vertical drive on sterndrive applications. On Mercury outboards this course covers the mid-sections. Removal and replacement, failure analysis, measurements, disassembly and assembly procedures are performed. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
MRNT 2228	Transom Plate and Mid-Sections 2	2	1/1/0				
	This course teaches the removal and replacement, failure analysis, measurements, disassembly and assembly procedures on the transom plates of the OMC and Volvo sterndrive applications. This course covers the removal and replacement, failure analysis, disassembly and assembly procedures of the mid-sections of Johnson, Evinrude and Yamaha outboards. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
MRNT 2230	Engine Performance Rebuild and Diagnostics	4	2/2/0				
	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 engine for this course providing it fits the curriculum. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
MRNT 2345	Marine Project Repair	3	1/2/0				
	Students will learn to repair or improve personal or customer marine equipment by practicing what they will be doing as technicians in the repair field. No projects are off limits, but instructor approval of the projects is required. <b>Prerequisite:</b> MRNT2207 <b>Corequisite:</b> None						
<b>Music</b>							
MUSC 1111	Fundamentals of Music	3	3/0/0				
	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
MUSC 1112	Beginning Class Guitar	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						



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MUSC 1113	<b>Beg Class Voice</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0	MUSC 1135	<b>Voice Ensemble</b> 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. <b>Prerequisite:</b> MUSC1141 <b>Corequisite:</b> None	1	1/0/0
MUSC 1114	<b>Beginning Class Piano</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	2/0/0	MUSC 1141	<b>Concert Choir</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0
MUSC 1115	<b>America's Musical Heritage</b> 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, R&B, hip hop, rap, salsa, reggae and urban folk styles. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	MUSC 1145	<b>Chamber Chorale</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0
MUSC 1116	<b>World Music</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	MUSC 1150	<b>History of Jazz</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0
MUSC 1117	<b>Beginning Class Guitar</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	2/0/0	MUSC 1151	<b>Ind Voice Lessons</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0
MUSC 1118	<b>Rock and Pop Music</b> 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 the 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, R&B, country western, soul, Motown, folk, folk rock, heavy metal, rap and hip hop and beyond. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	MUSC 1160	<b>Makings of a Rock Band</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0
MUSC 1120	<b>Introduction to Music Technology</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	MUSC 1162	<b>Jazz Ensemble</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0
MUSC 1121	<b>Basic Theory and Musicianship I</b> 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 and must be taken concurrently with MUSC 1123. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	MUSC 1164	<b>Concert Band</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0
MUSC 1122	<b>Basic Theory and Musicianship II</b> 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. It must be taken concurrently with MUSC 1124. <b>Prerequisite:</b> MUSC1121 <b>Corequisite:</b> None	3	3/0/0	MUSC 1181	<b>Private Instrumental Lessons</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0
MUSC 1123	<b>Sight Singing &amp; Ear Training I</b> 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 1121. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0	MUSC 1185	<b>Private Music Composition Lessons</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0
MUSC 1124	<b>Sight Singing &amp; Ear Training II</b> 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 with MUSC 1122. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0	MUSC 1191	<b>Ind Piano Lessons</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0
				MUSC 2223	<b>Sight Singing &amp; Ear Training III</b> Meets MnTC Goal Area 6F. This course is designed to improve skills in two areas: 1) to	1	1/0/0

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	recognize and notate tonal melodies and rhythmic patterns, and 2) to reproduce at sight what is notated. Must be taken concurrently with MUSC 2231. <b>Prerequisite:</b> MUSC1124 <b>Corequisite:</b> None						
MUSC 2224	Sight Singing & Ear Training IV	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. It must be taken concurrently with MUSC 2232. <b>Prerequisite:</b> MUSC2223 <b>Corequisite:</b> 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. <b>Prerequisite:</b> MUSC1122 AND MUSC1124 <b>Corequisite:</b> None						
MUSC 2232	Advanced Theory and Musicianship IV	3	3/0/0				
	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. <b>Prerequisite:</b> MUSC2231 <b>Corequisite:</b> None						
MUSC 2251	Individual Voice Lessons	2	2/0/0				
	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
MUSC 2281	Private Instrumental Lessons	2	2/0/0				
	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
MUSC 2285	Advanced Music Composition	2	2/0/0				
	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. <b>Prerequisite:</b> MUSC1185 <b>Corequisite:</b> None						
MUSC 2291	Individual Piano Lessons	2	2/0/0				
	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
<b>Nursing</b>							
NURS 1400	Introduction to Professional Nursing	2	2/0/0				
	This course introduces the student to the concepts of professional nursing. It includes the evolution of nursing practice, the scope of practice for health care teams, creating plans of care for diverse patient populations that integrate quality and safety, professional behavior, therapeutic communication, documentation and medical terminology. <b>Prerequisite:</b> Must be eligible to take English 1101 and Math 1114 <b>Corequisite:</b> None						
NURS 1406	Nursing Fundamentals I	3	2/1/0				
	This course prepares students to provide safe, therapeutic nursing care to diverse patient populations across the age span. Content includes asepsis and infection control, holistic assessment, basic pharmacologic 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. <b>Prerequisite:</b> Must be eligible to take English 1101 and Math 1114 <b>Corequisite:</b> None						
NURS 1415	Nursing Clinical I	2	0/2/0				
	This course promotes the application of fundamental skills while providing holistic nursing care to a diverse group of patients. The course incorporates the concepts of quality and safe patient care, professional behavior, therapeutic communication and self-evaluation. <b>Prerequisite:</b> BIOL2267 AND BIOL2268 AND ENGL1101 AND NURS1400 AND NURS1406 AND BIOL2260 AND BIOL2261 AND PSYC2222 <b>Corequisite:</b> None						
NURS 1416	Nursing Fundamentals II	4	2/2/0				
	This course prepares students to provide safe, therapeutic nursing care to diverse patient populations across the age span. The course also integrates the content and skills 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. <b>Prerequisite:</b> BIOL2260 AND BIOL2261 AND NURS1400 AND NURS1406 AND BIOL2267 AND BIOL2268 AND ENGL1101 AND PSYC2222 <b>Corequisite:</b> None						
NURS 1426	Reproductive Health	2	2/0/0				
	This course introduces antepartal, intrapartal, postpartal and neonatal nursing care for the uncomplicated mother and infant. Holistic care and wellness promotion are emphasized, including needs of the family. Nursing care is examined for diverse patients of both genders across the lifespan to maintain and promote reproductive wellness; this includes normal sexuality, management of fertility and reproductive health promotion. Nursing care is examined to maintain and promote wellness for pediatric patients, considering variations based on normal growth and development. <b>Prerequisite:</b> PSYC2222 AND NURS1400 AND NURS1406 AND BIOL2260 AND BIOL2261 AND BIOL2267 AND BIOL2268 <b>Corequisite:</b> None						
NURS 2120	Professional Nursing Pharmacology	2	2/0/0				
	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. <b>Prerequisite:</b> BIOL2263 AND NURS1406 AND BIOL2262 OR LPN AND NURS2410 <b>Corequisite:</b> None						
NURS 2410	Role Transition	2	2/0/0				
	This course prepares the practical nurse to transition into the professional nursing role. Concepts of legal and ethical considerations in practice, holistic assessment, the nursing process and development of individualized plans of care will be explored while integrating informatics, evidence-based practice, patient-centered care, safety and quality improvement. <b>Prerequisite:</b> MATH0090 AND Graduate of an approved Practical Nursing program <b>Corequisite:</b> None						
NURS 2426	Reproductive Disorders	2	2/0/0				
	This course analyzes nursing care of antepartal, intrapartal, postpartal and neonatal conditions for the mother and infant with the focus on complications, illnesses or abnormalities. This course is designed to plan nursing care for patients as they adapt to abnormal reproductive conditions including infectious diseases, infertility, problems with sexual functioning and other dysfunctions of both the male and female reproductive tracts. <b>Prerequisite:</b> NURS1415 AND NURS1416 AND NURS1426 AND BIOL2262 AND BIOL2263 AND CHEM1100 OR LPN AND <b>Corequisite:</b> None						
NURS 2437	Nursing Clinical II	4	0/4/0				
	This clinical course provides the professional nursing student with opportunities to utilize the nursing process in providing individualized patient-centered care to diverse patient populations. An emphasis on evidence-based nursing care and clinical judgment skills, personal identity and behavior, teamwork and collaboration, holism, patient-centered care, safety and quality improvement will be incorporated. <b>Prerequisite:</b> NURS1415 AND NURS1416 AND NURS1426 AND CHEM1100 AND BIOL2262 AND BIOL2263 OR LPN AND <b>Corequisite:</b> None						
NURS 2438	Restorative Nursing I	4	4/0/0				
	Restorative Nursing I is designed to prepare students to plan nursing care for diverse patients experiencing disorders of the neurological/sensory, musculoskeletal, endocrine, immunological, hematological and gastrointestinal systems. Emphasis is placed on patient-centered care, nursing judgment/evidence-based care, safety and pharmacology. <b>Prerequisite:</b> NURS1415 AND NURS1416 AND NURS1426 AND BIOL2262 AND BIOL2263 AND CHEM1100 OR LPN AND NURS2410 <b>Corequisite:</b> None						
NURS 2447	Nursing Clinical III	4	0/4/0				
	This clinical course provides the professional nursing student with opportunities to manage care for diverse patient populations including care planning, delegation, supervision, prioritization and continuity of care. Concepts of evidence-based nursing care and clinical judgment skills, personal identity and behavior, teamwork and collaboration, holism, patient-centered care, safety and quality improvement will be interwoven into patient care. <b>Prerequisite:</b> NURS2437 AND NURS2426 AND NURS2438 AND NURS2455 AND BIOL2202 <b>Corequisite:</b> None						

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
<b>NURS 2448</b>	<b>Restorative Nursing II</b>	<b>3</b>	<b>3/0/0</b>	<b>PARA 2204</b>	<b>Real Property</b>	<b>3</b>	<b>3/0/0</b>
<p>This course is designed to prepare students to plan nursing care for diverse patients experiencing disorders of the cardiovascular, respiratory, renal, fluids/electrolytes/acid/base and integumentary systems. Emphasis is placed on patient-centered care, nursing judgment/evidence-based care, safety and pharmacology.</p> <p><b>Prerequisite:</b> NURS2438 AND NURS2437 AND NURS2426 AND NURS2455 AND BIOL2202</p> <p><b>Corequisite:</b> None</p>				<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><b>Prerequisite:</b> None</p> <p><b>Corequisite:</b> None</p>			
<b>NURS 2455</b>	<b>Advanced Intravenous Therapy</b>	<b>1</b>	<b>0/1/0</b>	<b>PARA 2210</b>	<b>Advanced Paralegal Practices</b>	<b>3</b>	<b>3/0/0</b>
<p>This lab course focuses on the skills and management of intravenous therapy by the professional nurse. Emphasis is placed on safety, nursing judgment, evidence-based practice, quality improvement and patient-centered care.</p> <p><b>Prerequisite:</b> NURS1415 AND NURS1416 AND NURS1426 AND BIOL2262 AND BIOL2263 AND CHEM1100 OR LPN AND NURS2410</p> <p><b>Corequisite:</b> None</p>				<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><b>Prerequisite:</b> None</p> <p><b>Corequisite:</b> None</p>			
<b>NURS 2464</b>	<b>Nursing Leadership</b>	<b>1</b>	<b>1/0/0</b>	<b>PARA 2212</b>	<b>Family Law</b>	<b>3</b>	<b>3/0/0</b>
<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><b>Prerequisite:</b> NURS2437</p> <p><b>Corequisite:</b> None</p>				<p>This course will explore and research family law concepts of marriage, divorce, annulment, child custody, property settlements and adoption.</p> <p><b>Prerequisite:</b> None</p> <p><b>Corequisite:</b> None</p>			
<b>NURS 2466</b>	<b>Mental Health Nursing</b>	<b>2</b>	<b>2/0/0</b>	<b>PARA 2216</b>	<b>Paralegal Internship</b>	<b>3</b>	<b>0/0/3</b>
<p>This course focuses on the concepts and theories of mental health, mental illness and psycho-pharmacology. Emphasis is placed on relationship-centered care, teamwork, quality and safety for diverse patient populations with psychiatric disorders.</p> <p><b>Prerequisite:</b> NURS2437</p> <p><b>Corequisite:</b> None</p>				<p>The paralegal internship provides students with the opportunity to apply the concepts and principles they have learned in a practical professional work environment under the supervision of a lawyer. Students complete an internship in which they perform the duties of a paralegal.</p> <p><b>Prerequisite:</b> PARA1102 AND ENGL1101</p> <p><b>Corequisite:</b> PARA2202</p>			
<h3>Paralegal</h3>							
<b>PARA 1101</b>	<b>Introduction to Paralegal</b>	<b>3</b>	<b>3/0/0</b>	<b>PDEV 1100</b>	<b>College Success Seminar</b>	<b>2</b>	<b>2/0/0</b>
<p>This course provides an overview of the paralegal profession, the legal office and the legal system.</p> <p><b>Prerequisite:</b> None</p> <p><b>Corequisite:</b> None</p>				<p>This course is designed to help first-year M State students successfully transition into college life. Topics include, but are not limited to, accessing college resources, understanding college guidelines, expectations and demands of being a college student, and community awareness. The class also will cover money management, proper nutrition and stress management. Students will participate in on-campus activities and community tours, and be exposed to expert guest speakers from the college and community. Students will set goals, examine learning styles and put in place a strategy for collegiate success.</p> <p><b>Prerequisite:</b> None</p> <p><b>Corequisite:</b> None</p>			
<b>PARA 1102</b>	<b>Research &amp; Writing I</b>	<b>3</b>	<b>3/0/0</b>	<b>PDEV 1101</b>	<b>Campus Life- Active Living</b>	<b>3</b>	<b>3/0/0</b>
<p>This course is a general introduction to recorded sources of law. It will examine where and how law can be found. The course will include discussion of the sources of law and practical writing exercises.</p> <p><b>Prerequisite:</b> Assess into college-level English</p> <p><b>Corequisite:</b> ENGL1101 AND PARA1101</p>				<p>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.</p> <p><b>Prerequisite:</b> None</p> <p><b>Corequisite:</b> None</p>			
<b>PARA 1104</b>	<b>Civil Law for Paralegals</b>	<b>3</b>	<b>3/0/0</b>	<b>PDEV 1102</b>	<b>Contemporary Career Search</b>	<b>1</b>	<b>0/1/0</b>
<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><b>Prerequisite:</b> None</p> <p><b>Corequisite:</b> None</p>				<p>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.</p> <p><b>Prerequisite:</b> None</p> <p><b>Corequisite:</b> None</p>			
<b>PARA 1105</b>	<b>Criminal Law for Paralegals</b>	<b>3</b>	<b>3/0/0</b>				
<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><b>Prerequisite:</b> None</p> <p><b>Corequisite:</b> None</p>							
<b>PARA 1106</b>	<b>Wills, Trusts &amp; Probate</b>	<b>3</b>	<b>3/0/0</b>				
<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><b>Prerequisite:</b> None</p> <p><b>Corequisite:</b> None</p>							
<b>PARA 1110</b>	<b>Torts for Paralegal</b>	<b>3</b>	<b>3/0/0</b>				
<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><b>Prerequisite:</b> None</p> <p><b>Corequisite:</b> None</p>							
<b>PARA 1112</b>	<b>Legal Ethics for the Paralegal</b>	<b>3</b>	<b>3/0/0</b>				
<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><b>Prerequisite:</b> None</p> <p><b>Corequisite:</b> None</p>							
<b>PARA 2202</b>	<b>Research &amp; Writing II</b>	<b>3</b>	<b>3/0/0</b>				
<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><b>Prerequisite:</b> PARA1102</p> <p><b>Corequisite:</b> None</p>							

### Personal Development

### Physical Education

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
PE 1130	<b>Beginning Golf</b>	1	0/1/0		eligible to take the Red Cross water safety Instructor exam. <b>Prerequisite:</b> None <b>Corequisite:</b> None		
PE 1141	<b>Introduction to Strength Training</b>	1	0/1/0	PE 2240	<b>Athletic Injury, Care &amp; Prevention</b>	2	2/0/0
PE 1190	<b>Varsity Football</b>	1	0/1/0	PE 2241	<b>Principles of Coaching</b>	3	3/0/0
PE 1192	<b>Varsity Basketball</b>	1	0/1/0	PE 2254	<b>Sports in Society</b>	3	3/0/0
PE 1193	<b>Varsity Baseball</b>	1	0/1/0		<b>Philosophy</b>		
PE 1194	<b>Varsity Golf</b>	1	0/1/0	PHIL 1200	<b>Applied and Professional Ethics</b>	3	3/0/0
PE 1197	<b>Varsity Volleyball</b>	1	0/1/0	PHIL 1201	<b>Ethics</b>	3	3/0/0
PE 1199	<b>Varsity Softball</b>	1	0/1/0	PHIL 1211	<b>Introduction to Philosophy</b>	3	3/0/0
PE 2100	<b>Introduction to Sports Management</b>	3	3/0/0	PHIL 2224	<b>Philosophy of Religion</b>	3	3/0/0
PE 2112	<b>Applied Coaching: Football</b>	1	1/0/0	PHIL 2225	<b>Bioethics</b>	3	3/0/0
PE 2201	<b>Lifeguard Water Safety</b>	2	1/1/0	PHIL 2240	<b>Non-Western Philosophical Perspectives</b>	3	3/0/0
PE 2211	<b>Water Safety Instructor</b>	2	1/1/0				



Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
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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

## Pharmacy Technology

**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:** MATH0055  
**Corequisite:** None

**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

**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

**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

**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

**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

## Physics

**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

**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 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 1108 Physics of Flight** 3 3/0/0  
 Meets MNTC Goal Area 3. This course is an introduction to physics as it applies to various forms of flight. The course will be a mixture of lecture, discussion and hands-on experiences. Lab-like experiences will be designed for all students regardless of background. Topics will include a history of human flight, Newton's laws and kinematics, resistive forces, introductory fluid dynamics, electronic systems, basic flight systems, rocketry and projectile motion. Students will create and present a model aircraft 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 is 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 OR MATH1116 OR MATH1118  
**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 OR MATH1116 OR MATH1118  
**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 0/0/1-3  
 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

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
<p>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.  <b>Prerequisite:</b> Instructor approval  <b>Corequisite:</b> None</p>				<p><b>PLBG 1128 Heating Systems Design and Installation</b> 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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>			
<p><b>PLBG 1102 Piping Trades and Job Safety</b> 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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>				<p><b>PLBG 1130 Hydronic Heating</b> 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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>			
<p><b>PLBG 1104 Building Sewers and Drainage Systems</b> 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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>				<p><b>PLBG 1134 Advanced Plumbing Blueprints</b> 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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>			
<p><b>PLBG 1106 Piping Grades, Elevations and Calculations</b> 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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>				<p><b>PLBG 1136 Basic Plumbing Code</b> 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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>			
<p><b>PLBG 1108 Plumbing/Piping Drawings</b> 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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>				<p><b>PLBG 1138 Advanced Plumbing Code</b> 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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>			
<p><b>Practical Nursing</b></p>							
<p><b>PLBG 1110 Copper Pipe Procedures</b> 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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>				<p><b>PNSG 1500 Nursing Care of Adults I</b> 3 2/1/0  This course introduces students to the care of the adult patient with a focus on health promotion and safety. Emphasis is on common health problems of the adult as well as chronic illness and end-of-life care. Application of pathophysiology, nutrition and pharmacology are applied to common diseases within each topic area. Additional emphasis includes basic alterations in fluid and electrolytes, oxygenation, cardiac output and tissue perfusion, regulation and metabolism, cognition and sensation, immunity, integument, mobility, reproduction, ingestion/digestion/absorption/elimination, excretion, physical and psychosocial variations, chronic illness, end-of-life care, environmental safety and emergency preparedness.  <b>Prerequisite:</b> Acceptance into the Practical Nursing program  <b>Corequisite:</b> None</p>			
<p><b>PLBG 1112 Plastic Pipe Procedures</b> 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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>				<p><b>PNSG 1510 Practical Nursing Foundations</b> 5 3/2/0  This course introduces key concepts of teamwork and collaboration, safety, quality improvement, professional identity/behavior, patient/relationship-centered care, nursing judgment/evidence-based practice, managing care of the individual patient and informatics/technology. This course includes an introduction to the theoretical foundation for basic nursing skills and focused assessments. Skills and assessments are demonstrated in the laboratory setting. An introduction to the nursing process provides the student with a beginning framework for decision making.  <b>Prerequisite:</b> Acceptance into the Practical Nursing program  <b>Corequisite:</b> None</p>			
<p><b>PLBG 1114 Steel Pipe Procedures</b> 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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>				<p><b>PNSG 1512 Practical Nursing Pharmacology</b> 2 2/0/0  This course incorporates the concepts of pharmacokinetics, pharmacodynamics, common adverse/side effects and contraindications to medication administration. Emphasis is placed on drug classifications and the role of the practical nurse in providing nursing care related to the safe administration of medications to individual patients across the age span.  <b>Prerequisite:</b> Acceptance into the Practical Nursing Program  <b>Corequisite:</b> None</p>			
<p><b>PLBG 1116 Plumbing Systems</b> 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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>				<p><b>PNSG 1514 Clinical I Practical Nurse Foundations</b> 4 0/4/0  This clinical course provides the student an opportunity to apply nursing judgment using the nursing process to implement safe, patient/relationship-centered care in selected settings. The student demonstrates focused assessments, data collection and implementation of skills learned in lab settings. The student documents findings and reinforces teaching plans for individual patients with common problems. The student develops communication and customer service skills while working with individual patients and team members.  <b>Prerequisite:</b> Acceptance into the Practical Nursing Program  <b>Corequisite:</b> None</p>			
<p><b>PLBG 1120 Plumbing Installation</b> 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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>				<p><b>PNSG 1520 Nursing Care of Women/Newborns/Children</b> 2 2/0/0  This course provides an integrative approach to the care of the childbearing woman, newborns and children. Emphasis is placed on normal pregnancies, normal growth and development, and common pediatric disorders.  <b>Prerequisite:</b> PSYC2222 AND PNSG1500 AND PNSG1510 AND PNSG1512 AND PNSG1514 AND BIOL2260  <b>Corequisite:</b> BIOL2262 AND ENGL1101</p>			
<p><b>PLBG 1122 Plumbing Repair and Service Work</b> 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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>							
<p><b>PLBG 1124 Plumbing Field Internship</b> 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.  <b>Prerequisite:</b> None  <b>Corequisite:</b> None</p>							

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
<b>PNSG 1524</b>	<b>Psychosocial Nursing</b>	<b>2</b>	<b>2/0/0</b>				
Psychosocial nursing care focuses on the care of individual patients with psychiatric and behavioral disorders. Emphasis is placed on common psychiatric and behavioral disorders as well as promoting and maintaining the mental health of individual patients.				This course is not an MnTC Goal Area 5 course and may not be used as a replacement for a Goal Area 5 course. This course is designed for students enrolled in the Mental Health Behavioral Aide II certificate program.			
<b>Prerequisite:</b> PSYC2222 AND PNSG1500 AND PNSG1510 AND PNSG1512 AND PNSG1514				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>PNSG 1526</b>	<b>Clinical II Practical Nursing</b>	<b>5</b>	<b>1/4/0</b>	<b>PSYC 1500</b>	<b>Positive Psychology</b>	<b>3</b>	<b>3/0/0</b>
This course provides the student an opportunity to apply nursing judgment using evidence-based care, critical thinking and clinical judgment to implement safe, patient/relationship-centered care to individual patients across the lifespan. The clinical student reflects on the value of patient-centered care, teamwork and collaboration, informatics, quality improvement, safety, managing care of the individual patient and nursing judgment/evidence-based care. Concepts related to career development options that enhance career mobility are reviewed. Standards of practice and the importance of practicing according to state regulations and statutes for the scope of practice for the PN are reviewed.				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.			
<b>Prerequisite:</b> BIOL2260 AND PSYC2222 AND PNSG1500 AND PNSG1510 AND PNSG1512 AND PNSG1514				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>PNSG 1530</b>	<b>Nursing Care of Adults II</b>	<b>5</b>	<b>2/3/0</b>	<b>PSYC 2220</b>	<b>Abnormal Psychology</b>	<b>3</b>	<b>3/0/0</b>
This course focuses on the care of the adult with common medical/surgical health problems. Emphasis is on physiological disorders that require management in an acute care facility. Application of pathophysiology, nutrition and pharmacology are applied to co-morbid diseases within each topic area. Additional emphasis includes advanced alterations in fluid and electrolytes, oxygenation, cardiac output and tissue perfusion, regulation and metabolism, cognition and sensation, immunity, integument, mobility, reproduction, ingestion, digestion, absorption, elimination, excretion, pre/post-operative care and oncology.				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.			
<b>Prerequisite:</b> BIOL2260 AND PSYC2222 AND PNSG1500 AND PNSG1510 AND PNSG1512 AND PNSG1514				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>Political Science</b>							
<b>POLS 1120</b>	<b>American National Government</b>	<b>3</b>	<b>3/0/0</b>	<b>PSYC 2222</b>	<b>Developmental Psychology</b>	<b>3</b>	<b>3/0/0</b>
Meets MnTC Goal Areas 5 and 9. This course provides an analysis of the organization, institutions and functions of the United States government.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>POLS 1130</b>	<b>State and Local Government</b>	<b>3</b>	<b>3/0/0</b>	<b>PSYC 2224</b>	<b>Social Psychology</b>	<b>3</b>	<b>3/0/0</b>
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.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>Psychology</b>							
<b>PSYC 1101</b>	<b>Human Interaction</b>	<b>3</b>	<b>3/0/0</b>	<b>PSYC 2226</b>	<b>Behavior and Environmental Management</b>	<b>3</b>	<b>3/0/0</b>
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.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>PSYC 1200</b>	<b>General Psychology</b>	<b>3</b>	<b>3/0/0</b>	<b>PSYC 2228</b>	<b>Cross-Cultural Psychology</b>	<b>3</b>	<b>3/0/0</b>
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.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>PSYC 1201</b>	<b>Introduction to Mental Health Behavioral Aide</b>	<b>4</b>	<b>4/0/0</b>	<b>PSYC 2230</b>	<b>Personality Psychology</b>	<b>3</b>	<b>3/0/0</b>
This course will provide students with resources to enter practice as a Mental Health Behavioral Aide II with a focus on children with mental illnesses. Students will achieve entry-level competencies in providing skill-building peer-to-peer or parent-child interactions, performing as a role-play partner, reinforcing children's accomplishments, generalizing skill-building activities in children's multiple natural settings, and developing redirection and de-escalation skills. The aide will perform these duties under the supervision of a mental health practitioner. This course is the same as HLTH 1201 and will be cross-listed.				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.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> PSYC1200			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			
<b>PowerSports Technology</b>							
<b>PWST 1302</b>	<b>Snowmobile I</b>	<b>5</b>	<b>2/3/0</b>	<b>PWST 1304</b>	<b>Snowmobile Clutching</b>	<b>2</b>	<b>1/1/0</b>
This course covers snowmobile engine designs, component identification and engine service procedures. This course also covers snowmobile fuel systems and service.				This course identifies major components of constant variable transmission systems and discusses maintenance, routine adjustment and tuning of variable transmission clutch systems.			
<b>Prerequisite:</b> None				<b>Prerequisite:</b> None			
<b>Corequisite:</b> None				<b>Corequisite:</b> None			

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PWST 1406	<b>Chainsaws and Generators</b>	2	1/1/0				
	This course offers a comprehensive view of overhaul techniques, diagnostics and post-repair inspections of modern chainsaws. This course also covers generator components and testing procedures. Students will test generator voltages and learn how to diagnose and repair generators. Students must have an understanding of electricity and electrical meter usage prior to taking this class.						
	<b>Prerequisite:</b>	None					
	<b>Corequisite:</b>	None					
PWST 2302	<b>Advanced Power Equipment</b>	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.						
	<b>Prerequisite:</b>	None					
	<b>Corequisite:</b>	None					
PWST 2304	<b>Motorcycles I</b>	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.						
	<b>Prerequisite:</b>	None					
	<b>Corequisite:</b>	None					
PWST 2306	<b>Snowmobile Drives and Suspensions</b>	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.						
	<b>Prerequisite:</b>	None					
	<b>Corequisite:</b>	None					
PWST 2308	<b>Advanced Snowmobiles</b>	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.						
	<b>Prerequisite:</b>	None					
	<b>Corequisite:</b>	None					
PWST 2311	<b>Motorcycles II</b>	3	1/2/0				
	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						
	<b>Prerequisite:</b>	None					
	<b>Corequisite:</b>	None					
PWST 2312	<b>Advanced Motorcycle Systems</b>	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.						
	<b>Prerequisite:</b>	None					
	<b>Corequisite:</b>	None					
<b>Radiologic Technology</b>							
RADT 1102	<b>Fundamental Concepts of Radiologic Technology</b>	2	2/0/0				
	This course will introduce the student to foundations of the radiologic technology profession. The content will include an examination of the organization of health care facilities and radiology departments, the radiologic technologist's role in the health care setting, professional obligations and behaviors, employment opportunities, historical significance of the profession, accreditation of educational programs, educational requirements, certification, registration and licensure processes and human diversity in the health care setting.						
	<b>Prerequisite:</b>	None					
	<b>Corequisite:</b>	None					
RADT 1112	<b>Introduction to Radiologic Technology and Patient Care</b>	4	3/1/0				
	This course is designed to provide concepts of radiologic sciences and patient care. Included in the course are discussions of professionalism, effective communication, patient physical needs assessment, patient consent procedures, x-ray production characteristics, basic radiation protection procedures, health information confidentiality, medical terminology, principles of pharmacology and contrast media, quality management, ethical behaviors and legal issues in health care. The student will also demonstrate competency in routine and emergency patient care, patient transfer and safety procedures, infection control, aseptic and sterile environment procedures and radiographic equipment manipulation.						
	<b>Prerequisite:</b>	None					
	<b>Corequisite:</b>	RADT1114 AND RADT1124					
RADT 1116	<b>Radiographic Procedures I</b>	5	3/2/0				
	This course will provide the student with the knowledge necessary to perform routine and mobile radiographic procedures relative to the thoracic and abdominal organs (including gastrointestinal studies), bony thorax, upper extremity and shoulder girdle. Emphasis will be on radiographic terms, anatomy, pathology, positioning, manipulation						
	of radiographic equipment and accessories, and related patient care considerations.						
	<b>Prerequisite:</b>	RADT1102					
	<b>Corequisite:</b>	RADT1112 AND RADT1124					
RADT 1124	<b>Radiographic Procedures II</b>	4	2/2/0				
	This course will provide the student with the knowledge necessary to perform routine and mobile radiographic procedures relative to the urinary system, lower extremity, pelvis, vertebral column and arthrology. Emphasis will be on radiographic terms, anatomy, pathology, positioning, manipulation of radiographic equipment and accessories, and patient care considerations. Basic techniques in venipuncture, contrast media types, intravenous medication and emergency response will also be included.						
	<b>Prerequisite:</b>	RADT1102					
	<b>Corequisite:</b>	RADT1112 AND RADT1116					
RADT 1132	<b>Principles of Radiobiology</b>	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.						
	<b>Prerequisite:</b>	RADT1112 AND RADT1116 AND RADT1124					
	<b>Corequisite:</b>	RADT1140 AND RADT1146					
RADT 1140	<b>Radiographic Imaging</b>	4	2/2/0				
	This course is designed to establish a knowledge base of 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.						
	<b>Prerequisite:</b>	RADT1112 AND RADT1116 AND RADT1124					
	<b>Corequisite:</b>	RADT1132 AND RADT1146					
RADT 1146	<b>Radiographic Procedures III</b>	4	2/2/0				
	This course will provide the student with the knowledge necessary to perform routine and mobile radiographic procedures related to skull (including sensory organs), traumatic injury and surgical radiography. In addition, the student will be introduced to the highly specialized studies of the central nervous system, cardiovascular, lymphatic system and cross-sectional imaging. Special imaging equipment, physical settings and techniques used in these highly specialized studies will also be included.						
	<b>Prerequisite:</b>	RADT1140 AND RADT1146 AND RADT1132					
	<b>Corequisite:</b>	RADT1180					
RADT 1180	<b>Radiographic Clinical I</b>	5	0/0/5				
	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 and pelvis.						
	<b>Prerequisite:</b>	RADT1140 AND RADT1146 AND RADT1132					
	<b>Corequisite:</b>	RADT1190					
RADT 1190	<b>Radiographic Clinical II</b>	5	0/0/5				
	This clinical course emphasizes the basic radiographic procedures and positioning related to the upper and lower gastrointestinal tract, and the biliary system. 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.						
	<b>Prerequisite:</b>	RADT1140 AND RADT1146 AND RADT1132					
	<b>Corequisite:</b>	RADT1180					
RADT 2100	<b>Radiographic Clinical III</b>	5	0/0/5				
	This clinical course emphasizes the basic radiographic procedures and positioning related to the urinary system, the bony thorax and the vertebral column. The student is also introduced to radiographic exposure factors and off-peak (e.g. evening and weekend hours) clinical hours.						
	<b>Prerequisite:</b>	RADT1180 AND RADT1190					
	<b>Corequisite:</b>	RADT2222 AND RADT2110					
RADT 2110	<b>Radiographic Clinical IV</b>	5	0/0/5				
	This clinical course emphasizes the basic radiographic procedures and positioning related to the skull, facial bones, paranasal sinuses and detailed areas of the skull. This clinical experience provides an opportunity to work with increased independence.						
	<b>Prerequisite:</b>	RADT1180 AND RADT1190					
	<b>Corequisite:</b>	RADT2222 AND RADT2100					
RADT 2120	<b>Radiographic Clinical V</b>	5	0/0/5				
	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.						
	<b>Prerequisite:</b>	RADT2100 AND RADT2110 AND RADT2224					
	<b>Corequisite:</b>	RADT2280 AND RADT2130					



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<b>RADT 2130</b>	<b>Radiographic Clinical VI</b> This clinical course emphasized the development of independence, discretion and judgement 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. <b>Prerequisite:</b> RADT2100 AND RADT2110 AND RADT2224 <b>Corequisite:</b> RADT2120 AND RADT2280	5	0/0/5	<b>REFR 1112</b>	<b>Refrig, A/C &amp; Htg Lab</b> This course covers the operation and service procedures of domestic refrigeration and an introduction to residential heating and air conditioning and commercial refrigeration equipment. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	0/3/0
<b>RADT 2224</b>	<b>Imaging Equipment</b> 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. <b>Prerequisite:</b> RADT1180 AND RADT1190 <b>Corequisite:</b> RADT2100 AND RADT2110	4	2/2/0	<b>REFR 1113</b>	<b>Refrigeration Electrical Circuits Fundamentals</b> This course will consist of the design of electrical drawings and troubleshooting of different refrigeration and heating equipment schematics and wiring diagrams. <b>Prerequisite:</b> REFR1106 AND REFR1108 <b>Corequisite:</b> None	3	3/0/0
<b>RADT 2250</b>	<b>Radiographic Pathology</b> 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. <b>Prerequisite:</b> BIOL2232 <b>Corequisite:</b> None	3	3/0/0	<b>REFR 1115</b>	<b>Refrigeration Electrical Circuits Lab</b> This course will consist of the design of electrical drawings and troubleshooting of different refrigeration and heating equipment and component schematic and wiring diagrams. <b>Prerequisite:</b> REFR1106 <b>Corequisite:</b> None	3	0/3/0
<b>RADT 2258</b>	<b>Radiographic Clinical V</b> 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. <b>Prerequisite:</b> RADT2248 <b>Corequisite:</b> None	7	0/0/7	<b>REFR 1117</b>	<b>Commercial Grocery Store Principles</b> This course is designed to cover the refrigeration piping and oil return in a grocery store setting. Students will learn about case controllers and temperature controls. Lab experience will include on-site visits to a grocery store and warehouses. <b>Prerequisite:</b> Completion of HVAC/R diploma <b>Corequisite:</b> None	3	1/2/0
<b>RADT 2268</b>	<b>Mammography Clinical</b> The emphasis of this clinical rotation will be on positioning and manipulation of mammographic equipment and accessories during imaging procedures of the breasts. This course will also address quality improvement procedures specific to mammography equipment and procedures. <b>Prerequisite:</b> RADT2258 AND ARRT Certification in Radiography <b>Corequisite:</b> None	4	0/0/4	<b>REFR 1130</b>	<b>Refrigeration Management</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	2/0/0
<b>RADT 2280</b>	<b>Board Review</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	2/0/0	<b>REFR 1140</b>	<b>Gas Heating</b> 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. <b>Prerequisite:</b> REFR1108 <b>Corequisite:</b> None	2	1/1/0
<b>Refrigeration and Air Conditioning</b>				<b>REFR 2202</b>	<b>Commercial Refrigeration and Air Conditioning Principles</b> 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. <b>Prerequisite:</b> Completion of HVAC/R diploma <b>Corequisite:</b> None	4	4/0/0
<b>REFR 1102</b>	<b>Refrigeration Principles</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	<b>REFR 2204</b>	<b>Commercial Refrigeration and Air Conditioning Lab</b> 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. <b>Prerequisite:</b> Completion of HVAC/R diploma <b>Corequisite:</b> None	3	0/3/0
<b>REFR 1104</b>	<b>Refrigeration Lab</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	4	0/4/0	<b>REFR 2206</b>	<b>Commercial Electrical Principles</b> 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. <b>Prerequisite:</b> Completion of HVAC/R diploma <b>Corequisite:</b> None	3	3/0/0
<b>REFR 1106</b>	<b>Electrical Fundamentals</b> This course covers electrical theory of Ohm's law, inductance, capacitance and electrical design, operation, use and construction of domestic refrigeration and electric motors. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	<b>REFR 2208</b>	<b>Commercial Electrical Lab</b> 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. <b>Prerequisite:</b> Completion of HVAC/R diploma <b>Corequisite:</b> None	3	0/3/0
<b>REFR 1108</b>	<b>Electrical Lab</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	0/3/0	<b>REFR 2211</b>	<b>Advanced Refrigeration Principles</b> 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. <b>Prerequisite:</b> Completion of HVAC/R diploma <b>Corequisite:</b> None	4	4/0/0
<b>REFR 1110</b>	<b>Refrig, A/C &amp; Htg Prin</b> 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. <b>Prerequisite:</b> REFR1104 AND REFR1108 <b>Corequisite:</b> None	3	3/0/0	<b>REFR 2212</b>	<b>Advanced Refrigeration Lab</b> 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.	3	0/3/0

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
<b>Prerequisite:</b>	Completion of HVAC/R diploma			<b>SOC 2215</b>	<b>Criminology</b>	<b>3</b>	<b>3/0/0</b>
<b>Corequisite:</b>	None			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 judiciary process and penology.			
<b>REFR 2213</b>	<b>Advanced Electrical Theory</b>	<b>3</b>	<b>3/0/0</b>	<b>SOC 2216</b>	<b>Minority Group Relations</b>	<b>3</b>	<b>3/0/0</b>
This course covers the electrical principles and schematics used in commercial, industrial, hospital and supermarket refrigeration systems. Safety is emphasized.				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.			
<b>Prerequisite:</b>	Completion of HVAC/R diploma			<b>Prerequisite:</b>	None		
<b>Corequisite:</b>	None			<b>Corequisite:</b>	None		
<b>REFR 2215</b>	<b>Advanced Electrical Applications</b>	<b>3</b>	<b>0/3/0</b>	<b>SOC 2217</b>	<b>Rural Sociology</b>	<b>3</b>	<b>3/0/0</b>
This course covers the application of electrical principles used in commercial, industrial, hospital and supermarket refrigeration systems. Safety is emphasized.				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.			
<b>Prerequisite:</b>	Completion of HVAC/R diploma			<b>Prerequisite:</b>	None		
<b>Corequisite:</b>	None			<b>Corequisite:</b>	None		
<b>REFR 2216</b>	<b>Refrigeration Internship</b>	<b>3</b>	<b>0/0/3</b>	<b>SOC 2220</b>	<b>Food, Culture and Society</b>	<b>3</b>	<b>3/0/0</b>
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.				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.			
<b>Prerequisite:</b>	Completion of HVAC/R diploma			<b>Prerequisite:</b>	None		
<b>Corequisite:</b>	None			<b>Corequisite:</b>	None		
<b>REFR 2220</b>	<b>HVAC Troubleshooting</b>	<b>3</b>	<b>1/2/0</b>	<b>SOC 2222</b>	<b>Sociology of Agriculture</b>	<b>3</b>	<b>3/0/0</b>
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.				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.			
<b>Prerequisite:</b>	REFR1108			<b>Prerequisite:</b>	None		
<b>Corequisite:</b>	None			<b>Corequisite:</b>	None		

## Sociology

<b>SOC 1111</b>	<b>Intro to Sociology</b>	<b>3</b>	<b>3/0/0</b>
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.			
<b>Prerequisite:</b>	None		
<b>Corequisite:</b>	None		
<b>SOC 1113</b>	<b>Social Problems</b>	<b>3</b>	<b>3/0/0</b>
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.			
<b>Prerequisite:</b>	None		
<b>Corequisite:</b>	None		
<b>SOC 1114</b>	<b>Sociology Service Learning</b>	<b>1</b>	<b>1/0/0</b>
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.			
<b>Prerequisite:</b>	SOC1111 OR SOC1113 OR SOC2211 OR SOC2215 OR SOC2216 OR SOC2217 OR WMST1130		
<b>Corequisite:</b>	None		
<b>SOC 2210</b>	<b>Social Deviance</b>	<b>3</b>	<b>3/0/0</b>
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			
<b>Prerequisite:</b>	SOC1111		
<b>Corequisite:</b>	None		
<b>SOC 2213</b>	<b>Sociology of the Family</b>	<b>3</b>	<b>3/0/0</b>
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.			
<b>Prerequisite:</b>	None		
<b>Corequisite:</b>	None		

<b>SOC 2215</b>	<b>Criminology</b>	<b>3</b>	<b>3/0/0</b>
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 judiciary process and penology.			
<b>Prerequisite:</b>	None		
<b>Corequisite:</b>	None		
<b>SOC 2216</b>	<b>Minority Group Relations</b>	<b>3</b>	<b>3/0/0</b>
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.			
<b>Prerequisite:</b>	None		
<b>Corequisite:</b>	None		
<b>SOC 2217</b>	<b>Rural Sociology</b>	<b>3</b>	<b>3/0/0</b>
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.			
<b>Prerequisite:</b>	None		
<b>Corequisite:</b>	None		
<b>SOC 2220</b>	<b>Food, Culture and Society</b>	<b>3</b>	<b>3/0/0</b>
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.			
<b>Prerequisite:</b>	None		
<b>Corequisite:</b>	None		
<b>SOC 2222</b>	<b>Sociology of Agriculture</b>	<b>3</b>	<b>3/0/0</b>
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.			
<b>Prerequisite:</b>	None		
<b>Corequisite:</b>	None		

## Spanish

<b>SPAN 1111</b>	<b>Beginning Spanish</b>	<b>4</b>	<b>4/0/0</b>
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.			
<b>Prerequisite:</b>	None		
<b>Corequisite:</b>	None		
<b>SPAN 1112</b>	<b>Beginning Spanish II</b>	<b>4</b>	<b>4/0/0</b>
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.			
<b>Prerequisite:</b>	SPAN1111		
<b>Corequisite:</b>	None		
<b>SPAN 2211</b>	<b>Intermediate Spanish</b>	<b>4</b>	<b>4/0/0</b>
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.			
<b>Prerequisite:</b>	SPAN1112 OR instructor approval		
<b>Corequisite:</b>	None		
<b>SPAN 2212</b>	<b>Intermediate Spanish II</b>	<b>4</b>	<b>4/0/0</b>
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.			
<b>Prerequisite:</b>	Instructor approval		
<b>Corequisite:</b>	None		

## Management Skills

<b>SUPL 1118</b>	<b>Lead and Facilitate Teams</b>	<b>3</b>	<b>3/0/0</b>
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			

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
	team interaction, identifying characteristics of successful teams and demonstrating skills and behaviors of both team leader and team member. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
<b>Social Work</b>							
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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
<b>Massage Therapy</b>							
THPY 1110	Massage Techniques and Ethics	3	2/1/0	THPY 1148	Sports Massage and Hydrotherapy	2	1/1/0
	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None				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. <b>Prerequisite:</b> None <b>Corequisite:</b> None		
THPY 1118	Kinesiology	3	2/1/0	THPY 1150	Business Development	2	2/0/0
	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None				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. <b>Prerequisite:</b> None <b>Corequisite:</b> None		
THPY 1123	Integrative Massage	2	1/1/0	THPY 1156	Massage Pathophysiology	3	3/0/0
	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None				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. <b>Prerequisite:</b> None <b>Corequisite:</b> None		
THPY 1130	Advanced Massage	2	1/1/0	THPY 2102	Lymphatic and Hospice Massage	1	0/1/0
	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. <b>Prerequisite:</b> THPY1110 <b>Corequisite:</b> None				This course covers the protocol and techniques for a full-body one-hour lymphatic drainage massage. Students will learn massage techniques for anatomy and physiology of the lymph system. Students also will gain hands-on exposure to massage on medically frail clients of all ages. <b>Prerequisite:</b> THPY1118 AND diploma or certificate in Massage Therapy <b>Corequisite:</b> None		
THPY 1135	Deep Tissue Massage	2	1/1/0	THPY 2106	Neuromuscular Therapy	2	0/2/0
	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. <b>Prerequisite:</b> THPY1110 <b>Corequisite:</b> None				Students will reinforce previously learned techniques. Students will consider various treatment protocols utilizing scientifically proven, outcome-based techniques including neuromuscular therapy, myofascial release, travel trigger point therapy, muscle energy technique, proprioceptive neuromuscular facilitated stretching, active isolative stretching and positional release technique. Students will perform thorough patient assessments utilizing medical histories and objective findings through palpation, functional muscle testing, range of motion testing, postural examination and gait examination. Based on the assessment results, students will write a supplementary care-plan using carefully selected techniques and recommended exercises appropriate for the given condition. The supplementary care plan will be written as prescribed by a licensed physician, chiropractor or physical therapist, focusing on conditions such as thoracic outlet syndrome, lateral epicondylitis, low back pain, piriformis syndrome and plantar fasciitis. <b>Prerequisite:</b> THPY1118 AND diploma or certificate in Massage Therapy <b>Corequisite:</b> None		
THPY 1142	Practical Skills Clinic	3	0/3/0	<b>Theatre</b>			
	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. <b>Prerequisite:</b> THPY1110 AND current certified CPR/First Aid card holder <b>Corequisite:</b> None			THTR 1100	Introduction to Theatre	3	3/0/0
THPY 1146	Certification Preparation	2	2/0/0		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. <b>Prerequisite:</b> None <b>Corequisite:</b> None		
	This course is designated to prepare the students to take the National Certification Examination (NEC) issued by the National Certification Board of Therapeutic Massage & 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. <b>Prerequisite:</b> THPY1110 <b>Corequisite:</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None		
				THTR 1130	Stage Make-up	3	2/1/0
					Meets MnTC Goal Area 6. In this course, students will explore the fundamental design principles, materials and application techniques of stage make-up. Starting with the		

Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
	basic fundamentals and continuing through special effects, the student will use skills acquired to enhance character development. Students will apply theory through practical laboratory work in stage make-up applications. <b>Prerequisite:</b> None <b>Corequisite:</b> None				course will be practices of pre-delivery, inspection and troubleshooting along with seasonal service requirements. <b>Prerequisite:</b> None <b>Corequisite:</b> None		
THTR 1135	<b>Stage Costuming</b> Meets MnTC Goal Area 6. Students will explore the basic theory and practice of stage costuming. Students will study historical periods, the principles of costume design, and costume construction and materials. Production work hours may be required. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0	TRNS 1003	<b>Off-Road Literature and Computer Systems</b> This course is designed for proper identification of the equipment that students will be working on. Students will act upon service procedures and specifications in online manuals, proper operation of equipment through the use of electronic owners manuals and accurate parts identification through online sources of service literature. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	1/1/0
THTR 1140	<b>Stagecraft</b> Meets MnTC Goal Area 6. This hands-on course introduces students to the theory and practice of basic technical theatre, including set construction, props, and basic lighting and sound. This course will acquaint students with the basic materials and construction techniques used in building stage scenery. Students will apply methods through planning, constructing, painting, rigging and shifting of stage scenery. Each student will be required to learn and observe safety rules in scene shop and surrounding areas. Production hours are required. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0	TRNS 1005	<b>Off-Road Electrical Systems</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	1/1/0
THTR 1145	<b>Stage Lighting and Sound</b> Meets MnTC Goal Area 6. This course introduces students to the basic theory and practice of stage lighting and sound. Students will apply techniques and methods from creating lighting and sound plots to setting up and running lights and sound equipment in production. Production work hours may be required. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0	TRNS 1006	<b>Off-Road Vehicle Maintenance</b> This off-road maintenance course is designed to train the student on techniques of proper maintenance of the off-road vehicle or boat. Students are encouraged to bring their personal recreational vehicle(s), use the up-to-date industry products that we offer or both. Trailer maintenance also will be covered. This is an excellent course for getting off-road equipment and boats ready for the coming winter or spring. <b>Prerequisite:</b> None <b>Corequisite:</b> None	4	2/2/0
THTR 2120	<b>Script Analysis</b> Meets MnTC Goal Area 6. In this course, students will analyze play scripts to discover production and performance values and aesthetics. Students will read a variety of plays from different periods and styles from the point of view of actor, director, designer or critic. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0	TRNS 1015	<b>Ignition, Charging and Starter Systems Lab</b> This course is a continuation of electrical systems used on powersports/marine equipment, focusing primarily on ignition and starting components. Students will apply the theories of ignition, induction, charging and starting systems. Emphasis will be on proper use of test equipment and the flow of electricity. <b>Prerequisite:</b> TRNS1005 <b>Corequisite:</b> None	2	0/2/0
THTR 2130	<b>Design for the Stage</b> Meets MnTC Goal Area 6. This course introduces students to the concepts, processes and practices common to the design of stage scenery, lighting, sound and costumes. Students will study and apply aesthetic principles and graphic skills involved in theatrical design. Students will develop research and rendering methods. This course will emphasize design skills as a communication tool in the collaborative process of theatrical production. Each student will be required to learn and observe safety rules in the scene shop, lighting and sound booth, and other relevant technical areas. Production work hours may be required. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0	TRNS 1016	<b>Ignition, Charging and Starting Systems Theory</b> This course is a continuation of the study of electrical and ignition systems used on both marine and powersports equipment, focusing primarily on ignition and starting systems. Students will learn the theories of ignition, induction, charging and starting systems. Emphasis will be on proper use of test equipment along with the generation and flow of electricity. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0
THTR 2220	<b>Theatre Certificate Internship and Portfolio</b> Meets MnTC Goal Area 6. In this course, students complete an internship at a local community theatre arts center. Students prepare a portfolio that represents a culmination of skills and information acquired prior to and during this course. This portfolio can be used as an employment tool. <b>Prerequisite:</b> THTR1105 AND THTR1140 <b>Corequisite:</b> None	1	0/1/0	TRNS 1102	<b>Introduction to Transportation</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	1/1/0
<b>Commercial Drivers Licensure</b>				TRNS 1104	<b>Transportation Electronics</b> This course prepares the student for the electronics-related courses that follow. The theory and operation of electricity and test instruments will be studied. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	2/1/0
TRDR 1101	<b>Commercial Driver License I</b> Students will obtain the information necessary to complete MnDOT CDL written exam. <b>Prerequisite:</b> None <b>Corequisite:</b> None	1	1/0/0	TRNS 1109	<b>Fuel Systems I</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	4	2/2/0
TRDR 1103	<b>Commercial Drivers License II</b> The students will obtain the knowledge and skills necessary to complete a pre-trip inspection, vehicle handling and on-road driving test needed to obtain the basic Commercial Drivers License. Students must possess a CDL learner permit and have taken a MnDOT physical before registering for this course. <b>Prerequisite:</b> Successful completion of MnDOT CDL learner permit <b>Corequisite:</b> None	1	0/1/0	TRNS 1111	<b>Electrical Systems I</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	4	2/2/0
<b>Transportation Technology</b>				TRNS 1112	<b>Heating Ventilation A/C</b> 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. <b>Prerequisite:</b> DSET1100 OR TRNS1102 <b>Corequisite:</b> None	3	1/2/0
TRNS 1001	<b>Fuel Systems I</b> 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	3	2/1/0	TRNS 1118	<b>Welding I</b> This class introduces students to welding safety, welding and cutting fundamentals. The	2	0/2/0



Course #	CourseTitle	CR	Lec/Lab/OJT	Course #	CourseTitle	CR	Lec/Lab/OJT
	course provides the theory of welding and the training to develop the necessary skills to cut and weld metal. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
TRNS 1120	<b>Welding II</b> 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. <b>Prerequisite:</b> TRNS1118 <b>Corequisite:</b> None	1	0/1/0				
TRNS 1125	<b>Starting and Charging Theory</b> This course covers the service and repair of starting and charging systems for off-road products, both two- and four-stroke. <b>Prerequisite:</b> None <b>Corequisite:</b> TRNS1126	2	2/0/0				
TRNS 1126	<b>Starting and Charging Lab</b> This course covers the hands-on testing of starting and charging systems and their components. <b>Prerequisite:</b> None <b>Corequisite:</b> TRNS1125	1	0/1/0				
TRNS 1193	<b>Fuel Systems II Lab</b> This course covers the application of information learned in the Fuel Systems II Theory course. Students will apply the theories of testing the operability of fuel systems of both two- and four-stroke engines. Included in this course will be practices of predelivery, inspection and troubleshooting, along with seasonal service requirements. <b>Prerequisite:</b> None <b>Corequisite:</b> TRNS1194	1	0/1/0				
TRNS 1194	<b>Fuel Systems II Theory</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	2/0/0				
TRNS 1197	<b>Electrical Systems I Lab</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> TRNS1198	2	0/2/0				
TRNS 1198	<b>Electrical Systems I Theory</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	2/0/0				
TRNS 2108	<b>Power Hydraulics</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	1/1/0				
<b>Women's Studies</b>							
WMST 1130	<b>Introduction to Women's Studies</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	3	3/0/0				
WMST 1136	<b>Global Perspectives of Women</b> Meets MNTC Goal Areas 6 and 8. This course examines the present-day realities of women's lives around the world. <b>Prerequisite:</b> None <b>Corequisite:</b> ENGL1101	3	3/0/0				
<b>Zoology</b>							
ZOO 1122	<b>Hematology &amp; Coagulation</b> This is an introductory course for Medical Laboratory Technician students covering	4	3/1/0				
	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. <b>Prerequisite:</b> None <b>Corequisite:</b> None						
ZOO 1123	<b>Immunohematology</b> 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. <b>Prerequisite:</b> BIOL1125 <b>Corequisite:</b> None	3	2/1/0				
ZOO 1126	<b>Urinalysis &amp; Body Fluids</b> 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. <b>Prerequisite:</b> None <b>Corequisite:</b> None	2	1/1/0				



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M State - Moorhead Campus

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M State - Detroit Lakes Campus

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M State - Wadena Campus

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**Tina Bartels**, Content and Graphic Design Coordinator  
M State

# Administration Credentials

**Kennedy, Peggy D** .....*President*  
 BS, University of Wisconsin - Whitewater  
 MA, University of Minnesota  
 EdD, University of Minnesota

**Abbott, Jill M**..... *Vice President of Academic Affairs*  
 BS, Southwest State University  
 MS, South Dakota State University  
 EdD, University of South Dakota

**Anderson, Shawn A** ..... *Dean of Student Success/  
 Senior Campus Dean*  
 BS, Minnesota State University Moorhead  
 MS, Central Connecticut State University

**Brimhall, Carrie Lee** ..... *Vice President/Chief Academic Officer*  
 AA, Fergus Falls Community College  
 BA, Concordia College  
 MS, Capella University  
 PhD, Capella University

**Clendenen, Dllona** ..... *Dean of Career and Technical Programs*  
 BS, University of Wisconsin Oshkosh  
 MBA, Keller Graduate School of Management  
 of DeVry University

**Holly Doyle**.....*Associate Dean of Academic Technology*  
 AA, Ridgewater College  
 BA, University of Washington  
 MAT, City University

**Steven Erickson**.....*Dean of Institutional Effectiveness/  
 Dean of Academic Affairs*  
 MS, University of California-Davis

**Henrickson, Gary P** .....*Dean of Academic Affairs/  
 Senior Campus Dean*  
 BA, University of Minnesota  
 MA, University of Minnesota  
 MA, George Mason University  
 PhD, University of Minnesota

**Jacobson, Jennifer Lynn** ..... *Dean of Health Careers*  
 BSN, Minot State University  
 MSN, University of South Alabama

**Johnson, Dacia A**..... *Chief Human Resources Officer*  
 BS, Minnesota State University Moorhead  
 MBA, Southwest Minnesota State University

**Johnson, Monty V** .....*Dean of Academic Affairs/  
 Senior Campus Dean*  
 BE, Wayne State College  
 MED, Iowa State University

**Knudson, Daniel L** ..... *Chief Information Officer*  
 BS, Minnesota State University Moorhead

**Laymon, Denise Ann** ..... *Chief Development and Alumni Officer*  
 BS, University of Mary  
 MS, University of Mary  
 MBA, 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

**Tucker, G.L.**.....*Dean of Custom Training Services/  
 Business & Entrepreneurial Services*  
 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 of Student Development  
 and Marketing*

BA, University of Minnesota  
 MSED, University of Wisconsin-Superior  
 PhD, Capella University

# Faculty Credentials

<b>Ahlschlager, Patricia M</b> ..... <i>Nursing</i> BS, Metropolitan State College of Denver MS, Minnesota State University Moorhead	<b>Bernstetter, Roberta A</b> ..... <i>Cosmetology</i> AA, Fergus Falls Community College DIPL, Northwest Technical College - Wadena BS, Bemidji State University
<b>Amundson, Sonja C</b> ..... <i>Nursing</i> AAS, Miles Community College	<b>Beske, Teresa</b> ..... <i>Medical Laboratory Technician</i> AS, Minnesota State Community and Technical College
<b>Anderson, Heidi Rochelle</b> ..... <i>English</i> AA, Minnesota State Community and Technical College MA, St. Cloud State University BA, St. Cloud State University	<b>Beyer, Jennifer Ann</b> ..... <i>English</i> BA, Bemidji State University MA, Bemidji State University
<b>Anderson, Marc David</b> ..... <i>Biology</i> BS, North Dakota State University MS, North Dakota State University PhD, Iowa State University	<b>Bjerke, M Shawn</b> ..... <i>Biology</i> BS, North Dakota State University MS, North Dakota State University
<b>Anderson, Sue Christine</b> ..... <i>Art</i> BS, Minnesota State University Moorhead MS, Minnesota State University Moorhead	<b>Blasczyk, Linda Kay</b> ..... <i>Nursing</i> BSN, University of Mary MSN, Concordia College
<b>Ashworth, Teresa K</b> ..... <i>Music</i> BA, University of South Dakota MED, North Dakota State University	<b>Bocnuk, Cheryl L</b> ..... <i>Web Development</i> AA, Rainy River Community College BA, St. Cloud State University BA, St. Cloud State University MMA, Metropolitan State University
<b>Bagent, Jack Kevin</b> ..... <i>Science</i> BA, University of Minnesota DR, University of Minnesota	<b>Booth, Michael</b> ..... <i>Math</i> BS, North Dakota State University MS, North Dakota State University
<b>Bagent, Karoline Lisa</b> ..... <i>Nursing</i> MN, University of Minnesota	<b>Borcharding, Matthew John</b> ..... <i>Biology</i> BS, Minnesota State University, Mankato MAT, Minnesota State University, Mankato
<b>Bagne, Angela Grace Beach</b> ..... <i>Psychology</i> MS, North Dakota State University	<b>Brady-Santwire, Colleen A</b> ..... <i>Radiologic Technology</i> RT (R)(M), ARRT Registered Technologist certified in Radiography and Mammography BS, University of Minnesota Crookston MS, Minnesota State University Moorhead
<b>Bainer, James Stephen</b> ..... <i>Diesel Equipment Technology</i> DIPL, Staples Area Vocational Technical Institute	<b>Brannick, Kristi Georjean</b> ..... <i>Biology</i> CERT, Anoka-Hennepin Technical College AA, Normandale Community College BS, St. Cloud State University MS, St. Cloud State University
<b>Baker, Adam Joseph, CPA</b> ..... <i>Accounting</i> AA, Fergus Falls Community College BS, Minnesota State University Moorhead	<b>Bremer, John O</b> ..... <i>English</i> AA, Rochester Community College BA, St. Cloud State University MA, North Dakota State University
<b>Balluff, Mark Allen</b> ..... <i>Math</i> BS, Minnesota State University Moorhead MAT, Minot State University	<b>Brickner, Joan Marie</b> ..... <i>English</i> ALA, Wayne State University BA, Wayne State University MA, Eastern Michigan University
<b>Banerji, Nandini</b> ..... <i>Science</i> BS, University of Delhi MS, Indian Institute of Technology, Kanpur MA, Indian Institute of Technology, Delhi PhD, University of Vigo	<b>Bry, Jeff D</b> ..... <i>Sociology</i> BS, University of North Dakota MA, University of North Dakota
<b>Beacom, Teresa Ann</b> ..... <i>English</i> BA, College of Saint Benedict MA, University of Missouri-Kansas City	
<b>Benchama, Nouredine</b> ..... <i>Math</i> MS, Wichita State University PhD, Wichita State University	



# Faculty Credentials

**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*

**Cantieri, Loretta** ..... *Art*  
 BFA, University of Illinois at Urbana  
 MFA, California Insitute of the Arts

**Carley, Alicia** ..... *Chemistry*  
 BA, Concordia College  
 MS, North Dakota State University

**Carlson, Chris** ..... *Communication*  
 BA, Gustavus Adolphus College  
 MS, North Dakota State University

**Carlson, Daniel Q** ..... *Music*  
 BM, Concordia College  
 BM, Concordia College  
 MM, North Dakota State University

**Carlson, Steven** ..... *History*  
 BA, Augsburg College  
 MS, Bemidji State University

**Carney, Paul** ..... *English*  
 BA, Southern Methodist University  
 MA, University of Texas at El Paso  
 MA, 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

**Christensen, Johanna** ..... *Nursing*  
 BSN, Jamestown College

**Christianson, Milan** ..... *Psychology*  
 MS, North Dakota State University

**Clemens, Thomas** ..... *Physics*  
 BS, University of North Dakota  
 MS, University of North Dakota

**Cole, Monica** ..... *Nursing*  
 AAS, Minnesota State Community and Technical College  
 AS, Alexandria Technical and Community College  
 BSN, College of Saint Scholastica

**Coley, Amy Marie** ..... *Radiologic Technology*  
 BS, University of Mary

**Cook, Leonard** ..... *Chemistry*  
 MA, Concordia College  
 MS, North Dakota State University  
 BA, Concordia College

**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

**Crowser, Abby** ..... *Volleyball Coach*  
 BS, Concordia College

**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** ..... *Dental*  
 AS, Argosy University  
 BA, Augustana College

**Deutschlander, Alena** ..... *Nursing*  
 BSN, Minnesota State University Moorhead

# Faculty Credentials

**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 Technical Institute

**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

**Ebert, Joshua** ..... *Criminal Justice*  
 AA, Central Lakes College  
 AS, Central Lakes College  
 BA, College of Saint Scholastica

**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

**Ekelund, Rebekah J** ..... *Chemistry*  
 BS, Houghton College  
 MS, Northeastern University

**Eklund, Clyde Wayne** ..... *Math*  
 BS, Bemidji State University  
 MS, University of Minnesota

**Elhard, Kathy L** ..... *Nursing*  
 AAS, Northwest Technical College  
 BSN, Minnesota State University Moorhead  
 MSN, Minnesota State University Moorhead

**Eliaison, 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

**Evans, Bill L** ..... *Biology*  
 AAS, Minnesota State Community and Technical College  
 BS, The Citadel  
 MS, Medical College of Georgia

**Fear, Trina** ..... *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

**Foss, Justus** ..... *Psychology*  
 BA, Concordia College  
 MS, Minnesota State University Moorhead

**Francis, Daniel J** ..... *Digital Photography and Imaging*  
 DIPL, Minnesota State Community and Technical College

**Freeman, Genevieve** ..... *Information Technology*

**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

**Ganyo, Jennifer** ..... *English*  
 BA, University of Minnesota, Morris  
 MFA, Minnesota State University Moorhead

# Faculty Credentials

**Gausman, Thomas A, MFA** ..... *Economics, Business*  
 BA, University of Minnesota, Morris  
 MA, Northern Illinois University  
 MS, Northern Illinois University

**Geist, Gerald** ..... *American Sign Language*

**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

**Gillette, Helen** ..... *Nursing*  
 AAS, Minnesota State Community and Technical College  
 BSN, Presentation College

**Godzinski, Ronald Peter**..... *Philosophy*  
 BA, California State University - Chico  
 MA, Colorado State University

**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

**Haagenson, Loren M**..... *Human Resources*  
 AA, Northland Community College  
 BS, Minnesota State University Moorhead  
 MM, University of Mary

**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

**Hanstad, Tanya J** ..... *Math*  
 BA, Concordia College  
 MS, North Dakota State University

**Harden, Noelle**..... *Geography*  
 MS, University of Wisconsin - Madison

**Heikes, David Arnold** ..... *English*  
 BS, University of South Dakota  
 MA, Western Washington University  
 MA, University of South Dakota

**Hendrickson, Janice** ..... *Basketball Coach*  
 DIPL, Minnesota State Community and Technical College  
 AA, Minnesota State Community and Technical College  
 AAS, Minnesota State Community and Technical College

**Hensel, Jeremy**..... *Electrical Line Worker*  
 DIPL, Northwest Technical College

**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

**Hicks, Erica** ..... *Chemistry*  
 AA, Northland Community and Technical College  
 BS, University of North Dakota  
 MS, University of North Dakota

**Hiller, Timothy**..... *Philosophy*  
 BA, Hendrix College  
 MA, Yale Divinity School

**Hilton, Kristi Marie**..... *American Sign Language*  
 AAS, Southeast Technical Institute  
 BA, Minnesota State University Moorhead  
 MS, Minnesota State University Moorhead

**Hines, Bethany** ..... *Medical Administrative Assistant*  
 DIPL, Minnesota State Community and Technical College

**Hinrichs, Andrew J** ..... *Equine Science*  
 BS, University of Minnesota, Crookston

**Hintermeister, Melissa J** ..... *Graphic Design Technology*  
 BA, Concordia College

# Faculty Credentials

<p><b>Hintgen, Sharon Voigt</b>.....<i>Math</i> BA, University of Minnesota, Morris BS, Minnesota State University Moorhead MS, Bemidji State University</p>	<p><b>Johnson, Mark L</b>.....<i>Political Science and History</i> BA, University of North Dakota MA, Louisiana State University and Agricultural and Mechanical College</p>
<p><b>Hjalmsquist, Dave C</b>.....<i>Computer Programming</i> Dipl, Northwest Technical College-Moorhead Dipl, Northwest Technical College-Moorhead</p>	<p><b>Johnson, Peggy J</b>.....<i>Music</i> BM, Colorado State University MM, Colorado State University DMA, University of Cincinnati</p>
<p><b>Hoekstra, Matthew</b>.....<i>History</i> MS, North Dakota State University</p>	<p><b>Johnson, Randall Joseph</b>.....<i>Information Technology</i> CEC, Bismarck State College BSC, University of Mary</p>
<p><b>Holmsquist, Sherrie L</b>.....<i>Business: Management, Marketing and Sales</i> AAS, University of Minnesota, Crookston MS, University of North Dakota</p>	<p><b>Johnson, Robert P</b>.....<i>Graphic Design Technology</i> Dipl, Northwest Technical College-Moorhead</p>
<p><b>Hughes, Alan S</b>.....<i>Construction Electricity</i></p>	<p><b>Johnson, Sheri A</b>.....<i>Communication, Theatre</i> BA, South Dakota State University MS, South Dakota State University MA, South Dakota State University</p>
<p><b>Hull, Gary</b>.....<i>Electrical Lineworker</i> Dipl, Wadena Area Vocational Technical Institute</p>	<p><b>Johnson, Sydney</b>.....<i>Dental Hygiene</i> AAS, North Dakota State College of Science AS, North Dakota State College of Science BS, Minnesota State University, Mankato</p>
<p><b>Imdieke, Gerald N</b>.....<i>Construction Electricity</i> Dipl, Northwest Technical College-Wadena</p>	<p><b>Jorgens, Kelly J</b>.....<i>Medical Administrative Assistant</i> AAS, North Dakota State College of Science BS, Bemidji State University</p>
<p><b>Jensen, Crystal Rae</b>.....<i>English</i> BA, Minnesota State University Moorhead MFA, Minnesota State University Moorhead</p>	<p><b>Juelich, Janell Faye</b>.....<i>Nursing</i> BSN, North Dakota State University</p>
<p><b>Jensen, Paul</b>.....<i>Business</i> BS, Bemidji State University JD, Hamline University</p>	<p><b>Kaderlik, Holly</b>.....<i>Music</i> BA, Concordia College BSC, Minnesota State University Moorhead</p>
<p><b>Jesser, Joanna K</b>.....<i>IT System Support, Information Technology</i> BSED, Mayville State University</p>	<p><b>Kaiser, Lynn Renee</b>.....<i>Business: Management, Marketing and Sales</i> BS, Minnesota State University Moorhead MMA, University of Mary</p>
<p><b>Johnson, Brenda Kay</b>.....<i>Architectural Technology</i> AAS, Minnesota State Community and Technical College</p>	<p><b>Kallinen, Brian P</b>.....<i>Nursing</i> AS, Northland Community and Technical College</p>
<p><b>Johnson, Deb F</b>.....<i>Custom Training</i> BS, Moorhead State University</p>	<p><b>Kasson, Bradley</b>.....<i>Dental</i> BS, University of Minnesota, Twin Cities DA, University of Minnesota, Twin Cities</p>
<p><b>Johnson, Eric A</b>.....<i>Art</i> BS, North Dakota State University MFA, University of North Dakota</p>	<p><b>Keller, Brian</b>.....<i>Accounting</i> AS, North Dakota State College of Science BS, North Dakota State University</p>
<p><b>Johnson, Erin Elizabeth</b>.....<i>Biology</i> BA, Augustana College PhD, University of Delaware</p>	<p><b>King, Steven J</b>.....<i>Football Coach, Athletic Director</i> AA, Fergus Falls Community College BA, St. Cloud State University MA, Northern State University</p>
<p><b>Johnson, Jay E</b>.....<i>Math</i> BA, University of Minnesota, Morris MAT, University of Wisconsin Eau Claire</p>	
<p><b>Johnson, Keith</b>.....<i>Construction Management</i> Dipl, Moorhead Area Technical Institute BS, Minnesota State University Moorhead</p>	



# Faculty Credentials

<b>Kitch, Travis</b> ..... <i>Anthropology</i> BA, Minnesota State University Moorhead BS, North Dakota State University MS, North Dakota State University	<b>Loveland, Richard Alan</b> ..... <i>Fire Service</i> AAS, Lake Superior College
<b>Knoke, Karen R</b> ..... <i>Math</i> BS, Moorhead State University MA, University of St. Thomas	<b>Lovgren, Jennifer Elizabeth</b> ..... <i>Communication</i> BS, North Dakota State University MA, North Dakota State University
<b>Kohler, Kenneth</b> ..... <i>Criminal Justice</i> BA, University of Minnesota, Morris JD, Hamline University	<b>Lundborg, Shelley Kay</b> ..... <i>Business</i> BA, Concordia College MS, Minnesota State University Moorhead MBA, University of Mary
<b>Kraemer, David J</b> ..... <i>Carpentry</i> DIPL, Northwest Technical College-Detroit Lakes BS, Bemidji State University	<b>Luney, Shannon</b> ..... <i>Graphic Design Technology</i>
<b>Kraft, Colleen F</b> ..... <i>Culinary Arts</i> DIPL, Northwest Technical College-Moorhead	<b>Lutgen, Emily R</b> ..... <i>Biology</i> BA, Grinnell College MS, University of Montana-Missoula
<b>Lacher, Marcus J</b> ..... <i>Administrative Management Technology</i> BS, Minnesota State University Moorhead MA, University of St Thomas	<b>Madison, Barbara</b> ..... <i>Medical Laboratory Technician</i> AAS, Alexandria Technical & Community College
<b>Lamey, Camelia</b> ..... <i>Biological Science</i> BA, University of Minnesota MS, University of Oklahoma	<b>Maloney, Todd</b> ..... <i>Refrigeration and Air Conditioning</i> DIPL, Moorhead Area Vocational Technical Institute
<b>Lamey, Timothy</b> ..... <i>Biology</i> BS, University of Minnesota, Twin Cities MS, University of Minnesota, Duluth PhD, University of Oklahoma Norman Campus	<b>Mann, Kirk Joel</b> ..... <i>English</i> BA, Concordia College MA, St. Cloud State University
<b>Larsen, Barbara A</b> ..... <i>Nursing</i> BSN, University of North Dakota	<b>McMichael, Timothy</b> ..... <i>Web Development</i>
<b>Larsen, Nathanael</b> ..... <i>Psychology</i> BA, Minnesota State University Moorhead BS, Moorhead State University MS, North Dakota State University MSED, North Dakota State University PhD, Capella University	<b>Miller, Dennis M</b> ..... <i>Automotive Service Technology</i> BS, Valley City State University
<b>Lee, Patrick M</b> ..... <i>Construction Electricity</i> DIPL, Wadena Area Vocational Technical Institute	<b>Moeller, Michael Alan</b> ..... <i>Automotive Service Technology</i> DIPL, North Dakota State College of Science
<b>Lewis, Nicholas</b> ..... <i>Baseball Coach</i> BA, Concordia College	<b>Mohn, Shannon Dale</b> ..... <i>Automotive Service Technology</i> AAS, Hennepin Technical College
<b>Lindgren, Steven G</b> ..... <i>Psychology</i> BS, Northern State University MS, South Dakota State University	<b>Mohr, Angie Kay</b> ..... <i>Nursing</i> AAS, College of Saint Catherine-Minneapolis BS, North Central University MSN, University of Minnesota
<b>Line, Donald</b> ..... <i>Electrical Technology</i> DIPL, Wadena Area Vocational Technical Institute	<b>Moore, Cynthia L</b> ..... <i>Nursing</i> DIPL, Fergus Falls Community College AS, Fergus Falls Community College BSN, Minnesota State University Moorhead MSN, Minnesota State University Moorhead
	<b>Morstad, Tracy L</b> ..... <i>Nursing</i> BSN, Southern Illinois University MSN, University of Mary
	<b>Murray, Ashley</b> ..... <i>Nursing</i> BSN, North Dakota State University MSN, University of North Dakota

# Faculty Credentials

<p><b>Mrazek, Joseph A</b> ..... <i>Mechanical Drafting and Design</i> AA, Brainerd Community College BS, Bemidji State University MS, Bemidji State University</p>	<p><b>Palmer, Rebecca</b> ..... <i>Medical Administrative Assistant</i> AAS, Minnesota State Community and Technical College</p>
<p><b>Murphy, Thomas James</b> ..... <i>Anthropology</i> BS, Black Hills State University BS, Minnesota State University, Mankato MS, Minnesota State University, Mankato</p>	<p><b>Panser, Laurel</b> ..... <i>Philosophy</i> BA, University of Minnesota Twin Cities MA, University of Minnesota Twin Cities MS, University of Washington</p>
<p><b>Mutzenberger, Reuben T</b> ..... <i>Math</i> BS, North Dakota State University MED, North Dakota State University</p>	<p><b>Parker, Anthony J</b> ..... <i>Business Entrepreneurship</i> BSB, University of Minnesota MBA, Colorado State University-Pueblo</p>
<p><b>Nansen, Gary Lee</b> ..... <i>Civil Engineering Technology</i> BEN, University of Minnesota</p>	<p><b>Patrick, Judy A, CPA</b> ..... <i>Accounting</i> BBA, University of New Mexico-Anderson/Man MBA, Metropolitan State University</p>
<p><b>Neece, Shari L</b> ..... <i>English</i> BS, Minnesota State University Moorhead LIC, Moorhead State University MA, North Dakota State University</p>	<p><b>Peeters, Christopher</b> ..... <i>Basketball Coach</i> AA, Central Lakes College BA, Jamestown College</p>
<p><b>Nelson, Jeffrey O</b> ..... <i>Criminal Justice</i> AA, Northland Community College BA, Minnesota State University Moorhead</p>	<p><b>Peltier, Robin Theresa</b> ..... <i>Dental</i> AAS, Minnesota State Community and Technical College BSDH, Minnesota State University Mankato</p>
<p><b>Neuenfeldt, Phyllis H</b> ..... <i>Math</i> BSED, North Carolina State University at Raleigh MED, East Carolina University</p>	<p><b>Pesch, Ryan</b> ..... <i>Equine Science</i></p>
<p><b>Nevala, David E</b> ..... <i>Heating, Ventilation and Air Conditioning</i> DIPL, Western Iowa Technical and Community College</p>	<p><b>Petermann, Shana R</b> ..... <i>Biology</i> BS, North Dakota State University MS, North Dakota State University</p>
<p><b>Nielson, Laurel A</b> ..... <i>Sociology</i> BS, Mayville State University MA, North Dakota State University</p>	<p><b>Peterson, Bonnie</b> ..... <i>Health Information Technology</i> BA, College of Saint Scholastica</p>
<p><b>Nikolas, Arlin D</b> ..... <i>History</i> BA, Moorhead State University MS, North Dakota State University</p>	<p><b>Petersen, Justin</b> ..... <i>ELL</i> BA, American Military University MA, Azusa Pacific University</p>
<p><b>Odden, Richard</b> ..... <i>Golf Management</i></p>	<p><b>Peterson, Greg R</b> ..... <i>Diesel Equipment Technology</i> DIPL, Northwest Technical College-Moorhead</p>
<p><b>Oliver, Nikki</b> ..... <i>Nursing</i> AA, Minnesota State Community and Technical College AS, Minnesota State Community and Technical College AAS, Minnesota State Community and Technical College BSN, Minnesota State University Moorhead</p>	<p><b>Pierce, Patsy</b> ..... <i>Nursing</i> CERT, Fergus Falls Community College</p>
<p><b>Olson, David D</b> ..... <i>Math</i> BSED, Valley City State University MAT, Minot State University</p>	<p><b>Pladson, Kristie G</b> ..... <i>Dental</i> DIPL, Rochester Community College AS, North Dakota State College of Science BS, Valley City State University MS, Minnesota State University Moorhead</p>
<p><b>Otto, Teresa Uhde</b> ..... <i>English</i> BS, Bemidji State University MS, University of Wisconsin-Stout MA, Hamline University</p>	<p><b>Potter, Brenda A</b> ..... <i>Medical Administrative Assistant</i> BS, Moorhead State University</p>
	<p><b>Preuss, Tim</b> ..... <i>Information Technology</i> BS, Concordia College MED, North Dakota State University</p>

# Faculty Credentials

<b>Prieve, Thomas M</b> ..... <i>Equine Science</i> BS, University of Minnesota DVM, University of Minnesota	<b>Saraswathamma, Manjusha T</b> ..... <i>Chemistry</i> BSC, Mahatma Gandhi University - India MS, Mahatma Gandhi University - India MS, Cochin University of Science and Technology PhD, North Dakota State University
<b>Quamme, Kent</b> ..... <i>Business</i> BS, Dickinson State University MS, University of North Dakota	<b>Scheller, Monte</b> ..... <i>Electrical Line Worker</i> DIPL, Northwest Technical College - Wadena CERT, Wadena Area Vocational Technical Institute
<b>Redlin, Jennifer Anne</b> ..... <i>Psychology</i> BS, North Dakota State University MS, North Dakota State University	<b>Schirmer, Diana Rachel</b> ..... <i>English</i> BA, Minnesota State University Moorhead MFA, Minnesota State University Moorhead
<b>Reed, Amber L</b> ..... <i>Nursing</i> DIPL, Fergus Falls Community College AS, Fergus Falls Community College BSN, Minnesota State University Moorhead	<b>Schirmer, Joshua D</b> ..... <i>English</i> BA, Minnesota State University Moorhead
<b>Reisenauer, Kent James</b> ..... <i>PowerSports Technology</i> AAS, North Dakota State College of Science	<b>Schwalboski, Ann Marie</b> ..... <i>English</i> BS, St. Cloud State University MA, Bowling Green State University MFA, Emerson College
<b>Retzlaff, Jason</b> ..... <i>Physical Education</i> AA, Fergus Falls Community College BS, North Dakota State University MS, North Dakota State University	<b>Seaborn, Susan J</b> ..... <i>Nursing</i> BSN, American Sentinel University MSN, American Sentinel University
<b>Rinehart, Lisa</b> ..... <i>ELL</i> BA, Concordia College MED, University of Phoenix- Phoenix Campus	<b>Shepard, Jana Lee</b> ..... <i>English</i> BA, St. Cloud State University MA, St. Cloud State University
<b>Ripplinger, Scott C</b> ..... <i>Automotive Service Technology</i> DIPL, East Grand Forks Technical Institute	<b>Shumake, Crystal K</b> ..... <i>Dental Assisting</i> CERT, North Dakota State College of Science AAS, Lake Superior College BS, Minnesota State University Moorhead
<b>Roberts, Randy R</b> ..... <i>Architectural Technology</i> DIPL, Northland Community and Technical College	<b>Simonson, Holley</b> ..... <i>Psychology</i> BA, University of Minnesota MS, North Dakota State University
<b>Robertson, Maronda Sue</b> ..... <i>Counselor</i> BS, University of Wisconsin-Madison MS, Minnesota State University, Mankato	<b>Skatvold, Karina Marie</b> ..... <i>Dental Hygiene and Dental Assisting</i> BS, Old Dominion University MA, University of Oklahoma Norman Campus
<b>Rocholl, Leah</b> ..... <i>Nursing</i> BSN, Minnesota State University Moorhead	<b>Smith, Cliff Fagerburg</b> ..... <i>Math</i> BS, Portland State University MS, Portland State University
<b>Roers, Mary B</b> ..... <i>Nursing</i> AS, Fergus Falls Community College ADN, Northland Community College BSN, Moorhead State University MSN, University of North Dakota	<b>Smith, Leretta May</b> ..... <i>Sociology</i> BS, North Dakota State University MS, North Dakota State University PhD, South Dakota State University
<b>Rogers, Kaele</b> ..... <i>Music</i> AFA, Normandale Community College BA, Northwestern College	<b>Soeth, Lee</b> ..... <i>Fire Service</i>
<b>Rosell, Brian L</b> ..... <i>Auto Body Collision Technology</i> DIPL, Northwest Technical College-Detroit Lakes	<b>Stangeland, Chad</b> ..... <i>Fire Service</i> AA, Minnesota State University Moorhead
<b>Samuelson, Kimberle Rae</b> ..... <i>Health Information Technology</i> DIPL, Northwest Technical College-Moorhead AS, Minnesota State University Moorhead	<b>Stende Miller, Mary Louise</b> ..... <i>Pharmacy Technology</i> BS, North Dakota State University

# Faculty Credentials

<b>Stenerson, Diane Lynn</b> ..... <i>English</i> AS, Fergus Falls Community College BS, Minnesota State University Moorhead MED, Lesley University	<b>Tharaldson, Brent A</b> ..... <i>Web Development</i> AAS, Minnesota State Community and Technical College BA, Minnesota State University Moorhead
<b>Stevenson, Angela</b> ..... <i>Surgical Technology</i> AS, Excelsior College	<b>Thielen, Leslie</b> ..... <i>Paralegal</i> BA, University of Minnesota Twin Cities JD, Marquette University
<b>Stigen, Nancy E, CMA</b> ..... <i>Accounting</i> AA, Moorhead Area Vocational Technical Institute BS, Moorhead State University	<b>Thompson, Fonda Ruth</b> ..... <i>Medical Transcription</i> DIP, Northwest Technical College-Moorhead
<b>Stoddard, David</b> ..... <i>Music</i> BS, University of Wisconsin - Stevens Point MM, North Dakota State University	<b>Todt, Rebecca W</b> ..... <i>Nursing</i> BS, Berea College
<b>Stodden, William</b> ..... <i>Political Science</i>	<b>Toenges, Randall</b> ..... <i>Culinary Arts</i> BA, Le Cordon Bleu College of Culinary Arts BA, University of St. Thomas
<b>Stowman, Shelly</b> ..... <i>Communication</i> BA, California State University - Los Angeles MBA, Baker University College of Arts and Science PhD, North Dakota State University	<b>Tougas-Mann, Cynthia Kay</b> ..... <i>Child Care and Education</i> AA, Central Lakes College BES, St Cloud State University
<b>Swanson, Alicia R</b> ..... <i>Nursing</i> BSN, North Dakota State University MSN, Concordia College	<b>Trombley, Kathryn M</b> ..... <i>Communication</i> BS, Saint John Fisher College MA, Central Michigan University
<b>Swanson, Kathleen</b> ..... <i>Nursing</i> AAS, North Dakota State University BSN, Minnesota State University Moorhead	<b>Trosvig, Michael R</b> ..... <i>Music</i> MM, University of Colorado at Boulder
<b>Swedberg, Marilyn</b> ..... <i>Psychology</i> AA, Fergus Falls Community College BA, Moorhead State College MS, St. Cloud State University	<b>Tungseth, Ryan</b> ..... <i>Golf Management</i> DIP, Hennepin Technical College
<b>Swetland, Jeffrey</b> ..... <i>Auto Body Collision Technology</i>	<b>Ullmer, Mike W</b> ..... <i>Marine Engine Technology</i> DIP, Northwest Technical College DIP, Northwest Technical College AAS, Fergus Falls Community College BS, Bemidji State University
<b>Synsteliem, Loren A</b> ..... <i>Psychology</i> AA, Fergus Falls Community College BA, Concordia College MSW, University of Connecticut- School of Social Work	<b>Vigesaa, Tami</b> ..... <i>Sociology</i> MED, University of Minnesota Twin Cities MA, University of North Dakota
<b>Szczech-Johnson, Janet D</b> ..... <i>Network Technology Administration, Cisco</i> DIP, Wadena Area Vocational Technical Institute BS, Bemidji State University MS, Bemidji State University	<b>Wagner, Dennis D</b> ..... <i>Construction Electricity</i> AAS, North Dakota State College of Science
<b>Tenderholt, Kimberly</b> ..... <i>Nursing</i> AS, Minnesota State Community and Technical College AAS, Northwest Technical College - Moorhead	<b>Wagner, John</b> ..... <i>Criminal Justice</i> AA, Fergus Falls Community College BA, Minnesota State University Moorhead MLA, Minnesota State University Moorhead
<b>TenEyck-Stafki, Susan D</b> ..... <i>Child Care and Education</i> BS, Moorhead State University LIC, Moorhead State University MS, Moorhead State University	<b>Walters, Christopher A</b> ..... <i>English</i> BA, University of Minnesota MA, State University of New York at Buffalo
	<b>Ward, Carrie M</b> ..... <i>Administrative</i> BS, Minnesota State University Moorhead MA, Minnesota State University Moorhead



# Faculty Credentials

**Weber, Dean A** ..... *Plumbing*  
 DIPL, Northwest Iowa Community College

**Weber, Richard T** ..... *Diesel Equipment Technology*  
 DIPL, North Dakota State College of Science

**Weibye, 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

**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  
 BBA, Bellevue University  
 MBA, Bellevue University

**Williams, Marcia E** ..... *Accounting*  
 ASBA, North Dakota State College of Science  
 BSBA, University of North Dakota

**Williams, Ronald** ..... *Engineering*  
 BS, North Dakota State University  
 MS, North Dakota State University  
 PhD, North Dakota State University

**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

# Faculty Credentials

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# Staff

Lynn Aasen ..... <i>General Maintenance Worker</i>	Michele Burns ..... <i>Academic Advisor</i>
Megan Adamczyk ..... <i>K-12 Collaboration Manager</i>	Christopher Burt ..... <i>Interim Admissions Representative</i>
Sharlene Allen ..... <i>College Registrar</i>	Alyssa Campion ..... <i>eCampus Enrollment Manager</i>
Jeanine Allmaras ..... <i>Accounts Receivable Clerk</i>	Pamela Canning ..... <i>Campus Resource Specialist</i>
Mark Altenburg ..... <i>Director of Advancement</i>	Thomas Capistran ..... <i>Cleaning Supervisor</i>
Sonja Amundson ..... <i>Exam Monitor</i>	Janice Carpenter ..... <i>Purchasing Account Clerk</i>
David Anderson ..... <i>General Maintenance Worker</i>	Bryan Christensen ..... <i>BES Director</i>
Douglas Andring ..... <i>Assistant Human Resources Director</i>	June Clark ..... <i>Nursing Admissions Coordinator</i>
Rhonda Bahls ..... <i>Administrative Assistant</i>	Kevin Clark ..... <i>General Maintenance Worker</i>
Lynn Bakke ..... <i>Call Center Resource Specialist</i>	Janine Corbin ..... <i>Accounts Payable Specialist</i>
Paul Bakkum ..... <i>General Maintenance Worker</i>	Tori Covington ..... <i>Payroll Clerk/ Campus Administrative Support</i>
Heidi Balgaard ..... <i>Human Resources Associate</i>	Rachel Cox ..... <i>English Tutor</i>
Nicole Ballard ..... <i>BES Administrative Assistant</i>	Tracy Crawford ..... <i>IT Help Desk</i>
Evonne Barnum ..... <i>Office Assistant</i>	Lorna Crowell ..... <i>Exam Monitor</i>
Tina Bartels ..... <i>Graphic Design Coordinator</i>	Abby Crowser ..... <i>Solution Center Resource Specialist</i>
Allen Behr ..... <i>Business Manager</i>	Deborah Dague ..... <i>Associate Registrar</i>
Alecia Bement ..... <i>eCampus Administrative Assistant</i>	Bonnie Dahring ..... <i>Associate Director, Financial Aid</i>
Rachel Bergerud ..... <i>Account Clerk; Call Center Resource Specialist</i>	Christopher DeBaere ..... <i>IT Help Desk</i>
Teresa Beske ..... <i>MLT/PBT Lab Assistant</i>	MaryLisa Denzel ..... <i>Interim Housing Director; Solutions Center Resource Specialist</i>
Jennifer Bieniek ..... <i>Academic Advisor</i>	Bethany Dertinger ..... <i>Accountant</i>
Cynthia Boe ..... <i>Career Services Director</i>	Christi Dickey ..... <i>Associate Director, Financial Aid</i>
Joanne Bokinskie ..... <i>Assistant to the Vice President of Student Development and Marketing</i>	Janice Dimke ..... <i>Exam Monitor</i>
Gary Borg ..... <i>General Maintenance Worker</i>	Teri Dobbs ..... <i>Industry Liaison</i>
Mary Braunberger ..... <i>Exam Monitor</i>	Amy Duchsherer ..... <i>Study Skills Tutor</i>
Christian Brezczinski ..... <i>Director of Student Development Services</i>	Cindy Dukowitz ..... <i>General Maintenance Worker</i>
Laurie Brekke ..... <i>Campus Resource Specialist</i>	David Dumbeck ..... <i>Data Systems Architect</i>
Denice Brewer ..... <i>CTS Administrative Assistant</i>	Sherry Dykhoff ..... <i>Exam Monitor</i>
Shannon Britten ..... <i>Enrollment Manager</i>	Scott Ebsen ..... <i>Director of Student Services</i>
Penny Brynildson ..... <i>Academic Advisor</i>	Diane Ellwanger ..... <i>Food Service Worker</i>
Karen Buboltz ..... <i>Director of Student Services</i>	Daniel Elstad ..... <i>IT Help Desk</i>
Jade Buermann ..... <i>IT Help Desk</i>	Carissa Engstrom ..... <i>Interim Enrollment Manager</i>

# Staff

Dellorie Enno..... <i>Dental Assistant</i>	Kari Honer ..... <i>Exam Monitor</i>
David Feda ..... <i>General Maintenance Worker</i>	Mary Huber ..... <i>Student Services/Campus Crossing Assistant</i>
Mary Frendin..... <i>College Registration Associate</i>	Alan Hughes ..... <i>General Maintenance Worker</i>
Karen Gabrielson ..... <i>Account Clerk</i>	Bruce Hurt..... <i>Facilities Services Supervisor</i>
Randy George..... <i>General Maintenance Worker</i>	Adam Hutton..... <i>Retail Services Assistant/Closer</i>
Linda Gnahn ..... <i>Interim College Bookstore Coordinator</i>	Claryce Iverson..... <i>Exam Monitor</i>
Marcia Goodyear ..... <i>Administrative Assistant</i>	Pamela Jacob ..... <i>College Admissions Specialist</i>
Kim Gould ..... <i>Campus Resource Specialist</i>	Robert Jacobson ..... <i>General Maintenance Worker</i>
Susan Grantham ..... <i>Dental Assistant</i>	Jacqueline Jandt..... <i>Financial Aid Assistant</i>
Dorothy Green..... <i>Account Clerk Senior</i>	Casey Jensen.... <i>Web Portal and Application Developer/Administrator</i>
Judith Hacking ..... <i>Library Technician</i>	David Jensen ..... <i>Student Life and Recruitment Director</i>
Darren Hage ..... <i>IT Help Desk</i>	Michele Jenson ..... <i>Associate Registrar</i>
Cheri Hagen..... <i>Library Assistant</i>	Sheila Jesness..... <i>CTS Administrative Assistant</i>
Craig Hanson ..... <i>General Repair Worker</i>	Kathryn Johnson ..... <i>Interim Enrollment Manager</i>
Kenneth Hanson..... <i>Study Skills Tutor</i>	Marie Johnson ..... <i>Exam Monitor</i>
Lavonn Hanson..... <i>Campus Administrative Support</i>	Susan Johnson ..... <i>General Maintenance Worker</i>
Lori Harper ..... <i>Library Technician</i>	Kyle Johnston..... <i>Director of Admissions</i>
Daniel Harrison ..... <i>Instructional Design and Development Coordinator</i>	Andrew Joy ..... <i>Telecommunications and Wiring Specialist</i>
Doreen Hauge ..... <i>Library Technician</i>	Lori Joy ..... <i>Exam Monitor</i>
Jeffrey Haukos ..... <i>Multimedia Information Technician</i>	Peg Kalar ..... <i>Communications Specialist</i>
Cynthia Hayward ..... <i>Interim Financial Aid Associate</i>	Jeannie Kaspari..... <i>Dental Lab Assistant</i>
Mary Heiden ..... <i>Exam Monitor</i>	Brenda Kava ..... <i>Associate Registrar</i>
Lorie Heldt..... <i>Campus Resource Specialist</i>	David Kenyon..... <i>General Maintenance Worker</i>
Alec Henry..... <i>Library Technician</i>	Sarah Kenz..... <i>Academic Advisor</i>
Marlo Hieb ..... <i>Bookstore Manager</i>	Jennifer Ketterling Pederson ..... <i>Dental Clinic Manager</i>
Jacqueline Hoban..... <i>Administrative Assistant</i>	Linda Kidder ..... <i>Exam Monitor</i>
Amy Hochgraber ..... <i>CTS Industry Liaison</i>	Heidi King..... <i>Food Service Coordinator</i>
Joel Hoffman..... <i>Nursing Lab Assistant</i>	Marci King ..... <i>Library Technician</i>
Lacey Hoffmann ..... <i>Registration and Records Assistant/ Foundation Administrative Assistant</i>	Christopher Klein ..... <i>IT Help Desk</i>
Sarah Hofmann ..... <i>Learning Services Coordinator and Academic Advisor</i>	Maggie Kluge ..... <i>Human Resources Assistant</i>
	Joel Kotschevar ..... <i>Building and Grounds Supervisor</i>
	Jon Kragness..... <i>Director of Disability Services</i>



# Staff

Roger Krause ..... <i>General Maintenance Worker</i>	Nathan Nims ..... <i>IT Help Desk</i>
Onnalee Krump ..... <i>Assistant Payroll Coordinator</i>	Gene Nygaard ..... <i>General Maintenance Worker</i>
Jennifer Labish ..... <i>Campus Resource Specialist</i>	Wendy Olds ..... <i>Director of Financial Aid</i>
Judith LaFleur ..... <i>Learning Center Tutor</i>	Melissa Olheiser ..... <i>Industry Liaison</i>
Loretta Lambrecht ..... <i>Exam Monitor</i>	Ann Olson ..... <i>Associate Registrar/ Foundation Administrative Assistant</i>
Barbara LaPlante ..... <i>Assistant to Continuous Improvement Efforts (AQIP)</i>	Leslie Olson ..... <i>Administrative Assistant</i>
Barbara Larsen ..... <i>Exam Monitor</i>	Jesus Ortiz ..... <i>General Maintenance Worker</i>
Lori Larson ..... <i>Executive Director, Fergus Area College Foundation</i>	Rick Pedersen ..... <i>General Repair Worker</i>
Timothy LaRue ..... <i>General Maintenance Worker</i>	Nicole Perala ..... <i>Transfer Specialist</i>
Amanda LeGare ..... <i>Academic Advisor</i>	Meghan Perry ..... <i>Study Skills Tutor</i>
Scott Lein ..... <i>General Repair Worker</i>	Pamela Phillips ..... <i>College Resource Specialist</i>
Julianna Lindsey ..... <i>Call Center Resource Specialist</i>	Patsy Pierce ..... <i>Exam Monitor</i>
Jacqueline Lysdahl ..... <i>Administrative Assistant</i>	Ann Porter ..... <i>Academic Advisor</i>
Jacquelyn Maethner ..... <i>Administrative Assistant, Fergus Area College Foundation</i>	Suzanne Rethemeier ..... <i>Academic Advisor</i>
Amy Marfell ..... <i>Exam Monitor</i>	Julie Richards ..... <i>Exam Monitor</i>
Heath Markovetz ..... <i>Network Administrator</i>	Janice Riewer ..... <i>Exam Monitor</i>
Katherine Martin ..... <i>Exam Monitor</i>	Patricia Robins ..... <i>General Maintenance Worker</i>
Joni Massie ..... <i>eCampus Advisor/Retention Specialist</i>	Paula Rohr ..... <i>Interim Study Skills Tutor/ Disability Services Coordinator</i>
Angela Mathers ..... <i>Director of Student Engagement</i>	Margo Rolczynski ..... <i>Administrative Assistant</i>
Rebecca Matinda ..... <i>Data Analyst</i>	Hayley Ross ..... <i>Bookstore Assistant</i>
Robin Mattson ..... <i>Building and Grounds Supervisor</i>	Cheryl Rotz ..... <i>Campus Resource Specialist</i>
Amanda May ..... <i>Library Technician</i>	Mary Rousslang ..... <i>Exam Monitor</i>
Victoria McWane-Creek ..... <i>Student Success Coach</i>	Justin Rovang ..... <i>Web Developer</i>
Brenda Mergens ..... <i>Administrative Assistant to the Deans</i>	Melinda Rustad ..... <i>Curriculum Development Coordinator</i>
Ricky Mitchell ..... <i>General Maintenance Worker</i>	Erienne Sandness ..... <i>Curriculum Technician</i>
Barbara Moquist ..... <i>Retail Services Director</i>	Sarah Saude ..... <i>Associate Director, Financial Aid</i>
Kitra Nelson ..... <i>Project Coordinator, Strategic Prevention Framework Partnership for Success</i>	Donna Sauvageau ..... <i>Administrative Assistant Title III</i>
Mark Nelson ..... <i>Academic Advisor</i>	Arthur Saylee ..... <i>General Maintenance Worker</i>
Larissa Ness ..... <i>College Admissions Specialist</i>	Kathleen Schaefer ..... <i>CTS Administrative Assistant</i>
Karissa Newby ..... <i>Bookstore Coordinator</i>	Douglas Schmidt ..... <i>Electrical Line Worker Lab Assistant</i>
	Shannon Schmitz ..... <i>Call Center Resource Specialist</i>

# Staff

Roger Schoon ..... <i>General Maintenance Worker</i>	Sarah Vance..... <i>Exam Monitor</i>
Karen Schumacher ..... <i>Health and Emergency Services Director</i>	Lawrence Vange..... <i>General Maintenance Worker</i>
Gregory Schwoboda ..... <i>Systems Security Administrator</i>	Joan VerSteeg..... <i>Exam Monitor</i>
Jessica Sem..... <i>Enrollment Manager</i>	Susan Vickstrom..... <i>Campus Resource Specialist</i>
Heath Sershen..... <i>Web Content Specialist</i>	Lori Vigesaa ..... <i>Project Coordinator, Strategic Prevention Framework Partnership for Success</i>
Krista Shaikoski..... <i>College Admissions Specialist; Call Center Resource Specialist</i>	Justin Wade..... <i>Web and Application Developer</i>
Matthew Sheppard..... <i>Director of College Facilities</i>	Kristy Wagar..... <i>Account Clerk Senior</i>
Angela Sieling..... <i>Associate Registrar</i>	Linda Wagner..... <i>Dental Department Assistant</i>
Claudia Simon ..... <i>Disability and Learning Services Director</i>	Tamara Wagner..... <i>Campus Crossing Assistant</i>
Cliff Smith..... <i>Math Tutor</i>	Grant Walton ..... <i>Electrical Line Worker Lab Assistant</i>
Elizabeth Smith..... <i>Campus Administrative Support/Math Tutor</i>	Erin Warren..... <i>eCampus Resource Specialist/Academic Advisor</i>
Sandra Smith..... <i>Human Resources Associate</i>	Melanie Waye ..... <i>Retail Services Assistant</i>
Joann Smithwick..... <i>Campus Crossing Assistant</i>	Geraldine Weeding ..... <i>Exam Monitor</i>
Jenna Sobiech ..... <i>Accounts Receivable Coordinator</i>	Yvonne Wegscheid..... <i>General Maintenance Worker</i>
Michael Soukup ..... <i>Wiring Specialist</i>	Rennae Weiss..... <i>Campus Resource Specialist</i>
Nancy South..... <i>Director of Student Services</i>	Dudley Wells ..... <i>Math Tutor</i>
Jamie Steidle..... <i>Nursing Lab Assistant</i>	Dale Westley ..... <i>Enrollment Manager</i>
Lesley Stoering..... <i>Exam Monitor</i>	Kay Wilder..... <i>Fitness Center Manager</i>
Diane Stroot..... <i>College Registration Associate</i>	Wayne Wolden..... <i>Business Manager</i>
Linda Sveningson ..... <i>Exam Monitor</i>	Michelle Wosika..... <i>Interim Associate Director, Financial Aid</i>
Armond Swanson..... <i>Account Clerk</i>	Lisa Ziegler ..... <i>Help Desk Director</i>
Meloni Swenson ..... <i>General Maintenance Worker</i>	
Travis Swenson..... <i>Dental Assistant</i>	
Brenda Tangen ..... <i>Human Resources Associate</i>	
Teresa Thompson..... <i>Payroll Coordinator</i>	
Steven Timmer..... <i>Learning Center Tutor</i>	
Carol Totland..... <i>Assistant to the President</i>	
Anna Trautmann ..... <i>Food Service Worker</i>	
Katie Tysdal..... <i>Assistant to the Associate Vice President of Academic Affairs</i>	
Theresa Ukkelberg ..... <i>Exam Monitor</i>	
David Uselman..... <i>Nursing Lab Assistant</i>	

# 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 Campus

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 Campus**  
900 Highway 34 East  
Detroit Lakes, MN 56501-2698  
218.846.3700  
Fax: 218.846.3794



**Fergus Falls Campus**  
1414 College Way  
Fergus Falls, MN 56537-1000  
218.736.1500  
Fax: 218.736.1510



**Moorhead Campus**  
1900 28th Avenue South  
Moorhead, MN 56560-4899  
218.299.6500  
Fax: 218.299.6810



**Wadena Campus**  
405 SW Colfax Avenue  
Wadena, MN 56482-1447  
218.631.7800  
Fax: 218.631.7904

**M|State**  
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**eCampus**

[ecampus@minnesota.edu](mailto:ecampus@minnesota.edu)

**minnesota.edu**  
**877.450.3322**