



COLLEGE CATALOG

2025-2026

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 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 Dacia Johnson, 1414 College Way, Fergus Falls, MN 56537, Office A520, 218-736-1512, fax: 218-736-1705. 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 complies with Minnesota Statute 197.775, which exceeds all criteria of Title 38 United States Code Section 3679(e)."

**Minnesota State
Community and Technical College**
Title IX and Cleary Compliance Director
Kara Helmig
1900 28th Avenue South, Moorhead, MN 56560
Office D111B
kara.helmig@minnesota.edu
TitleIX@minnesota.edu
218.299.6522

**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 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.



MINNESOTA STATE

A member of Minnesota State. 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.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

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DETROIT LAKES

900 Highway 34 East
Detroit Lakes, MN 56501-2698
218.846.3700 • 877.450.3322

About the Campus

The Detroit Lakes campus is known for strong healthcare, transfer and workforce development programs. Nursing, Radiologic Technology, Limited Scope Radiography and liberal arts transfer degree programs in history, psychology, political science and other fields are offered in Detroit Lakes. The campus also houses offices for M State's workforce development branch, which provides a broad range of training in everything from leadership development to safety compliance.

Small class sizes, flexible delivery and an understanding of students' prior learning experiences create a personalized education experience, and transfer programs prepare students for smooth and easy transitions to the four-year college or university of their choice.

The campus provides food service, student organizations, a veterans resource center and other support services to promote students' academic success. Scholarship opportunities are available through the M State Foundation and Alumni.

About the Community

Located about 45 minutes east of Fargo-Moorhead and situated among plentiful woodlands, prairies and lakes – 412 lakes within a 25-mile radius – Detroit Lakes is an ideal place for outdoor recreationists to live, work and play. The community's mile-long beach is a regional hot spot for beach-goers, and there are plenty of other nearby lakes to visit as well as many parks and miles of trails to explore. Hiking, biking, fishing, camping, canoeing and kayaking, ATVing, river tubing, golfing, skiing, snowmobiling and other activities keep people active outdoors, all year long.

The community's year-round population of about 10,000 increases by the thousands every summer due to tourists and seasonal residents. They come for the area's abundant natural resources, but also for the full calendar of fun community events. Detroit Lakes hosts the WE Fest Country Music Festival and Northwest Water Carnival every summer, along with the annual Pine to Palm Golf Tournament, Festival of Birds, winter Polar Fest, and many others. The Detroit Mountain Recreation Area, Holmes Theatre, museums, and community center provide opportunities for year-round entertainment and culture, and "troll hunters" come to see the famous, giant troll sculptures made and hidden throughout the area by international artist Thomas Dambo.

Detroit Lakes has a strong entrepreneurial spirit and mix of manufacturing, tourism, agriculture and retail, and has top-rated schools and healthcare facilities.



FERGUS FALLS

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

About the Campus

The Fergus Falls campus has provided high-quality academic programs in the liberal arts and health sciences for over 60 years and is known for its rich tradition in the fine arts and athletics. Situated within a park-like 142 acres on the city's west edge, the picturesque campus features a vibrant calendar of student events, multiple student clubs and organizations, and convenient on-campus student housing.

The home of M State Spartan Athletics, the campus hosts football, volleyball, golf, basketball, baseball and softball games as part of the National Junior College Athletic Association and the Minnesota College Athletic Conference. As the center of M State's fine arts opportunities, the campus hosts extensive art collections and multiple band and choir concerts, plays, musicals and other special events throughout the year.

The campus is also one of the only community college campuses in Minnesota to offer on-campus student housing, with two apartment complexes providing a comfortable and affordable way for Fergus Falls students to stay close to their classes and engage in college activities. Residents are able to purchase meal plans through the campus cafeteria.

Scholarship opportunities are available to Fergus Falls students through the Fergus Area College Foundation.

About the Community

With abundant opportunities for outdoor exploration and plenty of dining, entertainment and shopping options, Fergus Falls feels larger than its 14,000-person population might suggest.

Located just off Interstate 94, less than an hour's drive from Fargo-Moorhead, Fergus Falls is the county seat of Otter Tail County, which holds the distinction of having the most lakes of any county in the United States – 1,048 of them.

Thanks to all those lakes, along with hundreds of miles of woodland and prairie trails, city and county parks, scenic byways and more, the Fergus Falls area is a veritable playground for people who love the outdoors. Boating, swimming, fishing, ATVing and snowmobiling, kayaking and canoeing, camping, walking, hiking, cross-country skiing and golfing are all popular.

For indoor adventurers, Fergus Falls offers art galleries, museums, a performance center, movie theatre, restaurants, exercise clubs and a vibrant shopping scene. Government offices and services, and quality healthcare, are all readily available in the community.



MOORHEAD

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

About the Campus

The most populous of M State's four campuses, the Moorhead campus has a vibrant atmosphere and comprehensive academic offerings, with about 50 technical and liberal arts degree, diploma and certificate options.

Home to an innovative healthcare simulation center and high-tech transportation center, the campus is a hub for M State's hands-on healthcare and transportation programs, which prepare students for in-demand, well-paying careers in nursing, automotive service and other fields. It's also home to the college's business programs and the region's Small Business Development Center. Other popular programs offered in Moorhead include Criminal Justice, Computer Programming and Cybersecurity, Dental Assisting and Dental Hygiene, Electrical Technology, Graphic Design, PowerSports and several liberal arts and sciences transfer pathways.

The on-site Campus Fitness Center offers cardio and weight equipment, personal training, group classes and other benefits, and an agreement between M State and the nearby Minnesota State University Moorhead (MSUM) makes it possible for M State students to live in MSUM's residence halls.

A full slate of support services are in place at M State Moorhead to help ensure student success, including counseling, tutoring, a veterans resource center, library, campus store, food service, student organizations and more. Scholarship opportunities are available through the M State Foundation and Alumni.

About the Community

Fargo-Moorhead is small enough to feel comfortable yet offers all the benefits of a large metropolitan area, with cultural, recreational and commercial diversity. Moorhead's population is about 45,000, and right across the Red River/Minnesota border is Fargo, North Dakota's most populous city; their combined metro-area population is more than 200,000 – and growing.

Arts and culture flourish in the area, where local talent and community interest support multiple art groups, galleries and theaters, semi-professional sports teams, a symphony orchestra, ballet company, civic opera company and more. Parks, trails, playgrounds, golf courses, swimming pools, sports centers and the Red River provide opportunities for walking, biking, skiing, water recreation and other outdoor activities, and there are enough shops, restaurants and nightclubs around to suit almost every taste and budget.

The area is known as a thriving center of manufacturing, agribusiness, technology, research and construction, and is regionally recognized for its top-notch healthcare facilities.



WADENA

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

About the Campus

The Wadena campus has a long and strong history of offering high-quality, hands-on career and technical programs. The campus offers programs in nursing, engineering and architecture, as well as liberal arts and sciences transfer pathways in political science, history and psychology.

Also home to M State's in-demand Cosmetology and Electrical Line Worker programs, the Wadena campus includes an on-site salon and 90-acre line worker training field. Line workers can demonstrate their pole climbing abilities and install electrical structures on site, and community members can visit the campus salon to receive hair, nail, skin and massage services from student practitioners.

An emphasis on hands-on, real-life experience combined with foundational classroom learning prepares students for the next step in their education or career, and smaller class sizes mean a more personalized education experience.

The campus has a welcoming atmosphere and supports student success with on-site childcare, counseling, tutoring, a veterans resource center, library, campus store, food service, multiple student organizations and more. Scholarship opportunities are available through the M State Foundation and Alumni.

About the Community

Positioned at the gateway to Minnesota lakes country, about an hour and a half east of the Fargo-Moorhead metro area, Wadena is known for having 1,000 lakes within a 50-mile radius, and for its 400 acres of scenic parklands.

With a population of just over 4,000, the community has a welcoming, small-town charm with plenty of places to eat, shop and play. Amenities and attractions include an art deco historic movie theater and downtown shopping area, community fitness center, museum, railroad depot, restaurants, a highly-rated healthcare facility and a unique "Murals of Minnesota" alleyway art exhibit.

For outdoor recreationists, there are miles of trails for hiking, biking, horseback riding, cross-country skiing and snowshoeing, and opportunities abound for ATVing, snowmobiling, golfing, camping, fishing and hunting. The community hosts fun events and activities all year long, including a county fair, June Jubilee, costume and pub crawls, Christmas festival and parade of lights, and more.

Strong in the manufacturing, agribusiness and construction industries, Wadena is home to more than 200 businesses. As the county seat of Wadena County, government services are conveniently located in the city.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

DIRECTORY OF COLLEGE SERVICES

ACADEMIC AND STUDENT SERVICES

Provost/Vice President of Academic Affairs Dr. Matthew Borcharding.....	218.736.1506
Dean of School of Applied Technology Dr. Mark Bannatyne	218.299.6817
Dean of Extended Learning Dr. Marsha Weber	218.299.6631
Dean of the School of Health Sciences, Human Services and Nursing Dr. Ken Kompelien.....	218.736.1522
Dean for the School of Liberal Arts and Sciences Alicia Carley.....	218.299.6505
Vice President of Student Affairs Elise Sturdvant.....	218.299.6853
Interim Dean of Student Affairs Scott Ebsen.....	219.299.6620
Dean of Integrated Communication Karen Reilly.....	218.736.1508

DETROIT LAKES

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	218.846.3756
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
Social Worker, Resources and Referrals.....	218.846.3687
Spartan Center.....	218.846.3734
Student Life.....	218.846.3768
Student Records.....	218.846.3789
Support Center	877.450.3322
Veterans Services.....	218.329.6040

FERGUS FALLS

Academic Advising.....	218.736.1533
Assessments/Accuplacer	218.736.1529
Athletics.....	218.736.1648
Bookstore.....	218-736.1556
Computer Help Center	218.736.1655
Counseling.....	218.736.1539
Disability Services	218.736.1595
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	218.736.1512
Security.....	218.770.9861

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

DIRECTORY OF COLLEGE SERVICES

Spartan Center.....	218.736.1619
Student Life.....	218.736.1537
Student Records.....	218.736.1529
Support Center	877.450.3322
Veterans Services.....	218.329.6040

MOORHEAD

Academic Advising.....	218.299.6880
Assessments/Accuplacer	877.450.3322
Bookstore.....	218.299.6570
Computer Help Center	218.299.6568
Counseling.....	218.299.6618
Disability Services	218.299.6882
Enrollment.....	877.450.3322
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	218.736.1512
Spartan Center.....	218.299.6882
Student Life.....	218.299.6529
Student Records.....	218.299.6593
Support Center	877.450.3322
Veterans Services.....	218.329.6040

WADENA

Academic Advising.....	218.631.7827
Assessments/Accuplacer	218.631.7818
Bookstore.....	218.631.7825
Child Care.....	218.632.2348
Computer Help Center	218.631.7873
Disability Services	218.631.7832
English Language Learner.....	218.632.2450
Enrollment.....	218.631.7818
Facilities	218.631.7906
Financial Aid.....	218.631.7922
Foundation	218.631.7819
Information	218.631.7821
Library	218.631.7865
Social Worker	218.631.3689
Spartan Center.....	218.631.7862
Student Life.....	218.631.7827
Student Records.....	218.631.7808
Support Center	877.450.3322
Veterans Services.....	218.329.6040

K12 COLLABORATIONS

Career Articulation Agreements	218.846.3867
Concurrent Enrollment.....	218.846.3867
eCampus in the High School.....	218.846.3867

25

AUGUST

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JANUARY

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JUNE

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AUGUST

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2025-2026 M STATE ACADEMIC CALENDAR

AUGUST 2025

- 25 | Fall semester begins
- 29 | Last day to drop or add full-term fall semester courses

SEPTEMBER 2025

- 1 | Labor Day **COLLEGE CLOSED**
- 15-20 | Homecoming
- 17 | Constitution Day

OCTOBER 2025

- 16-17 | Fall break
- No classes/college open

NOVEMBER 2025

- 10 | No classes/college open
- 11 | Veterans Day **COLLEGE CLOSED**
- 25 | Last day to withdraw from full-term fall semester courses
- 27-28 | Thanksgiving break **COLLEGE CLOSED**

DECEMBER 2025

- 15-18 | Final exams
- 18 | Fall semester ends
- 19-31 | Semester break
- No classes/college open
- 25 | Christmas Day **COLLEGE CLOSED**

JANUARY 2026

- 1 | New Year's Day **COLLEGE CLOSED**
- 2-9 | Semester break.
- No classes/college open
- 12 | Spring semester begins
- 16 | Last day to drop or add full-term spring semester courses
- 19 | Martin Luther King Jr. Day **COLLEGE CLOSED**

FEBRUARY 2026

- 16 | Presidents Day **COLLEGE CLOSED**

MARCH 2026

- 9-13 | Spring break
- No classes/college open
- 13 | Application deadline for spring or summer graduates planning to attend the spring commencement ceremony
- 23 | Registration opens for fall 2026 and spring and summer 2027

APRIL 2026

- 3 | No classes/college open
- 20 | Last day to withdraw from full-term spring semester courses

MAY 2026

- 11-14 | Final exams
- 12 | Commencement Detroit Lakes
- 13 | Commencement Moorhead
- 14 | Commencement Fergus Falls
- 14 | Spring semester ends
- 15 | Commencement Wadena
- 19 | Summer semester begins
- 25 | Memorial Day **COLLEGE CLOSED**

JUNE 2026

- 1 | Summer term general education/online courses begin
- 19 | Juneteenth **COLLEGE CLOSED**

JULY 2026

- 3 | Independence Day Observed **COLLEGE CLOSED**
- 4 | Independence Day
- 24 | Summer term ends

AUGUST 2026

- 24 | Fall semester begins

● No classes ● Final exams ● Registration opens **BOLD** Important dates



MINNESOTA STATE

Minnesota State Community and Technical College,
A member of Minnesota State system



Minnesota State
Community and Technical College

minnesota.edu | 877.450.3322

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

ACCREDITATIONS

Minnesota State Community and Technical College is accredited by the Higher Learning Commission, an institutional accreditation agency recognized by the U.S. Department of Education.

230 South LaSalle St., Suite 7-500, Chicago, IL 60604
Website: www.hlcommission.org
Email: info@hlcommission.org
Phone: 800.612.7440 or 312.263.0456

Programs accredited/approved/licensed by additional agencies include:

Automotive Service Technology

Automotive Service of Excellence Education Foundation (ASE EF)
1503 Edwards Ferry Rd., NE, Suite 401
Leesburg, VA 20176
Phone: 703.669.6650
Email: info@ASEEducationFoundation.org

Cosmetology

Minnesota Board of Cosmetology
1000 University Ave. W, Suite 100, St. Paul, MN 55104
Phone: 651.201.2742 | Email: cosmetology@state.mn.us
Website: mn.gov/boards/cosmetology

Criminal Justice

Minnesota Board of Peace Officer Standards and Training (POST)
1600 University Ave., Suite 200, St. Paul, MN 55104
Phone: 651.643.3060 | Email: postboard.agency.docs@state.mn.us
Website: mn.gov/post/

Dental Hygiene and Dental Assisting

Commission on Dental Accreditation (CODA)
211 East Chicago Ave., Chicago, IL 60611
Phone: 800.621.8099
Website: coda.ada.org

Diesel Equipment Technology

Associated Equipment Distributors Foundation (AEDF)
650 East Algonquin Rd., Suite 305,
Schaumburg, IL 60173
Phone: 630.574.0650
Website: aedfoundation.org/
Email: info@aednet.org

Electrical Line Worker Technology

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

Electrical Technology

Approved as one year of credit toward journeyman's license by the:
Minnesota Department of Labor and Industry - Board of Electricity
443 Lafayette Rd. N., St. Paul, MN 55155
Phone: 651.284.5005 or 800.342.5354
Website: www.dli.mn.gov/about-department/about-dli

Health Information Technology/Coding

Commission on Accreditation for Health Informatics and Information
Management Education (CAHIIM)
200 E. Randolph St., Suite 5100, Chicago, IL 60601
Phone: 312.235.3255
Email: info@cahiim.org
Website: www.cahiim.org

Massage Therapy

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
Website: www.ncbtmb.org

Medical Laboratory Technology

National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
5600 North River Rd., Suite 720, Rosemont, IL 60018-5119
Phone: 773.714.8880
Email: info@naacls.org
Website: www.naacls.org

Nursing (AS)

Minnesota Board of Nursing
1210 Northland Dr., Suite 120, Mendota Heights, MN 55120
Phone: 612.317.3000
Email: nursing.board@state.mn.us
Website: mn.gov/boards/nursing

National League for Nursing Commission for Nursing Education

Accreditation (CNEA)
2600 Virginia Ave., NW, Eighth Floor, Washington, DC 20037
Website: cnea.nln.org

Plumbing Technology

32-credit program approved as 800 hours toward student apprenticeship
card in Minnesota and 1,600-2,000 hours in North Dakota.
Minnesota Department of Labor and Industry - Construction Codes and
Licensing Division
443 Lafayette Rd. N, St. Paul, MN 55155
Phone: 651.284.5005 or 800.342.5354
Website: www.dli.mn.gov/about-department/about-dli

Practical Nursing (Diploma/AAS)

Minnesota Board of Nursing
1210 Northland Dr., Suite 120
Mendota Heights, MN 55120
Phone: 612.317.3000
Email: nursing.board@state.mn.us
Website: mn.gov/boards/nursing

Radiologic Technology

Joint Review Committee on Education in Radiologic Technology (JRCERT)
20 North Wacker Dr., Suite 2850, Chicago, IL 60606-3182
Phone: 312.704.5300
Email: mail@jrcert.org
Website: www.jrcert.org

Surgical Technology

Commission on Accreditation of Allied Health Education Programs
(CAAHEP)
9355 - 113th St. N., #7709
Seminole, FL 33775
Phone: 727.210.2350
Email: mail@caahep.org
Website: <https://www.caahep.org/>

in cooperation with the
Accreditation Review Council on Education in Surgical Technology and
Surgical Assisting (ARC/STSA)
19751 East Mainstreet, Suite #339
Parker, CO 80138
Phone: 303.694.9262
Email: info@arcstsa.org
Website: arcstsa.org
Email: info@arcstsa.org

Associate of Arts (AA) Degree:

REQUIREMENTS

The Liberal Arts and Sciences AA degree forms the foundation of a traditional liberal arts education and will satisfy a large portion of the general education course requirements for bachelor's degrees at four-year colleges and universities. The degree is the basic graduation award toward which most students will work if they intend to transfer. It emphasizes a broad general education. In order to obtain an AA degree, students must complete the following requirements:

- Successful completion of a minimum of 60 semester credits numbered 1000 or above.
- Achieve an overall GPA of 2.00 and a GPA of 2.00 within the Minnesota Transfer Curriculum (MnTC).
- Earn at least 20 of the 60 credits at M State.
- Complete a minimum of 40 credits from the MnTC and fulfill individual requirements in each of the ten MnTC goal areas.

Students may satisfy the MnTC requirement with a variety of courses and credits. Some courses will meet more than one of the ten (10) required goal areas. Fulfilling the minimum requirements in each goal area may not satisfy the 40 credit minimum. Some additional credits beyond the minimum requirements in goals 1-10 could be needed to achieve the overall 40 credit MnTC requirement. Students should carefully review and monitor their progress.

In order to be certified as having met all the requirements of the college's Minnesota Transfer Curriculum (MnTC), a student must successfully complete courses as prescribed in the following Liberal Arts and Sciences education distribution areas with a minimum GPA of 2.00. Transfer courses with grades of A-D will be included in the GPA calculation for the MnTC

ANTH	1100	Introduction to Anthropology	5, 8
ART	1101	Drawing I	2, 6
ART	1107	Foundations of Art, 2-D	2, 6
ART	1109	Foundations of Art, 3-D	2, 6
ART	1110	Introduction to Art	6
ART	1114	Painting I	2, 6
ART	1117	Printmaking I	2, 6
ART	1118	Watercolor I	6
ART	1123	Global Art History: Asian, Islamic, African, Mesoamerican	2, 6
ART	1124	American Art	6, 7
ART	1127	World of Art I	2, 6, 8
ART	1128	World of Art II	2, 6, 8
ART	1140	Handbuilt Ceramics	6
ART	1141	Ceramics I	6
ART	1142	Introduction to Ceramics	2, 6
ART	2000	Intermediate Art Studio	2, 6
ART	2111	Drawing II	2
ART	2112	Painting II	2
ART	2114	Photographic Art I	2
ART	2115	Introduction to Digital Photography	2, 6
ART	2116	Mixed Media I	2, 6
ART	2201	Foundation Digital Imaging	2, 6
ART	2241	Advanced Ceramics	6
ART	2260	Art, Portfolio Design and Professional Development	6
ART	2261	Art, Portfolio Design and Professional Development Internship	6
ART	2999	AFA-Visual Art Capstone Exhibition	2, 6
ASL	1100	Introduction to Deaf Studies	7
ASL	1101	American Sign Language and Deaf Culture I	8
ASL	1102	American Sign Language and Deaf Culture II	8
BIOL	1102	Introduction to Horticulture	3

BIOL	1104	Biology of Human Concerns	2, 3
BIOL	1107	Environmental Science Issues	2, 3, 10
BIOL	1108	Environmental Science Issues Lab	2, 3, 10
BIOL	1115	Introduction to Biotechnology	3
BIOL	1122	General Biology I	2, 3
BIOL	1123	General Biology II	3, 10
BIOL	1152	Food Science	3
BIOL	1161	Introduction to Freshwater Biology	3, 10
BIOL	1170	Essentials of Human Anatomy and Physiology	3
BIOL	2010	General Ecology	3, 10
BIOL	2202	Principles of Nutrition	2, 3
BIOL	2220	General Microbiology	3
BIOL	2240	Genetics	3
BIOL	2260	Human Anatomy and Physiology I	3
BIOL	2261	Human Anatomy and Physiology I Lab	3
BIOL	2262	Human Anatomy and Physiology II	3
BIOL	2263	Human Anatomy and Physiology II Lab	3
BIOL	2267	Medical Microbiology	3
BIOL	2268	Medical Microbiology Lab	3
CHEM	1100	Fundamental Concepts of Chemistry	2, 3
CHEM	1101	Principles of General Chemistry	2, 3
CHEM	1111	General Inorganic Chemistry I	2, 3
CHEM	1112	General Inorganic Chemistry II	2, 3
CHEM	1115	Introduction to Organic and Biochemistry	2, 3
CHEM	2224	Organic Chemistry I	2, 3
CHEM	2225	Organic Chemistry II	2, 3
CHIN	1101	Introduction to Chinese	8
COMM	1100	Communication and Effective Human Relations	1, 2
COMM	1120	Introduction to Public Speaking	1
COMM	1130	Small Group Communication	1, 2
COMM	1140	Interpersonal Communication	1
COMM	2220	Oral Interpretation	6
COMM	2230	Intercultural Communication	7
COMM	2240	Family Communication	2
COMM	2250	Gender Communication	7
COMM	2260	Computer-Mediated Communication	1
ECON	1150	Essentials of Economics	2, 5
ECON	2210	Macroeconomics	2, 5
ECON	2222	Microeconomics	2, 5, 9
ENGL	1101	College Writing	1
ENGL	1205	Writing About Literature	1
ENGL	1210	Writing About Current Issues	1
ENGL	1215	Professional and Technical Writing	1
ENGL	2200	Introduction to Creative Writing	6
ENGL	2221	Creative Writing: Poetry	6
ENGL	2222	Creative Writing: Fiction	6
ENGL	2223	Creative Writing: Personal Narrative	6
ENGL	2228	A Well Examined Life: Reading and Writing Memoir	6, 7
ENGL	2230	Environmental Literature	2, 6, 10
ENGL	2234	Introduction to Literature: Short Stories	2, 6, 7
ENGL	2235	Introduction to Literature: Drama	2, 6, 8
ENGL	2236	Introduction to Literature: Novel	2, 6, 7
ENGL	2237	Introduction to Literature: Short Prose	2, 6, 9
ENGL	2238	Literature, Illness and the Human Condition	6, 9
ENGL	2239	Nature Writers	2, 6, 10
ENGL	2302	American Ethnic Literature	6, 7
ENGL	2304	Introduction to Literature, Native American Focus	2, 6
ENGL	2310	Introduction to Mythology	6
ENGL	2314	Introduction to Shakespeare	6
ENGL	2321	Women in Literature	6, 7
ENGL	2322	Banned Literature	2, 6, 7
ENGL	2323	Horror and Supernatural Fiction	2, 6
ENGL	2324	Travel Literature	2, 6, 10
ENGL	2325	Contemporary World Literature	6, 8
ENGL	2372	Children's Literature	2, 6, 7
ENGL	2374	The Poetics of Rock Lyrics	2, 6
GEOG	1110	World Geography	5, 8
GEOG	1160	Global Physical Geography	8, 10

GLST	1510	Global Studies: Natural Science	3, 8
HIST	1101	Western Civilization: Ancient to 1600s	5, 8
HIST	1102	Western Civilization: 1600s to the Present	5, 8
HIST	1110	Western Civilization: Ancient-1400's	5, 8
HIST	1111	Western Civilization: 1400's-1600's	5, 8
HIST	1112	Western Civilization: 1600's-1800's	5, 8
HIST	1113	Western Civilization: 20th Century	5, 8
HIST	1201	American History to 1877	5, 7
HIST	1202	American History since 1877	5, 7
HIST	1500	European Experience	5, 8
HIST	1600	History of Baseball	5
HIST	1700	The History of America's National Parks	5, 10
HIST	2211	American History: the Colonial Period	5, 7
HIST	2212	American History 19th Century	5, 7
HIST	2213	American History: 20th Century	5, 7
HIST	2220	Minnesota and Northern Plains History	5, 10
HONS	1101	Introduction to Honors	2
HONS	2900	Honors Capstone Seminar	2
HUM	1101	Introduction to the Humanities	2, 6
HUM	1105	Religion in the Humanities	6, 8
HUM	1110	Native American Culture	2, 6, 7
HUM	1120	Culture of Italy	6, 8
HUM	1132	Women in the Humanities	6, 7
HUM	1134	Global Perspectives for Women	6, 8
HUM	1201	Religion and the American Experience	6, 7
HUM	2210	Introduction to Film	2, 6
HUM	2230	World Cinema	6, 8
HUM	2236	Technology in the Humanities	2, 6, 8
HUM	2281	Culture of the British Isles	6, 8
HUM	2293	Field Experience: Europe	6, 8
HUM	2295	Field Experience: The East	6, 8
HUM	2301	Heroes, Moral and Cultural	2, 6
ILS	1100	Integrative Learning Seminar I	2
ILS	2100	Integrative Learning Seminar II	2
MATH	1100	World of Math	2, 4
MATH	1101	Mathematical Reasoning	2, 4
MATH	1102	Finite Math	2, 4
MATH	1114	College Algebra	2, 4
MATH	1115	Functions/Trigonometry	2, 4
MATH	1116	College Trigonometry	2, 4
MATH	1118	Precalculus	2, 4
MATH	1122	Applied Calculus and Linear Algebra	2, 4
MATH	1134	Calculus I	2, 4
MATH	1135	Calculus II	2, 4
MATH	1207	Elementary Statistics	2, 4
MATH	1213	Introduction to Statistics	2, 4
MATH	2200	Principles of Arithmetic	2, 4
MATH	2231	Calculus III	2, 4
MATH	2257	Linear Algebra	2, 4
MCOM	1122	Introduction to Mass Communication	5, 9
MCOM	1142	Popular Culture and Social Media	7
MCS	2230	Multicultural America	7
MUSC	1113	Beginning Class Voice	6
MUSC	1114	Beginning Class Piano	6
MUSC	1115	America's Musical Heritage	6, 7
MUSC	1116	World Music	6, 8
MUSC	1117	Beginning Class Guitar	6
MUSC	1118	Rock and Pop Music	6
MUSC	1118	Rock and Pop Music	6
MUSC	1120	Introduction to Music Technology	6
MUSC	1121	Basic Theory and Musicianship I	2, 6
MUSC	1122	Basic Theory and Musicianship II	6, 2
MUSC	1123	Sight Singing and Ear Training I	6
MUSC	1124	Sight Singing and Ear Training II	6
MUSC	1131	Civic Orchestra	6
MUSC	1135	Voice Ensemble	6
MUSC	1141	Concert Choir	6
MUSC	1145	Chamber Chorale	6
MUSC	1150	History of Jazz	6
MUSC	1151	Individual Voice Lessons	6

MUSC	1160	Music Business: Creating and Promoting Music	6	THTR	1125	Theatre Technical Practicum	6
MUSC	1162	Jazz Ensemble	6	THTR	1130	Stage Make-up	6
MUSC	1164	Concert Band	6	THTR	1140	Stagecraft	6
MUSC	1168	Pep Band	6	THTR	2120	Script Analysis	6
MUSC	1181	Private Instrumental Lessons	6	THTR	2130	Design for the Stage	6
MUSC	1185	Private Music Composition Lessons	6	WMST	1130	Introduction to Women's Studies	5, 7
MUSC	1191	Individual Piano Lessons	6	WMST	1136	Global Perspectives of Women	6, 8
MUSC	2214	Class Piano II	6				
MUSC	2223	Sight Singing and Ear Training III	6				
MUSC	2224	Sight Singing and Ear Training IV	6				
MUSC	2231	Advanced Theory and Musicianship III 2, 6					
MUSC	2232	Advanced Theory and Musicianship IV 2, 6					
MUSC	2251	Individual Voice Lessons	6				
MUSC	2281	Private Instrumental Lessons	6				
MUSC	2285	Advanced Music Composition	6				
MUSC	2291	Individual Piano Lessons	6				
PHIL	1130	Critical Thinking	2				
PHIL	1200	Applied and Professional Ethics	2, 9				
PHIL	1201	Ethics	2, 6, 9				
PHIL	1211	Introduction to Philosophy	2, 6				
PHIL	2220	Environmental Ethics	9, 10				
PHIL	2224	Philosophy of Religion	2, 6, 8				
PHIL	2225	Bioethics	2, 9				
PHIL	2230	Existentialism	2, 6				
PHIL	2235	Symbolic Logic	4				
PHIL	2240	Non-Western Philosophical Perspectives	6, 8				
PHIL	2300	Political and Social Philosophy	5, 7				
PHYS	1105	Fundamental Concepts in Physics	3				
PHYS	1106	Fund of Physics - Mechanics	3				
PHYS	1107	Physics of Music	3, 6				
PHYS	1108	Physics of Flight	3				
PHYS	1120	Introduction to Astronomy	3				
PHYS	1401	College Physics I	3				
PHYS	1402	College Physics II	3				
PHYS	1411	University Physics I	3				
PHYS	1412	University Physics II	3				
POLS	1120	American National Government	5, 9				
POLS	1130	State and Local Government	5, 9				
POLS	2204	Comparative Government	5, 8				
POLS	2206	Global Politics	5, 8				
POLS	2220	Introduction to Constitutional Theory	2, 5, 9				
POLS	2310	Ideas and Ideologies	7, 9				
POLS	2950	Introduction to Social Research	2, 5				
PSYC	1101	Human Interaction	2, 5				
PSYC	1200	General Psychology	5, 9				
PSYC	1202	Introduction to Autism Spectrum Disorders	5				
PSYC	1500	Positive Psychology	5, 9				
PSYC	2220	Abnormal Psychology	5				
PSYC	2222	Lifespan Development	5, 9				
PSYC	2224	Social Psychology	5, 7				
PSYC	2226	Behavior and Environmental Management	2, 5, 10				
PSYC	2230	Personality Psychology	5				
PSYC	2302	Cross-Cultural Psychology	5, 7				
PSYC	2900	Statistics for Behavioral and Social Sciences	5				
PSYC	2950	Introduction to Social Research	2, 5				
SOC	1111	Introduction to Sociology	2, 5, 7				
SOC	1113	Social Problems	5, 9				
SOC	1114	Sociology Service Learning	5				
SOC	2210	Social Deviance	5, 7				
SOC	2213	Sociology of the Family	5, 7				
SOC	2215	Criminology	2, 5				
SOC	2216	Minority Group Relations	5, 7				
SOC	2217	Rural Sociology	5, 7				
SOC	2220	Food, Culture and Society	5, 7				
SOC	2222	Sociology of Agriculture	5				
SOC	2950	Introduction to Social Research	2, 5				
SPAN	2211	Intermediate Spanish I	8				
SPAN	2212	Intermediate Spanish II	8				
THTR	1100	Introduction to Theatre	6				
THTR	1105	Acting I	6				
THTR	1120	Theatre Performance Practicum	6				



PROGRAMS AND MAJORS
2025-2026

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Accounting Associate of Applied Science (AAS) - 60 credits Moorhead, Online

This program 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.

Requirement	Title	Credits
ACCT1101	Payroll.....	3
ACCT1124	Spreadsheet Applications	3
ACCT2210	Managerial Accounting	4
ACCT2211	Financial Accounting I.....	3
ACCT2212	Financial Accounting II.....	3
ACCT2218	QuickBooks	2
ACCT2255	Income Tax-Individual.....	3
ACCT2256	Income Tax-Business	3
ACCT2616	Intermediate Accounting I	3
ACCT2618	Intermediate Accounting II	3
BUS1100	Business Computers.....	3
BUS1141	Introduction to Business	3
BUS2150	Legal Environment of Business	3
ENGL1101	College Writing	3
3 credits from the following.....		3
ACCT 2630	FUND/Non-Profit Accounting	
ACCT 2640	Accounting Internship	
BUS 2204	Principles of Management	
BUS 2206	Principles of Mkt	
DKMG 2200	Digital Mkt	
HRES 1122	Human Resource Management	
HRES 1130	Benefits Admin	
3 credits from the following.....		3
BUS2204	Principles of Management	
BUS2206	Principles of Marketing	
DMKT2200	Introduction to Digital Marketing	
HRES1122	Human Resource Management	
3 credits from the following.....		3
COMM1120	Introduction to Public Speaking	
COMM1140	Interpersonal Communication	
3 credits from the following.....		3
ECON2210	Macroeconomics	
ECON2222	Microeconomics	
6 credits MnTC Electives*		6

*To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Accounting Associate of Applied Science (AAS) - 60 credits Moorhead, Online

This program 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.

Requirement	Title	Credits
ACCT1101	Payroll.....	3
ACCT1124	Spreadsheet Applications	3
ACCT2210	Managerial Accounting	4
ACCT2211	Financial Accounting I.....	3
ACCT2212	Financial Accounting II.....	3
ACCT2218	QuickBooks	2
ACCT2255	Income Tax-Individual.....	3
ACCT2256	Income Tax-Business	3
ACCT2616	Intermediate Accounting I	3
ACCT2618	Intermediate Accounting II	3
BUS1100	Business Computers.....	3
BUS1141	Introduction to Business	3
BUS2150	Legal Environment of Business	3
ENGL1101	College Writing	3
3 credits from the following.....		3
ACCT 2630	FUND/Non-Profit Accounting	
ACCT 2640	Accounting Internship	
BUS 2204	Principles of Management	
BUS 2206	Principles of Mkt	
DKMG 2200	Digital Mkt	
HRES 1122	Human Resource Management	
HRES 1130	Benefits Admin	
3 credits from the following.....		3
BUS2204	Principles of Management	
BUS2206	Principles of Marketing	
DMKT2200	Introduction to Digital Marketing	
HRES1122	Human Resource Management	
3 credits from the following.....		3
COMM1120	Introduction to Public Speaking	
COMM1140	Interpersonal Communication	
3 credits from the following.....		3
ECON2210	Macroeconomics	
ECON2222	Microeconomics	
6 credits MnTC Electives*		6

*To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Accounting Clerk Diploma - 32 credits Moorhead, Online

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

Requirement	Title	Credits
ACCT1101	Payroll.....	3
ACCT1124	Spreadsheet Applications	3
ACCT2211	Financial Accounting I.....	3
ACCT2212	Financial Accounting II.....	3
ACCT2218	QuickBooks	2
ACCT2255	Income Tax-Individual.....	3
BUS1100	Business Computers.....	3
9 credits from the following.....		9
ACCT2210 Managerial Accounting		
ACCT2256 Income Tax-Business		
ACCT2616 Intermediate Accounting I		
ACCT2640 Accounting Internship (1 – 4 credits)		
BUS1141 Introduction to Business		
BUS2150 Legal Environment of Business		
BUS2204 Principles of Management		
BUS2206 Principles of Marketing		
HRES1122 Human Resource Management		
HRES1130 Benefits Administration		
3 credits MnTC Goal Area 1 Electives		3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Accounting Transfer Pathway Associate of Science (AS) - 60 credits Fergus Falls, Moorhead, Online

The Accounting Transfer Pathway offers students a powerful option: the opportunity to complete an Associate of Science degree with course credits that directly transfer to designated accounting bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities enter the university with junior-year status. All courses in the transfer pathway associate degree directly transfer and apply to designated bachelor's degree programs in a related field.

Requirement	Title	Credits
ACCT2210	Managerial Accounting	4
ACCT2211	Financial Accounting I.....	3
ACCT2212	Financial Accounting II.....	3
BUS1100	Business Computers.....	3
BUS2150	Legal Environment of Business	3
BUS2206	Principles of Marketing	3
BUS2204	Principles of Management	3
COMM1120	Introduction to Public Speaking	3
ECON2210	Macroeconomics.....	3
ECON2222	Microeconomics.....	3
ENGL1101	College Writing	3
MATH1114	College Algebra	4
MATH1213	Introduction to Statistics.....	4
8 credits ACCT Technical Electives		8
3 credits MnTC Goal Area 1 Electives		3
4 credits MnTC Goal Area 3 Electives		4
3 credits MnTC Goal Area 6 Electives		3

*To earn an AS degree, students must complete courses from 6 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Advanced HVAC/R - Heating, Ventilation, Air Conditioning and Refrigeration Diploma - 35 credits Moorhead

Students in this program will gain the skills and knowledge to service and maintain commercial refrigeration equipment, which includes walk-in coolers and freezers, grocery store coolers and ice-makers. Students will gain skills in layout, installation and repair. Employment opportunities exist 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.

Requirement	Title	Credits
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 Refrigeration	3
3 credits from the following.....		3
COMM1120 Introduction to Public Speaking		
COMM1130 Small Group Communication		

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Advanced Practice Esthiology Certificate - 20 credits Wadena

This certificate is for licensed estheticians and licensed cosmetologists. Advanced practice services include: dermaplaning; skin needling in the epidermal layer; advanced extractions; microdermabrasion; chemical peels that treat the epidermal layer of the skin; and electrical energy treatments using galvanic current, high frequency, radio frequency, ultrasound or light. Anyone who performs advanced practice esthetic services must have an Advanced Practice Esthetician Operator or Advanced Practice Esthetician Salon Manager License.

Requirement	Title	Credits
ESTH1003	License Preparation AP Esthetician	1
ESTH1901	Advanced Skin Treatments.....	3
ESTH1903	Advanced Exfoliation	3
ESTH1904	Advanced Skin Care Techniques.....	3

Special Requirements: ESTH1201 Salon Practicum AP Esthetician (10 credits)..... 10

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Advanced Practice Esthiology Diploma - 44 credits Wadena

This diploma program is for students wanting to earn an Advanced Practice Esthetician license right out of school. This program allows students to go directly from esthetician training to advanced practice esthetician training without first applying for an esthetician license. Esthetics is the non-medical treatment of the skin, its disorders and function. Instruction includes the sciences of anatomy, dermatology and chemistry as related to skin care; sanitation and safety procedures; Minnesota statutes and laws which pertain to the regulation of the practice of skin care; and elementary service skills. Advanced practice services include dermaplaning; skin needling in the epidermal layer; advanced extractions; microdermabrasion; chemical peels that treat the epidermal layer of the skin; and electrical energy treatments using galvanic current, high frequency, radio frequency, ultrasound or light. The MN Board of Cosmetology requires 600 hours of esthetician clinical time and an additional 500 hours of advanced practice clinical time to become licensed as an advanced practice esthetician in the State of Minnesota. Upon completion of 1,100 hours, course completion certificates and passing of the state exams, a student can apply for licensure.

Requirement	Title	Credits
Alexandria Body Sugar (1 credit)		1
COSM1000	Principles and Practices	3
COSM1002	Client Consultations	1
COSM1004	Cosmetic Chemistry and Makeup Applications	1
COSM1006	Spa Therapies	1
COSM1010	Eyelash Extensions	1
COSM1100	Salon Safety	1
COSM1109	Skin Analysis	1
COSM1157	Histology of the Skin	1
COSM1159	Facials and Hair Removal	1
COSM1179	Minnesota Cosmetology Laws and Rules	1
ESTH1003	License Preparation AP Esthetician	1
ESTH1901	Advanced Skin Treatments	3
ESTH1903	Advanced Exfoliation	3
ESTH1904	Advanced Skin Care Techniques	3
COSM2004	License Preparation Esthetician	1

Special Requirements: COSM1203 - Salon Practicum Esthetician (5 credits in the Spring. 6 credits in the Summer) these credits can be comprised from the following non repeatable course:
COSM2800 -

Special Requirements: ESTH1201 - Salon Practicum AP Esthetician (10 credits) 10

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Agribusiness Associate of Applied Science (AAS) - 60 credits Moorhead, Online

This program includes courses in all major areas of agribusiness, including management, marketing, agronomy, animal science, precision agriculture and business analysis. The program prepares students to work in agricultural businesses at the technical, sales or managerial level. The program also prepares students to be engaged in a farming operation and learn to make sound management decisions based on financial analysis and production information.

Requirement	Title	Credits
ACCT1124	Spreadsheet Applications	3
ACCT2211	Financial Accounting I.....	3
AGRI1100	Principles of Agronomy	3
AGRI1170	Introduction to Agribusiness	3
AGRI1200	Introduction to Animal Science	3
AGRI1300	Introduction to Precision Agriculture	3
AGRI2100	Agricultural Commodity Marketing	3
AGRI2200	Principles of Farm and Ranch Management.....	3
AGRI2300	Farm Records and Business Analysis	3
BUS1100	Business Computers.....	3
BUS1141	Introduction to Business	3
BUS2204	Principles of Management	3
BUS2206	Principles of Marketing	3
ENGL1101	College Writing	3
6 credits from the following.....		6
ACCT2212	Financial Accounting II	
ACCT2218	QuickBooks	
BUS1300	Financial Statement Analysis	
BUS2150	Legal Environment of Business	
BUS2500	Business Internship	
MGMT2225	Project Management	
MKTG1106	Professional Selling	
MKTG2236	Small Business Management	
3 credits from the following.....		3
COMM1120	Introduction to Public Speaking	
COMM1140	Interpersonal Communication	
3 credits from the following.....		3
ECON2210	Macroeconomics	
ECON2222	Microeconomics	
6 credits MnTC Electives		6

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

American Sign Language and Deaf Studies Certificate - 9 credits Moorhead

The American Sign Language and Deaf Studies certificate program is designed to introduce students to the language, culture, and history of the American Deaf community. Students will acquire a foundation of American Sign Language (ASL) and become acquainted with various issues and concerns of the Deaf community. The curriculum provides students with the academic qualifications to enter advanced ASL courses and is also ideal for those pursuing professions that work with Deaf people. This program does not prepare students to become interpreters.

Requirement	Title	Credits
ASL1100	Introduction to Deaf Studies	3
ASL1101	American Sign Language and Deaf Culture I	3
ASL1102	American Sign Language and Deaf Culture II	3

American Sign Language Studies Certificate - 18 credits Moorhead

The American Sign Language (ASL) 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.

Requirement	Title	Credits
ASL1100	Introduction to Deaf Studies	3
ASL1101	American Sign Language and Deaf Culture I	3
ASL1102	American Sign Language and Deaf Culture II	3
ASL1103	American Sign Language and Deaf Culture III	3
ASL1104	American Sign Language and Deaf Culture IV	3
ASL1105	Advanced Fingerspelling and Numbers	3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

American Sign Language Pre-Interpreting Program Associate of Science (AS) - 60 credits Moorhead

The American Sign Language Pre-Interpreting Program prepares students to enter a bachelor's degree program in the field of sign language interpretation. Students are introduced to the language and culture of the American Deaf community. While students gain sign language skills and an understanding of Deaf culture, they also acquire knowledge of the interpreter's role and multiple approaches to ethical decision-making within the field of sign language interpreting.

Track: Interpreter Training

Requirement	Title	Credits
ASL1100	Introduction to Deaf Studies.....	3
ASL1101	American Sign Language and Deaf Culture I.....	3
ASL1102	American Sign Language and Deaf Culture II.....	3
ASL1103	American Sign Language and Deaf Culture III.....	3
ASL1104	American Sign Language and Deaf Culture IV.....	3
ASL1105	Advanced Fingerspelling and Numbers.....	3
IPP1111	Introduction to Interpreting.....	3
IPP2213	Topics in Interpreting.....	3
IPP2214	Intro to Ethics and Decision-Making for Interpreters.....	3
Goal Area	1. Communication.....	3
Goal Area	2. Critical Thinking.....	3
Goal Area	3. Natural Sciences.....	3
Goal Area	4. Mathematics/Logical Reasoning.....	3
Goal Area	5. History and the Social and Behavioral Sciences.....	3
Goal Area	6. The Humanities and Fine Arts.....	3
Goal Area	9. Ethical and Civic Responsibility.....	3
Goal Area	10. People and the Environment.....	3
9 credits MnTC Electives		9

*To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Architectural Drafting Diploma - 33 credits Wadena

Students completing this program will be prepared for employment with architectural and engineering firms, contractors and various manufacturing and distribution companies related to the construction industry. Computer-aided drafting is an important tool for construction and design, and is an important part of the Architectural Drafting program. This program teaches students the principles of residential and commercial building technology, as well as the drafting skills to apply them.

Requirement	Title	Credits
ARCH1126	Residential Project I.....	3
ARCH2226	Residential Project II.....	4
ARCH2250	Project Administration.....	2
BLDG1114	Blueprint Reading I.....	2
CADD1000	AutoCAD Basics.....	3
CONM1108	Principles of Estimating.....	4
CONM1124	Building Systems.....	3
ENGL1101	College Writing.....	3
ENGT1126	Engineering Graphics.....	3
ENGT1134	Office Systems and Equipment.....	3
3 credits	MnTC Electives*	3

*To earn a diploma, students must complete courses from 1 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Architectural Drafting & Design Associate of Applied Science (AAS) - 60 credits Wadena

In the Architectural Drafting and Design program, students become proficient in computer-aided drafting (CAD) and the Revit building design software, learning the skills needed for a variety of jobs related to the construction industry. Graduates are hired by architectural and engineering firms, contractors, and manufacturing and distribution companies. An advisory board comprised of local and regional industry representatives reviews the curriculum to ensure students learn the skills needed by employers.

Requirement	Title	Credits
ARCH1126	Residential Project I.....	3
ARCH2222	Architectural Drafting Service Learning.....	4
ARCH2226	Residential Project II.....	4
ARCH2232	Civil and Structural Integration.....	3
ARCH2236	Architectural Presentation.....	2
ARCH2244	Commercial Projects.....	4
ARCH2248	CADD Alternatives.....	3
ARCH2250	Project Administration.....	2
BLDG1114	Blueprint Reading I.....	2
CADD1000	AutoCAD Basics.....	3
CONM1108	Principles of Estimating.....	4
COMM1120	Introduction to Public Speaking.....	3
CONM1124	Building Systems.....	3
ENGL1101	College Writing.....	3
ENGT1126	Engineering Graphics.....	3
ENGT1134	Office Systems and Equipment.....	3
DET2230	3D Printing and Prototyping.....	2
9 credits MnTC Electives		9

*To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Art Transfer Pathway Associate of Fine Arts (AFA) - 60 credits Fergus Falls

The 60-credit AFA in Art provides students with the skills to help them develop into professional artists. Students will explore multiple areas in the visual arts including design, painting, drawing, ceramics, mixed media, printmaking and photography. In addition, students will explore artistic intent and exhibition opportunities. The degree ensures that students will have the necessary coursework to prepare for transfer and advanced studies in the visual arts.

Requirement	Title	Credits
ART1101	Drawing I.....	3
ART1107	Foundations of Art, 2-D.....	3
ART1109	Foundations of Art, 3-D.....	3
ART1114	Painting I.....	3
ART1117	Printmaking I.....	3
ART1127	Art History: Prehistory to the Middle Ages.....	3
ART1128	Art History: Renaissance to Contemporary.....	3
ART1142	Introduction to Ceramics.....	3
ART2115	Introduction to Digital Photography.....	3
ART2201	Foundation Digital Imaging.....	3
ENGL1101	College Writing.....	3
ENGL1210	Writing About Current Issues.....	3
ENGL2321	Women in Literature.....	3
HUM1110	Native American Culture.....	3
PHIL1201	Ethics	3
6 credits from the following		6
ART1110 Introduction to Art		
ART1124 American Art		
ART1129 Art History: African, Asian, Islamic and Mesoamerican		
ART1140 Handbuilt Ceramics		
ART2000 Intermediate Art Studio		
ART2114 Photographic Art I		
ART2116 Mixed Media I		
ART2241 Advanced Ceramics		
3 credits from the following.....		3
ART2001 Art and the Environment		
ENGL2239 Nature Writers		
ENGL2324 Travel Literature		
HIST1700 The History of America National Parks		
3 credits from the following		3
COMM1120 Introduction to Public Speaking		
COMM1140 Interpersonal Communication		
3 credits from the following.....		3
PSYC1200 General Psychology		
PSYC2220 Abnormal Psychology		
PSYC2224 Social Psychology		
SOC1111 Introduction to Sociology		

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Associate Degree Nursing Associate of Science (AS) - 64 credits Detroit Lakes, Fergus Falls, Moorhead, Wadena

The Associate Degree Nursing program is designed for students with no previous nursing experience who are seeking to become registered nurses. The Detroit Lakes, Fergus Falls, Moorhead and Wadena campuses offer the two-year Associate Degree Nursing 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, and community health and other health-related facilities. Upon completion of the nursing program, an Associate of Science degree is awarded by the college. Nursing graduates may apply to take the National Council Licensing Exam-RN (NCLEX-RN) following graduation. 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 Minnesota Board of Nursing has officially approved the Associate Degree Nursing program at M State.

*Students must earn a grade of C or better in all program courses to graduate from this program.

Requirement	Title	Credits
BIOL2202	Principles of Nutrition.....	3
BIOL2260	Human Anatomy and Physiology I.....	3
BIOL2261	Human Anatomy and Physiology I Lab.....	1
BIOL2262	Human Anatomy and Physiology II.....	3
BIOL2263	Human Anatomy and Physiology II Lab.....	1
BIOL2267	Medical Microbiology.....	3
BIOL2268	Medical Microbiology Lab.....	1
CHEM1100	Fundamental Concepts of 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	Lifespan Development.....	3
SOC1111	Introduction to Sociology.....	3
3 credits MnTC Electives*		3

*To earn an AS degree, students must complete courses from 6 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Automotive Service Technology Associate of Applied Science (AAS) - 66 credits Moorhead

The Associate of Applied Science (A.A.S.) in Automotive Service Technology is a comprehensive program designed to equip students with the in-demand skills needed for a successful career in the dynamic automotive industry. Taught by seasoned professionals with extensive experience in the field, this program ensures that students receive both foundational knowledge and advanced technical expertise to excel in automotive diagnostics, repair and maintenance. Through a hands-on, immersive curriculum, students gain proficiency in key areas such as engine performance, electrical and hybrid systems, steering and suspension, brake systems and automotive electronics. The program is continuously updated in collaboration with local and regional industry leaders, keeping pace with the latest advancements in automotive technology and industry trends. Accredited by the National Institute for Automotive Service Excellence (ASE), the A.A.S. in Automotive Service Technology meets the rigorous standards set by the industry, preparing students for ASE certification and enhancing their credentials as they enter the workforce. Graduates leave the program ready to take on roles in a wide range of settings, including dealerships, independent repair shops and specialized automotive service centers. With expert instructors, real-world training and ASE accreditation, the A.A.S. in Automotive Service Technology offers a robust pathway to a rewarding career, providing students with the skills and certification they need to succeed in this fast-paced, high-demand field.

Requirement	Title	Credits
AMST1101	Automotive Equipment Fundamentals	2
AMST1102	Alignment and Suspension I.....	3
AMST1105	Brakes	3
AMST1112	Automotive Electrical Fundamentals	4
AMST1127	Internal Combustion Engines	4
AMST1135	Drivetrains	4
AMST2206	Body Electrical and Mechanical	3
AMST2212	Advanced Automotive Electrical Systems	3
AMST2219	Electronic Powertrain Control I.....	3
AMST2221	Electronic Powertrain Control II.....	4
AMST2222	Light Duty Diesel	2
AMST2223	Electronic Braking and Suspension Systems.....	4
AMST2236	Automatic Transmissions	5
AMST2240	Heating, Ventilation and Air Conditioning	3
HYEV2605	Hybrid Vehicle Technologies.....	2
HYEV2606	Electric Platform Technologies.....	2
COMM1130	Small Group Communication.....	3
ECON1150	Essentials of Economics	3
PSYC2800	Psychology of Health and Resiliency	3
6 credits MnTC Electives*		6

*To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Automotive Service Technology Diploma - 60 credits Moorhead

The 60-credit diploma in Automotive Service Technology provides students with the essential skills and hands-on experience to excel in the fast-evolving automotive industry. Taught by industry experts, this program blends cutting-edge technology with real-world applications, preparing students for success in diagnosing, repairing and maintaining vehicles of all makes and models. The curriculum covers key areas, including engine performance, electrical systems, transmission repair, brake systems and diagnostic tools, ensuring students gain a comprehensive understanding of automotive service. Regularly reviewed by local and regional industry leaders, the program stays up to date with industry trends and technological advancements. Students benefit from practical, hands-on training in state-of-the-art labs, supported by instructors who are seasoned professionals with real-world expertise. With National Institute for Automotive Service Excellence (ASE) accreditation, this program is recognized for meeting the highest industry standards, enhancing employability and setting students up for career advancement in the automotive field.

Requirement	Title	Credits
AMST1101	Automotive Equipment Fundamentals	2
AMST1102	Alignment and Suspension I.....	3
AMST1105	Brakes.....	3
AMST1112	Automotive Electrical Fundamentals	4
AMST1127	Internal Combustion Engines	4
AMST1135	Drivetrains	4
AMST2206	Body Electrical and Mechanical	3
AMST2212	Advanced Automotive Electrical Systems	3
AMST2219	Electronic Powertrain Control I.....	3
AMST2221	Electronic Powertrain Control II.....	4
AMST2222	Light Duty Diesel	2
AMST2223	Electronic Braking and Suspension Systems.....	4
AMST2236	Automatic Transmissions	5
AMST2240	Heating, Ventilation and Air Conditioning	3
HYEV2605	Hybrid Vehicle Technologies.....	2
HYEV2606	Electric Platform Technologies.....	2
COMM1130	Small Group Communication.....	3
ECON1150	Essentials of Economics	3
PSYC2800	Psychology of Health and Resiliency	3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Biology Transfer Pathway Associate of Science (AS) - 60 credits Fergus Falls, Moorhead

An Associate of Science-Pathway degree (AS-P) is awarded upon completion of an academic program in scientific, technological or other professional fields and is titled "Biology (Minnesota State Transfer Pathway)." Transfer pathway programs are designed to provide transfer of all courses within the AS pathway into designated baccalaureate degree programs identified by system universities. 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.

Requirement	Title	Credits
BIOL1122	General Biology I	4
BIOL1123	General Biology II	4
BIOL2240	Genetics	4
CHEM1111	General Chemistry I.....	5
CHEM1112	General Chemistry II.....	5
COMM1120	Introduction to Public Speaking	3
ENGL1101	College Writing	3
MATH1114	College Algebra	4
4 credits from the following.....		4
	BIOL2010 General Ecology	
	BIOL2220 General Microbiology	
3 credits from the following.....		3
	ENGL1205 Writing About Literature	
	ENGL1210 Writing About Current Issues	
	ENGL1215 Professional and Technical Writing	
3 credits from the following.....		3
	MATH1115 Functions/Trigonometry	
	MATH1116 College Trigonometry	
	MATH1122 Applied Calculus	
	MATH1134 Calculus I	
	MATH1135 Calculus II	
	MATH1213 Introduction to Statistics	
3 credits MnTC Goal Area 5 Electives		3
3 credits MnTC Goal Area 6 Electives		3
12 credits MnTC Electives*		12

*To earn an AS degree, students must complete courses from 6 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Business Associate of Applied Science (AAS) - 60 credits Fergus Falls, Moorhead, Online

Success in a business career in the 21st century requires preparation in core business subjects. In this program, students learn management skills, accounting procedures, and skills to sell and market products and services. They also gain general knowledge of business law, economics and computer skills, along with crucial interpersonal skills through various liberal arts courses. This degree offers some flexible restricted electives to allow students to concentrate in one of several business emphasis areas. Business students are prepared for industries such as retail, hospitality, insurance, business-to-business, nonprofit and government. Upon graduation, students will be qualified for entry-level management, administration, marketing and human resources positions, such as sales, office management, customer service and project management. Students may also transfer to a Business Pathway AS degree, which aligns with business bachelor's degree options throughout the Minnesota State system.

Requirement	Title	Credits
ACCT1124	Spreadsheet Applications.....	3
ACCT2211	Financial Accounting I.....	3
BUS1100	Business Computers.....	3
BUS1141	Introduction to Business.....	3
BUS2204	Principles of Management.....	3
BUS2206	Principles of Marketing.....	3
BUS2700	Technology Research and Presentation.....	3
ENGL1101	College Writing.....	3
MKTG1106	Professional Selling.....	3
MKTG2000	Integrated Marketing Communications.....	3
3 credits from the following		3
	BUS2500 Business Internship	
	MKTG2236 Small Business Management	
	MKTG2402 Management and Marketing Seminar	
3 credits from the following		3
	COMM1120 Introduction to Public Speaking	
	COMM1140 Interpersonal Communication	
3 credits from the following.....		3
	ECON2210 Macroeconomics	
	ECON2222 Microeconomics	
15 credits from the following disciplines		15
	ACCT, ADMS, AGRI, BUS, DMKT, ENTR, HRES, MGMT, MKTG, PE	
6 credits MnTC Electives		6

*To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Business Administration Diploma - 33 credits Detroit Lakes, Fergus Falls, Moorhead, Online

Be prepared for a varied, exciting range of career options with a general Business diploma credential. Students will be provided with a fundamental knowledge of business functions, processes, and an understanding of business organizations in today's global economy. Coursework includes business concepts such as accounting, economics, management, marketing and sales. Skills related to the application of these concepts are developed through the study of computer applications, communication, critical thinking and decision-making. Through these skills, students will have a sound business education base for lifelong learning. This diploma seamlessly integrates into the Business AAS degree program.

Requirement	Title	Credits
ACCT2211	Financial Accounting I.....	3
BUS1100	Business Computers.....	3
BUS1141	Introduction to Business.....	3
BUS2204	Principles of Management.....	3
BUS2206	Principles of Marketing.....	3
DMKT2200	Introduction to Digital Marketing.....	3
MKTG1106	Professional Selling.....	3
MKTG2000	Integrated Marketing Communications.....	3
3 credits from the following disciplines		3
ACCT, BUS, DMKT, ENTR, MKTG		
3 credits from the following		3
ECON2210 Macroeconomics		
ECON2222 Microeconomics		
ENGL1101 College Writing		
3 credits COMM Electives		3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Business Transfer Pathway Associate of Science (AS) - 60 credits Fergus Falls, Moorhead, Online

The Business Transfer Pathway AS offers students a powerful option: the opportunity to complete an Associate of Science degree with course credits that directly transfer to designated business bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities enter the university with junior-year status. Emphasis is on contemporary business practices through coursework in management, marketing, economics, accounting, technology and communications. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field.

Requirement	Title	Credits
ACCT2210	Managerial Accounting.....	4
ACCT2211	Financial Accounting I.....	3
ACCT2212	Financial Accounting II.....	3
BUS1100	Business Computers.....	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
MATH1213	Introduction to Statistics.....	4
3 credits from the following		3
PHIL1200 Applied and Professional Ethics		
PHIL1201 Ethics		
3 credits from the following		3
PSYC1200 General Psychology		
SOC1111 Introduction to Sociology		
6 credits from the following		6
Course Type Career		
Course Type MnTC Electives		
3 credits of Goal Area 1. Communication.....		3
3 credits MnTC Electives.....		3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Child and Adolescent Therapeutic Behavioral Health Certificate - 16 credits Online

This certificate prepares learners to enter the mental health workplace as a Mental Health Behavioral Aide II (MHBAlI). This program provides foundational knowledge for entry-level workers (beyond the level of Mental Health Behavioral Aide I) 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.

Students must earn a grade of C or better in all program courses to graduate from this program.

Requirement	Title	Credits
MCS2230	Multicultural America	3
PSYC1203	Introduction to Child and Adolescent Therapeutic Behavioral Health	4
PSYC2220	Abnormal Psychology	3
PSYC2222	Lifespan Development	3
PSYC2226	Behavior and Environmental Management.....	3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

moorhead, minn

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 and to 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.

Requirement	Title	Credits
CPTR1001	Introduction to Programming and Scripting.....	3
CPTR1040	Introduction of Programming Logic	3
CPTR2001	Scripting for Automation	3
CPTR2224	Linux I	3
CPTR2230	Structured Query Language	3
CPTR2235	Comparative Languages.....	3
CPTR2238	Database Integration	3
CPTR2240	Database Administration.....	3
CPTR2242	Java Programming.....	3
CPTR2255	Software Security and Testing	3
CPTR2265	Software Engineering	3
CPTR2296	Topics in Computers.....	3
CSCI1110	Informatics	3
CSCI1121	Computer Science I	4
ENGL1101	College Writing	3
MATH1114	College Algebra	4
3 credits from the following.....		3
	COMM1120 Introduction to Public Speaking	
	COMM1130 Small Group Communication	
	COMM1140 Interpersonal Communication	
2 credits from the following.....		2
	CPTR*, CSCI, CSEC	
5 credits MnTC Electives**		5

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

**To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Construction Management Associate of Applied Science (AAS) - 66 credits Moorhead

The Construction Management program prepares graduates for a variety of careers in the construction industry, including management, supervision, estimating, testing and safety. The program focuses on the coordination of labor, building materials, equipment, time and finances, from project conception through completion. Students gain a combination of skills in construction, business and management, preparing them for leadership roles in the field. This degree also allows students to continue their education in a baccalaureate program at participating four-year institutions.

Requirement	Title	Credits
BUS2204	Principles of Management	3
CADD1000	AutoCAD Basics	3
CONM1101	Construction Documents and 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 and Bidding	3
CONM2222	Construction Management Internship	2
ENGL1101	College Writing	3
ENGL1215	Professional and Technical Writing.....	3
ENGT1118	Construction and Manufacturing Math	3
ENGT1126	Engineering Graphics	3
3 credits from the following.....		3
BUS1100 Business Computers		
ENGT1100 Introduction to Building Information Modeling		
3 credits from the following.....		3
COMM1120 Introduction to Public Speaking		
COMM1130 Small Group Communication		
3 credits from the following.....		3
ECON2210 Macroeconomics		
ECON2222 Microeconomics		
3 credits MnTC Electives*		3

*To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Correctional Officer Certificate - 24 credits Moorhead

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

Requirement	Title	Credits
COMM1140	Interpersonal Communication	3
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
SOC2215	Criminology	3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Cosmetology Diploma - 58 credits Wadena

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. 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 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 eligible for employment in salons and many other unique employment settings. The Board of Cosmetologists, which is the cosmetology licensing body, requires 1,550 hours of clinical time in order to become licensed in 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.)

Requirement	Title	Credits
COSM1000	Principles and Practices.....	3
COSM1002	Client Consultations.....	1
COSM1003	License Preparation Cosmetology.....	1
COSM1004	Cosmetic Chemistry and Makeup Applications.....	1
COSM1005	Hair Reformation.....	1
COSM1006	Spa Therapies.....	1
COSM1007	Gel Nail Applications.....	1
COSM1010	Eyelash Extensions.....	1
COSM1100	Salon Safety.....	1
COSM1109	Skin Analysis.....	1
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 and Hair Removal.....	1
COSM1161	Nail Structure and Growth.....	1
COSM1163	Hair Color.....	1
COSM1171	Principles of Hair Design.....	1
COSM1179	Minnesota Cosmetology Laws and Rules.....	1
COSM1202	Salon Practicum Nail Technician.....	1
COSM1203	Salon Practicum Esthetician.....	1
COSM2000	Artistry in Hairstyling.....	1
COSM2100	Chemical Texture Services.....	1
COSM2200	Manicuring/Pedicuring.....	1
COSM2300	Cosmetology Anatomy.....	1
COSM2400	Advanced Nail Techniques.....	1
COSM2500	Salon Business.....	1
2 credits COSM1204 Salon Practicum Hair Technician (one in fall, one in spring).....		2
26 credits from the following		26
COSM1200 Salon Practicum		
COSM2800 Alexandria Body Sugaring		
COSM1304 Hair Extension Techniques		
COSM1300 Clipper C		

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Criminal Justice Associate of Science (AS) - 60 credits Moorhead

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.

Requirement	Title	Credits
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
6 credits CRJU Electives.....		6
21 credits MnTC Electives*		21

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Cybersecurity Associate of Applied Science (AAS) - 60 credits Moorhead, Online

This program provides the skills to support and maintain information technology (IT) systems. These skills include overall computer knowledge, networking, application software and IT security. Students will gain hands-on experience working with routing and switching, server virtualization and private cloud computing environments. Students will explore the concepts of risk, threats, vulnerabilities, attack vectors and exploits while analyzing known security incidents. Students will write policies and apply policies and recommended security framework controls and countermeasures to decrease risk. Courses in this degree program prepare students for the CompTIA Security + and Cisco Certified Entry Network Technician (CCENT) certifications.

Requirement	Title	Credits
COMM1120	Introduction to Public Speaking.....	3
CPTR1001	Introduction To Programming and Scripting.....	3
CPTR1040	Introduction to Programming Logic.....	3
CPTR1108	CISCO 1.....	3
CPTR1118	CISCO 2.....	3
CPTR1122	System Maintenance.....	3
CPTR2224	Linux I.....	3
CPTR2240	Database Administration.....	3
CPTR2245	Enterprise Network Technologies.....	3
CSCI1110	Informatics.....	3
CSEC1110	Fundamentals of IT Security.....	3
CSEC2204	Managing Directory Services.....	3
CSEC2210	Security Breaches and Countermeasures.....	3
CSEC2228	Network Defense.....	3
ENGL1101	College Writing.....	3
HUM2236	Technology in the Humanities.....	3
3 credits from the following		3
CPTR1129 RPG Programming		
CPTR2234 Linux II		
CPTR2242 Java Programming		
CPTR2260 Advanced Structured Query Language		
CSCI1121 Computer Science I		
3 credits from the following		3
CPTR1115 COBOL Programming		
CPTR2001 Scripting for Automation		
CPTR2210 Database Report Generation		
CPTR2230 Structured Query Language		
CPTR2294 Internship		
CPTR2296 Topics in Computers		
6 credits MnTC Electives.....		6

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Cybersecurity Certificate - 30 credits Moorhead, Online

This certificate is designed for individuals looking to add technical skills in IT security. A person earning this certificate will develop skills to manage and secure the Linux operating system, develop and query an information database, and create simple scripts. Areas of cybersecurity focus include vulnerability assessment, penetration testing, perimeter defense, incident response and applying security measures to reduce risk of a security breach.

Requirement	Title	Credits
CPTR1001	Introduction To Programming and Scripting.....	3
CPTR1040	Introduction to Programming Logic.....	3
CPTR1108	CISCO 1.....	3
CPTR1118	CISCO 2.....	3
CPTR2224	Linux I.....	3
CPTR2234	Linux II.....	3
CPTR2240	Database Administration.....	3
CSEC1110	Fundamentals of IT Security.....	3
CSEC2210	Security Breaches and Countermeasures.....	3
CSEC2228	Network Defense.....	3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Dental Assisting Associate of Applied Science (AAS) - 63 credits Moorhead

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.

Students must earn a grade of C or better in all program courses to graduate from this program.

Requirement	Title	Credits
BIOL2202	Principles of Nutrition	3
BIOL2260	Human Anatomy and Physiology I	3
BIOL2262	Human Anatomy and Physiology II	3
BIOL2267	Medical Microbiology	3
CHEM1100	Fundamental Concepts of 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 Practice Management	2
DNAS1119	Advanced Functions	5
DNAS1144	Dental Assisting Clinical Affiliations	6
DNAS1210	Dental Assisting Radiology Lab I	1
DNAS1212	Dental Assisting Radiology Lab II	1
DNAS1215	Dental Specialties	1
ENGL1101	College Writing	3
PSYC1200	General Psychology	3

To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Dental Assisting Diploma - 48 credits Moorhead

The Dental Assisting program provides the knowledge necessary for the dental assistant to assist in performing general clinical assisting and support functions, intra-oral clinical procedures, business office procedures and laboratory tasks. The curriculum includes content in general studies; biomedical, dental and clinical sciences; clinical practice; and additional intra-oral 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.

Students must earn a grade of C or better in all program courses to graduate from this program.

Requirement	Title	Credits
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 Practice Management.....	2
DNAS1119	Advanced Functions.....	5
DNAS1144	Dental Assisting Clinical Affiliations.....	6
DNAS1210	Dental Assisting Radiology Lab I.....	1
DNAS1212	Dental Assisting Radiology Lab II.....	1
DNAS1215	Dental Specialties.....	1
ENGL1101	College Writing.....	3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Moorhead

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 including 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.

Students must earn a grade of C or better in all program courses to graduate from this program.

Requirement	Title	Credits
BIOL2202	Principles of Nutrition.....	3
BIOL2260	Human Anatomy and Physiology I.....	3
BIOL2262	Human Anatomy and Physiology II.....	3
BIOL2267	Medical Microbiology.....	3
CHEM1100	Fundamental Concepts of 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
DNHY1110	Principles I.....	2
DNHY1112	Dental Hygiene Practice I.....	3
DNHY1113	Radiology Lab I.....	1
DNHY1114	Radiology Lab II.....	1
DNHY1118	Oral Pathology.....	2
DNHY1119	Dental Hygiene Principles II.....	4
DNHY1123	Dental Hygiene Practice II.....	5
DNHY1124	Pain Control Lab.....	2
DNHY1130	Dental Hygiene Principles III.....	1
DNHY1132	Dental Hygiene Practice III.....	1
DNHY1136	Dental Pharmacology.....	2
DNHY2210	Dental Hygiene Principle IV.....	2
DNHY2213	Dental Hygiene Practice IV.....	6
DNHY2219	Periodontology.....	2
DNHY2220	Dental Hygiene Principle V.....	1
DNHY2223	Dental Hygiene Practice 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	Introduction to Sociology.....	3

To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Design and Engineering Technology Associate of Applied Science (AAS) - 60 credits Wadena

The Design and Engineering Technology program prepares students for employment in a wide variety of engineering-related disciplines. Students are trained across multiple two- and three-dimensional software platforms to generate drawings of parts, assemblies and layouts, as well as other manufacturing and construction-related documentation specifically required by employers. The curriculum incorporates 3D printing, 3D scanning and rapid prototyping as tools for taking student designs from computer models to three-dimensional solids. Graduates of the program enter the workforce as mechanical drafters, designers and engineering technicians. This degree also allows students to continue their education in a baccalaureate program at participating four-year institutions.

Requirement	Title	Credits
BLDG1114	Blueprint Reading I.....	2
CADD1000	AutoCAD Basics.....	3
CADD1400	Introduction to SolidWorks.....	3
CADD1410	Introduction to Autodesk Inventor.....	3
COMM1120	Introduction to Public Speaking.....	3
DET1104	Mechanical Drawing I.....	4
DET1106	Mechanical Drawing II.....	4
DET1114	Manufacturing Processes.....	2
DET2120	Structural Design and Detailing.....	3
DET2200	Advanced Modeling with SolidWorks.....	3
DET2210	Advanced Modeling with Inventor.....	3
DET2230	3D Printing and Prototyping.....	2
DET2246	Tool Design.....	3
DET2248	CNC Applications.....	3
DET2250	Reverse Engineering Applications.....	4
ENGL1101	College Writing.....	3
ENGT1134	Office Systems and Equipment.....	3
9 credits MnTC Electives.....		9

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Design and Engineering Technology Certificate - 30 credits Wadena

The Design and Engineering Technology program prepares students for employment in a wide variety of engineering-related disciplines. Students are trained across multiple two-dimensional and three-dimensional software platforms to generate drawings of parts, assemblies and layouts, as well as other manufacturing and construction-related documentation specifically required by employers. The curriculum incorporates 3D printing, 3D scanning and rapid prototyping as tools for taking student designs from computer models to three-dimensional solids. Graduates of the program are prepared to enter the workforce as mechanical drafters, designers and engineering technicians.

Track: Drafting and 3D Technologies - Diploma

Requirement	Title	Credits
CADD1000	AutoCAD Basics.....	3
CADD1400	Introduction to SolidWorks.....	3
CADD1410	Introduction to Autodesk Inventor.....	3
BLDG1114	Blueprint Reading I.....	2
DET1104	Mechanical Drawing I.....	4
DET1106	Mechanical Drawing II.....	4
DET1114	Manufacturing Processes.....	2
ENGT1134	Office Systems and Equipment.....	3
6 credits MnTC Electives.....		6

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Diesel Equipment Technology Associate of Applied Science (AAS) - 79 credits Moorhead

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 the 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 get hands-on training in all program areas. This program is an Association of Diesel Specialists TechSmart program participant.

Case New Holland Sponsored Track

Requirement	Title	Credits
DCNH1116	CNH (Case New Holland) Supervised Occupational Experience (SOE) I	3
DCNH1118	CNH (Case New Holland) Supervised Occupational Experience (SOE) II	7
DCNH2210	Mobile Hydraulics	4
DCNH2218	CNH (Case New Holland) Supervised Occupational Experience (SOE) III	3
DCNH2238	Transmissions and Drive Systems.....	4
DCNH2242	Advanced Engines and Fuel Systems	6
DSET1100	Diesel Equipment Fundamentals	2
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
DSET1136	Introduction to Diesel Engines	2
DSET1144	Electrical Troubleshooting	3
DSET2200	Introduction to Electronic Controls	3
DSET2204	Advanced Electrical and Emission Systems	3
DSET2206	Electronic Controls.....	3
ECON1150	Essentials of Economics	3
ENGL1101	College Writing	3
ENGL1215	Professional and Technical Writing.....	3
SOC1111	Introduction to Sociology	3
TRNS1112	Heating Ventilation A/C.....	3
3 credits from the following.....		3
COMM1120 Introduction to Public Speaking		
COMM1130 Small Group Communication		
COMM1140 Interpersonal Communication		

To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Diesel- General Option Track

Requirement	Title	Credits
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
DSET1136	Introduction to Diesel Engines	2
DSET1140	Supervised Occupational Experience I	7
DSET1144	Electrical Troubleshooting	3
DSET2200	Introduction to Electronic Controls	3
DSET2204	Advanced Electrical and Emission Systems	3
DSET2206	Electronic Controls	3
DSET2210	Mobile Hydraulics	4
DSET2238	Transmissions & 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
ENGL1215	Professional and Technical Writing	3
SOC1111	Introduction to Sociology	3
TRNS1112	Heating Ventilation A/C	3
3 credits from the following		3
COMM1120 Introduction to Public Speaking		
COMM1130 Small Group Communication		
COMM1140 Interpersonal Communication		
3 credits from the following		3
DSET1114 Vehicle Brakes		
DSET1116 Fall Supervised Occupational Experience		

To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Diesel- Truck Option Track

Requirement	Title	Credits
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
DSET1136	Introduction to Diesel Engines	2
DSET1144	Electrical Troubleshooting	3
DSET2200	Introduction to Electronic Controls	3
DSET2204	Advanced Electrical and Emission 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
ENGL1215	Professional and Technical Writing	3
SOC1111	Introduction to Sociology	3
TRNS1112	Heating Ventilation A/C.....	3
3 credits from the following.....		3
COMM1120 Introduction to Public Speaking		
COMM1130 Small Group Communication		
COMM1140 Interpersonal Communication		

To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Diesel Equipment Technology Diploma - 65 credits Moorhead

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, differentials, 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.

Requirement	Title	Credits
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
DSET1130	Trans Elec/Start/Charge	4
DSET1132	Introduction to Engine Theory	2
DSET1136	Introduction to Diesel Engines	2
DSET1144	Electrical Troubleshooting	3
DSET2200	Introduction to Electronic Controls	3
DSET2204	Advanced Electrical and Emission Systems	3
DSET2206	Electronic Controls.....	3
DSET2210	Mobile Hydraulics	4
DSET2238	Transmissions & Drive Systems	4
DSET2240	Supervised Occupational Experience II	3
DSET2242	Advanced Engines and Fuel Systems	6
ENGL1101	College Writing	3
ENGL1215	Professional and Technical Writing	3
TRNS1112	Heating Ventilation A/C.....	3
3 credits from the following.....		3
COMM1120 Introduction to Public Speaking		
COMM1130 Small Group Communication		
COMM1140 Interpersonal Communication		

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Digital Marketing Associate of Applied Science (AAS) - 60 credits Online

This program develops proficiency in the dynamic and rapidly growing field of digital marketing. Knowledge and skills in this field are in high demand as companies create marketing strategies through digital channels including search engines, websites, social media, email and mobile applications. This program provides a solid foundation in marketing and business, while teaching the strategies and techniques to succeed in a digital marketing career. Work environment/job skills: Digital marketers are involved in the creation, delivery and measurement of digital marketing campaigns through search engine optimization, paid search, social media, online advertising and email campaigns in order to drive engagement and customer conversion. Successful digital marketing practitioners have a strong aptitude for marketing and a deep passion for digital and social media, which drives them to continually seek out the latest technology, social platform or mobile app. Digital marketers need to be self-motivated, detail-oriented, problem solvers and analytical thinkers who thrive in a collaborative, diverse work environment. Other core competencies include strong verbal, writing, grammar and presentation skills to effectively communicate across all media platforms and with company stakeholders. They are also expected to effectively manage multiple projects in a fast-paced work environment.

Requirement	Title	Credits
ACCT2211	Financial Accounting I.....	3
BUS1100	Business Computers.....	3
BUS1141	Introduction to Business	3
BUS2204	Principles of Management	3
BUS2206	Principles of Marketing	3
DMKT2200	Introduction to Digital Marketing	3
DMKT2210	Social Media Marketing	3
DMKT2300	Content Marketing	3
DMKT2310	Digital Marketing UX Design	3
DMKT2320	Search Engine Marketing	3
DMKT2330	Email and MMS Marketing.....	3
DMKT2400	Digital Marketing Analytics.....	3
DMKT2410	Digital Marketing Capstone.....	3
ENGL1101	College Writing	3
MKTG2000	Integrated Marketing Communications	3
3 credits from the following.....		3
	COMM1120 Introduction to Public Speaking	
	COMM1130 Small Group Communication	
	COMM1140 Interpersonal Communication	
3 credits from the following.....		3
	ECON2210 Macroeconomics	
	ECON2222 Microeconomics	
3 credits from the following.....		3
	BUS, GDTC, MGMT, MKTG, SOMM	
6 credits MnTC Electives*		6

*To earn an AAS degree, students must complete courses from at 3 of the 10 MnTC goal areas.....3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Early Childhood Certificate - 18 credits Fergus Falls

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.

Requirement	Title	Credits
ECE1107	Child Growth and Development.....	3
ECE1109	Health, Wellness and Nutrition	3
ECE1111	Diverse Children and Family Relations.....	3
ECE1113	Behavior Guidance	3
ECE1115	Creative Activities and Environment	3
ED 2204	Introduction to Education	3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Early Childhood Education Transfer Pathway Associate of Science (AS) - 60 credits Fergus Falls

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, 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 Rule Numbers 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 will not be allowed to participate in lab or field experience coursework.

Requirement	Title	Credits
BIOL1104	Biology of Human Concerns	3
ECE1107	Child Growth and Development	3
ECE1109	Health, Wellness and Nutrition	3
ECE1111	Diverse Children and Family Relations	3
ECE1113	Behavior Guidance	3
ECE1115	Creative Activities and Environment	3
ECE2101	Observation and Assessment	3
ECE2103	Introduction to Special Education	3
ECE2105	Internship	3
ECE2107	Introduction to Language and Literacy	3
ED2204	Introduction to Education	3
ENGL1101	College Writing	3
ENGL2372	Children's Literature	3
MATH1100	World of Math	3
PSYC2222	Lifespan Development	3
SOC2213	Sociology of the Family	3

3 credits from the following:

COMM1120	Introduction to Public Speaking	3
COMM1130	Small Group Communication	3
COMM1140	Interpersonal Communication	3

3 credits Goal Area 4 Mathematics/Logical Reasoning

3 credits Goal Area 7A Human Diversity

6 credits MnTC Electives*

To earn an AS degree, students must complete courses from 6 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Electrical Line Worker Technology Associate of Applied Science (AAS) - 68 credits Wadena

The Electrical Line Worker Technology 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 Wadena 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.

Requirement	Title	Credits
BIOL1107	Environmental Science Issues.....	3
ELWT1100	Introduction to Lineworker Theory	4
ELWT1102	Electrical Line Worker Theory I.....	4
ELWT1104	Electrical Structure Installation.....	5
ELWT1106	Climbing Electrical Structure.....	4
ELWT1108	Construction of Overhead Structures.....	3
ELWT1110	Line Worker Theory II	4
ELWT1112	Transformers	2
ELWT1114	Line Construction Reports	2
ELWT1116	Pole Top and Bucket Rescue	1
ELWT1118	Field Construction I.....	3
ELWT1120	Field Construction II.....	3
ELWT1134	Hydraulics for Lineworkers	2
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
3 credits MnTC Electives*		3
3 credits from the following.....		3
	ELWT1122 Field Construction III	
	ELWT1132 Electrical Line Worker Internship	

*To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Electrical Line Worker Technology Diploma - 36 credits Wadena, Satellite Site

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.

Requirement	Title	Credits
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
2 credits from the following.....		2
ELWT1122 Field Construction III		
ELWT1130 Electrical Line Worker Internship		
3 credits MnTC Electives.....		3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Electrical Technology - Electrician Diploma - 74 credits Moorhead, Wadena

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.

Requirement	Title	Credits
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
ELEC2222	Advanced Programmable Logic Controllers	3
ELEC2225	Transformers	2
ELEC2230	Electrical Building Information Modeling	2
ELEC2238	Low Voltage Wiring	2
ELEC2248	Code Applications	2
ELEC2250	Special Topics/Projects	2
HLTH1122	CPR-First Aid	1
MATH1000	Technical Mathematics	3
PDEV1102	Contemporary Career Search	1

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Elementary Education Transfer Pathway Associate of Science (AS) - 60 credits Fergus Falls

The Elementary Education Foundations Transfer Pathway Associate of Science degree offers students interested in teaching kindergarten through 6th grade a powerful option: the opportunity to complete an AS degree with course credits that directly transfer to designated Elementary Education bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree program.

Requirement	Title	Credits
ART1110	Introduction to Art.....	3
BIOL1104	Biology of Human Concerns.....	3
BIOL1107	Environmental Science Issues.....	3
BIOL1108	Environmental Science Issues Lab.....	1
COMM1120	Introduction to Public Speaking.....	3
ECE1107	Child Growth and Development.....	3
ECE1111	Diverse Children and Family Relations.....	3
ECE2103	Children with Exceptionalities.....	3
ED2204	Introduction to Education.....	3
ED2210	Education Technology.....	3
ENGL1101	College Writing.....	3
ENGL2372	Children's Literature.....	3
MATH1101	Mathematical Reasoning.....	4
MATH1114	College Algebra.....	4
PSYC2222	Lifespan Development.....	3
SOC2213	Sociology of the Family.....	3
12 credits MnTC Electives		12

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Engineering Associate of Science (AS) - 60 credits Moorhead

The Associate of Science in Engineering consists of sequential math, physics and other science courses that 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 create options 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 and in government, schools, colleges and universities.

Requirement	Title	Credits
CHEM1111	General Chemistry I	5
CHEM1112	General Chemistry II	5
COMM1120	Introduction to Public Speaking	3
ENGL1101	College 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
3 credits from the following.....		3
	ENGL1205 Writing About Literature	
	ENGL1210 Writing About Current Issues	
	ENGL1215 Professional and Technical Writing	
6 credits from the following.....		6
	CADD1000 AutoCAD Basics	
	CADD2120 Visual Communication or Engineers	
	ENGR2970 Internship Experience	
	MnTC Electives	
3 credits MnTC Electives*		3

*To earn an AS degree, students must complete courses from 6 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Entrepreneurial Certificate Certificate - 15 credits Moorhead, Online

This certificate provides students with the ability to continuously learn and adapt the business knowledge, skills and attitudes needed to succeed in business, whether as an entrepreneur starting and operating a small business or as an entrepreneur within an organization. Students learn to recognize market opportunities within an industry, plan a business initiative to develop their big idea, and evaluate its profit potential. This certificate is appropriate for those who wish to be self-employed.

Requirement	Title	Credits
ENTR1101	Entrepreneurship I: Finding Your Opportunity	3
ENTR1201	Entrepreneurship II: Starting your Business	3
DMKT2200	Introduction to Digital Marketing	3
BUS1141	Introduction to Business	3
6 credits from the following.....		6
ACCT2211 Financial Accounting I		
BUS1100 Business Computers		
BUS1300 Financial Statement Analysis		
BUS2150 Legal Environment of Business		
BUS2204 Principles of Management		
BUS2206 Principles of Marketing		
DMKT2210 Social Media Marketing		
HRES1122 Human Resource Management		

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Environmental Science Associate of Science (AS) - 60 credits Fergus Falls, Moorhead

The Associate of Science 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, ensuring students are properly prepared for further study at an advanced level.

Requirement	Title	Credits
BIOL1107	Environmental Science Issues.....	3
BIOL1108	Environmental Science Issues Lab.....	1
BIOL1122	General Biology I.....	4
BIOL1123	General Biology II.....	4
BIOL2010	General Ecology.....	4
CHEM1111	General Chemistry I.....	5
CHEM1112	General Chemistry II.....	5
COMM1120	Introduction to Public Speaking.....	3
ECON2210	Macroeconomics.....	3
ENGL1101	College Writing.....	3
GEOG1110	World Regional Geography.....	3
MATH1114	College Algebra.....	4
MATH1207	Elementary Statistics.....	3
PHIL1201	Ethics.....	3
3 credits from the following.....		3
ENGL1205 Writing About Literature		
ENGL1210 Writing About Current Issues		
ENGL1215 Professional and Technical Writing		
3 credits from the following.....		3
POLS2204 Comparative Government		
POLS2206 Global Politics		
3 credits MnTC Goal Area 6 Electives.....		3
3 credits MnTC Electives*.....		3

*To earn an AS degree, students must complete courses from 6 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Esthetician Certificate - 24 credits Wadena

Esthetics is the non-medical treatment of the skin, its disorders and function. Instruction includes the sciences of anatomy, dermatology and chemistry as related to skin care; 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.

Requirement	Title	Credits
COSM1000	Principles and Practices	3
COSM1002	Client Consultations.....	1
COSM1004	Cosmetic Chemistry and Makeup Applications.....	1
COSM1006	Spa Therapies	1
COSM1010	Eyelash Extensions	1
COSM1100	Salon Safety	1
COSM1109	Skin Analysis	1
COSM1157	Histology of the Skin	1
COSM1159	Facials and Hair Removal.....	1
COSM1179	Minnesota Cosmetology Laws and Rules.....	1
COSM2004	License Preparation Esthetician	1
11 credits from the following.....		11
	COSM1200 Salon Practicum	
	COSM2800 Alexandria Body Sugaring	

Eyelash Extension Technician Certificate - 3 credits Wadena

This course will be for nail technicians and any person seeking a license to perform eyelash extensions. "Eyelash extensions" means the application, removal and trimming of threadlike natural or synthetic fibers to an eyelash and includes the cleansing of the eye area and lashes. Eyelash extensions do not include color agents, straightening agents, permanent wave solutions, bleaching agents, applications to the eyebrow or any other cosmetology service. Eyelash technician training consists of board-approved curriculum of 38 hours. There will be instruction in the following: structure, function, and disorders of the eye and orbital area; eyelash growth cycles; contraindications and allergic reactions; infection control; eye shapes and eyelash evaluation; product ingredients; health and safety; and laws and rules. There will also be instruction in the application of eyelash extensions, including client consultation, design, cleansing the eye area, applying eyelash extensions, and removing eyelash extensions.

Requirement	Title	Credits
COSM1010	Eyelash Extensions	1
COSM1100	Salon Safety	1
COSM1179	Minnesota Cosmetology Laws and Rules.....	1

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Gas Utility Construction and Service Diploma - 36 credits Online

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

*This program is part of the MN Energy Academy and is in the Minneapolis-St. Paul metro area.

Requirement	Title	Credits
CONM2213	Safety Management.....	2
GAS1000	Gas Utility Field Training I.....	4
GAS1001	Underground Utility Locating	2
GAS1002	Gas Service Welding I	3
GAS1003	Gas Utility Equipment Training	5
GAS1004	Gas Utility Field Training II.....	4
GAS2001	Forklift Certification	1
GAS2002	Gas Utility Field Training III.....	5
GAS2003	Gasless Leak Detection	3
GAS2600	Electric and Gas Appliances	4
MATH1000	Technical Mathematics	3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Global and Intercultural Studies Certificate - 12 credits Fergus Falls, Moorhead, Online

In a world of instant communication and the relationships that implies, an understanding of how that world works becomes useful when one is called on to managing those relationships. Much of that understanding is technical in that the natural features and characteristics of the world and its regions are defined and generally accepted. The institutions that govern the relationships among these regions, while always in flux, can still be understood in broad terms such as trade, shared resources and other formal interactions such as aid, international accords and security. But much of a good understanding of the world hinges on matters that are more equivocal. Works of the humanities, religion, culture and long-standing traditions shape the ways people engage in the relationships that formally define global interaction. For this reason, this program collects courses from multiple disciplines into three groupings from which one can build a sequence of courses that both covers the essential skills necessary to advance a more global outlook as well as allows for a more targeted exploration of global influences. This makes it possible for participants to explore their personal interests on a global scale and in more depth.

Requirement	Title	Credits
3 credits from the following.....		3
	ANTH1100 Introduction to Anthropology	
	ART1129 Art History: African, Asian, Islamic and Mesoamerican	
	HUM1110 Native American Culture	
	WMST1136 Global Perspectives of Women	
6 credits from the following.....		6
	COMM2200 Intercultural Communication	
	GEOG1110 World Regional Geography	
	GLST1100 Introduction to Global Studies	
3 credits from the following.....		3
	HUM1105 Religion in the Humanities	
	POLS2204 Comparative Government	
	POLS2206 Global Politics	

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Graphic Design Certificate - 30 credits Moorhead

Graphic design is a highly competitive and rewarding career for those with a talent and/or interest in graphic communication. The Graphic Design certificate program focuses on the integration of technology with graphic design to train students to create communication materials such as branding, brochures, web interface design, magazine layout and other forms of visual communication. The 30-credit certificate is targeted specifically at advanced students, students possessing an advanced degree or students who have professional experience in a creative field. It is a two-semester fast-track curriculum with the intent of building on students' existing skill sets and experience or accommodating the advanced students' accelerated goals for employment.

Requirement	Title	Credits
GDTC1100	Macintosh Production Processes.....	3
GDTC1105	Adobe Photoshop I	3
GDTC1113	Design and Layout I.....	3
GDTC1115	Design and Layout II.....	3
GDTC1120	Adobe InDesign I	3
GDTC1124	Interactive Design I	3
GDTC1135	Adobe Illustrator I.....	3
GDTC2120	Adobe InDesign II	3
GDTC2205	Adobe Photoshop II	3
GDTC2245	Adobe Illustrator II.....	3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Graphic Design Diploma - 60 credits Moorhead

Graphic Design focuses on the integration of digital technology and graphic design to create communication materials for print, multimedia and online production. Students develop creatively and technically as they learn skills in the principles of design and related software as well as production methods and specifications for a variety of industry products. Students are trained to be task-oriented by learning to meet deadlines, solve problems and work efficiently, along with learning industry expectations and best practices. They also are trained in the methods of compiling and presenting a personal portfolio of their work in both print and online forms to assist in the job search for entry-level employment.

Requirement	Title	Credits
ENGL1101	College Writing.....	3
GDTC1100	Macintosh Production Processes.....	3
GDTC1105	Adobe Photoshop I.....	3
GDTC1113	Design and Layout I.....	3
GDTC1115	Design and Layout II.....	3
GDTC1120	Adobe InDesign I.....	3
GDTC1124	Interactive Design I.....	3
GDTC1127	Digital Photo / Video.....	3
GDTC1135	Adobe Illustrator I.....	3
GDTC1151	Process Printing Theory.....	3
GDTC2205	Adobe Photoshop II.....	3
GDTC2212	Design and Layout III.....	3
GDTC2120	Adobe InDesign II.....	3
GDTC2224	Interactive Design II.....	3
GDTC2231	Design Portfolio.....	3
GDTC2245	Adobe Illustrator II.....	3
GDTC2249	Dimensional Design.....	3
GDTC2250	Design Campaigns.....	3
GDTC2258	Graphic Design Professional Practices.....	3

3 credits from the following 3
 COMM1120 Introduction to Public Speaking
 COMM1140 Interpersonal Communication

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Hair Technician Diploma - 36 credits Wadena

A hair technician is any person who performs services for the cosmetic care of hair on the scalp. Hair technician services include cutting the hair and the application of dyes, bleach, reactive chemicals, keratin or other preparations to color or alter the structure of the hair. Hair technician training includes 900 hours of training in hair services. Upon completion of the 900-hour training program and passing test scores in hair technician general theory, written practical and Minnesota laws and rules pertaining to hair technician services, an applicant may apply for licensure.

Requirement	Title	Credits
COSM1000	Principles and Practices.....	3
COSM1002	Client Consultations.....	1
COSM1005	Hair Reformation.....	1
COSM1100	Salon Safety.....	1
COSM1117	Shampooing and Rinsing.....	1
COSM1119	Haircutting.....	1
COSM1129	Hairstyling.....	1
COSM1130	Properties of the Hair and Scalp.....	1
COSM1163	Hair Color.....	1
COSM1171	Principles of Hair Design.....	1
COSM1179	Minnesota Cosmetology Laws and Rules.....	1
COSM1204	Salon Practicum Hair Technician.....	16
COSM1300	Clipper Cutting Techniques.....	1
COSM1304	Hair Extension Techniques.....	1
COSM2000	Artistry in Hairstyling.....	1
COSM2005	License Preparation Hair Technician.....	1
COSM2100	Chemical Texture Services.....	1
COSM2300	Cosmetology Anatomy.....	1
COSM2500	Salon Business.....	1

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Health Information Technology/Coding Associate of Applied Science (AAS) - 64 credits Online

The health information technician is an important member of the health care team who secures, analyzes, integrates and manages health information for patient care, performs diagnostic and procedure coding, utilizes electronic systems for revenue cycle and data management activities, and maintains a legal patient record. This information steers the health care industry. The program is designed to combine general education and technical courses for a well-rounded and functional education. To further the student's knowledge, the program utilizes web-based educational electronic health record-related systems, and an on-site internship is required.

Requirement	Title	Credits
BIOL1170	Essentials of Human Anatomy and Physiology	4
BUS1100	Business Computers.....	3
CPTR1106	Microcomputer Databases	3
ENGL1101	College Writing	3
HITM1151	Introduction to Health Information Management.....	3
HITM1155	Medicolegal Aspects	3
HITM1165	Information Systems in Health	3
HITM1236	Essentials of Medical Coding.....	2
HITM2224	Inpatient Procedure Coding	2
HITM2230	Medical Science for Health Information Professionals.....	3
HITM2237	Outpatient Procedure Coding	2
HITM2253	Quality Management Studies.....	3
HITM2256	Management Practice in Health Information Management	3
HITM2264	Revenue Cycle Management	3
HITM2283	Intermediate Diagnosis Coding.....	3
HITM2286	Advanced Medical Coding	3
HITM2290	Health Care Data Management and Analysis	3
HITM2310	Health Information Professional Practice	2
HITM2320	Registered Health Information Technician (RHIT) Exam Review	1
HLTH1116	Medical Terminology.....	3
MATH1112	Applied Statistics	3
PHIL1200	Applied and Professional Ethics	3
3 credits from the following.....		3
	COMM1120 Introduction to Public Speaking	
	COMM1130 Small Group Communication	
	COMM1140 Interpersonal Communication	

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Health Sciences Broad Field Associate of Science (AS) - 60 credits Fergus Falls, Moorhead, Online

This AS degree provides students a broad base of general education coursework relevant to the field of health sciences. The degree is designed to transfer to all MnSCU system universities offering related baccalaureate programs through a statewide articulation agreement. Students are encouraged to consult with counselors/advisors for guidance and planning regarding the requirements of the various health sciences baccalaureate programs to facilitate the most efficient transition and transfer. Students who intend to pursue graduate level degrees should consider M State's Pre-Professional Health AS Degree.

Students must earn a grade of C or better in all program courses to graduate from this program.

Requirement	Title	Credits
BIOL1122	General Biology I	4
BIOL2202	Principles of Nutrition	3
BIOL2260	Human Anatomy and Physiology I	3
BIOL2261	Human Anatomy and Physiology I Lab	1
BIOL2262	Human Anatomy and Physiology II	3
BIOL2263	Human Anatomy and Physiology II Lab	1
BIOL2267	Medical Microbiology	3
BIOL2268	Medical Microbiology Lab	1
CHEM1111	General Chemistry I	5
ENGL1101	College Writing	3
HLTH1000	Introduction to Healthcare	3
MATH1114	College Algebra	4
MATH1207	Elementary Statistics	3
PHIL1201	Ethics	3
PSYC1200	General Psychology	3
PSYC2222	Lifespan Development	3
SOC1111	Introduction to Sociology	3
3 credits from the following		3
COMM1140 Interpersonal Communication		
COMM2200 Intercultural Communication		
8 credits of Career or MnTC Electives		8

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

History Transfer Pathway Associate of Arts (AA) - 60 credits Fergus Falls, Moorhead, Online, Wadena

The History Transfer Pathway offers students the opportunity to complete an Associate of Arts degree with course credits that directly transfer to designated history bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field.

Requirement	Title	Credits
ENGL1101	College Writing	3
3 credits from the following.....		3
	COMM1120 Introduction to Public Speaking	
	COMM1130 Small Group Communication	
	COMM1140 Interpersonal Communication	
3 credits from the following.....		3
	ENGL1205 Writing About Literature	
	ENGL1210 Writing About Current Issues	
	ENGL1215 Professional and Technical Writing	
6 credits MnTC Goal Area 3 Electives		6
3 credits MnTC Goal Area 4 Electives		3
3 credits MnTC Goal Area 5 Electives.....		3
9 credits MnTC Goal Area 6 Electives.....		9
21 credits MnTC Electives.....		21
9 credits from the following*		9
	HIST1101 Western Civilization: Ancient to 1600s	
	HIST1102 Western Civilization: 1600s to the Present	
	HIST1201 American History to 1877	
	HIST1202 American History since 1877	
	HIST1301 World History: Ancient to 1500s	
	HIST1302 World History: 1500s to Present	

*Must complete one of the three introductory sequences (1101/1102, 1201/1202, 1301/1302), plus at least one course from another. At least one course must be a US topic (1201 or 1202)

To earn an AA degree, students must meet the individual requirements of all 10 goal areas of the MnTC. Of the 60 total credits required in the program, a minimum of 40 credits must be from the MnTC.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Human Resources Associate of Applied Science (AAS) - 60 credits Online

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, talent acquisition, selection and employment, training and development, compensation and benefit administration.

Requirement	Title	Credits
ACCT1124	Spreadsheet Applications	3
ACCT2211	Financial Accounting I.....	3
BUS1100	Business Computers.....	3
BUS1141	Introduction to Business	3
BUS2204	Principles of Management	3
ENGL1101	College Writing	3
HRES1122	Human Resource Management.....	3
HRES1126	Talent Acquisition	3
HRES1130	Benefits Administration	3
HRES1134	Training and Development.....	3
HRES2204	Policy Administration	3
HRES2212	Strategic Compensation	3
HRES2224	Employee/Labor Relations.....	3
HRES2245	Human Resources Internship	1
HRES2252	Human Resource Systems	2
3 credits from the following.....		3
	COMM1120 Introduction to Public Speaking	
	COMM1140 Interpersonal Communication	
3 credits from the following.....		3
	ECON2210 Macroeconomics	
	ECON2222 Microeconomics	
3 credits from the following.....		3
	PSYC1200 General Psychology	
	SOC1111 Introduction to Sociology	
6 credits Technical Electives.....		6
3 credits MnTC Electives*		3

*To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Human Resources Associate of Science (AS) - 60 credits Online

Human resources programs prepare students to provide support to companies and individual employees in the area of human resources. Associate of Science graduates may assume duties in the following areas: communication with employees, employee analytics, policies and administration, employer and labor relations, talent acquisition, selection and employment, training and development, compensation 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.

Requirement	Title	Credits
BUS1100	Business Computers.....	3
COMM1120	Introduction to Public Speaking	3
ENGL1101	College Writing	3
ENGL1215	Professional and Technical Writing.....	3
HRES1122	Human Resource Management.....	3
HRES1126	Talent Acquisition	3
HRES1130	Benefits Administration	3
HRES1134	Training and Development.....	3
HRES2204	Policy Administration	3
HRES2212	Strategic Compensation	3
HRES2224	Employee/Labor Relations.....	3
HRES2245	Human Resources Internship	1
HRES2252	Human Resource Systems	2
3 credits from the following.....		3
ACCT2211	Financial Accounting I	
BUS2204	Principles of Management	
3 credits from the following.....		3
ECON2210	Macroeconomics	
ECON2222	Microeconomics	
4 credits from the following.....		4
MATH1100	World of Math	
MATH1114	College Algebra	
MATH1213	Introduction to Statistics	
3 credits from the following.....		3
PHIL1200	Applied and Professional Ethics	
PHIL1201	Ethics	
3 credits from the following.....		3
PSYC1200	General Psychology	
SOC1111	Introduction to Sociology	
8 credits MnTC Electives*		8

*To earn an AS degree, students must complete courses from 6 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Human Resources Certificate - 18 credits Online

This program is designed to prepare students to enter the Human Resources field and supports continued professional growth for those currently in the field. This certificate will provide students with the basic understanding of key human resource practices and how to support and manage them. The certificate program is transferable to the Human Resources Associate of Applied Science and Associate of Science degrees.

Requirement	Title	Credits
HRES1122	Human Resource Management	3
HRES1126	Talent Acquisition	3
HRES1130	Benefits Administration	3
9 credits from the following.....		9
BUS1100 Business Computers		
BUS1141 Introduction to Business		
HRES1134 Training and Development		
HRES2204 Policy Administration		
HRES2212 Strategic Compensation		
HRES2224 Employee/Labor Relations		
HRES2245 Human Resources Internship		
HRES2252 Human Resource Systems		

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

HVAC/R - Heating, Ventilation, Air Conditioning and Refrigeration Diploma - 35 credits Moorhead, Wadena

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.

Requirement	Title	Credits
HVAC1102	Duct Fitting Construction	3
HVAC1103	Electricity for Heating, Ventilating and Air Conditioning	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
HVAC2214	Hot Water Heating	2
HVAC2221	Heat Pump Theory and Operation	3
HVAC2290	Heating, Ventilating, and Air Conditioning Internship	1
MATH1000	Technical Mathematics	3
REFR1110	Refrigeration, Air Conditioning and Heating Principles	3
REFR1112	Refrigeration, Air Conditioning and Heating Lab	3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Information Technology Associate of Applied Science (AAS) - 60 credits Online

The focus of this school-to-work degree is customer service, user support and an emphasis on technical skills including desktop and network support. Students will learn the skills needed to provide technical support to customers and users regarding issues related to computer systems, hardware, software and local area networks. Additionally, skills to understand the importance of daily maintenance of computer systems and networks, learning to coach users and customers through problem-solving processes, and communicating a solution will be gained. The use of systems including office applications, virtualization and operating systems will be used in addition to learning analytical, diagnostic, communication and customer service skills.

Requirement	Title	Credits
CPTR1040	Introduction to Programming Logic	3
CPTR1108	CISCO 1	3
CPTR1118	CISCO 2	3
CPTR1121	Information Technology Service Desk	3
CPTR1125	IT Essentials I	3
CPTR1130	IT Essentials II	3
CPTR1135	Beginning Networking	3
CPTR1148	Microcomputer Operating System	3
CPTR2100	Supporting End-User Applications	3
CPTR2224	Linux I	3
CPTR2236	Network Security	3
CPTR2240	Database Administration	3
CPTR2272	Network Operating Systems	3
ENGL1101	College Writing	3
HUM2236	Technology in the Humanities	3
SOC1111	Introduction to Sociology	3
3 credits from the following		3
BUS1100 Business Computers		
CSCI1110 Informatics		
3 credits from the following		3
CPTR2001 Scripting for Automation		
CPTR2200 CISCO 3		
CPTR2234 Linux II		
CPTR2294 Internship		
CSEC2204 Managing Directory Services		
6 credits MnTC Electives*		6

*To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Information Technology Associate of Science (AS) - 60 credits Moorhead

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 to complete a bachelor's degree at selected institutions. The degree is an ideal mix of practical experience and general education for a field that is constantly evolving.

Requirement	Title	Credits
COMM1120	Introduction to Public Speaking.....	3
CPTR1001	Introduction To Programming and Scripting.....	3
CPTR1040	Introduction to Programming Logic.....	3
CPTR1108	CISCO 1.....	3
CPTR1122	System Maintenance.....	3
CPTR2001	Scripting for Automation.....	3
CPTR2224	Linux I.....	3
CPTR2245	Enterprise Network Technologies.....	3
CSCI1110	Informatics.....	3
CSEC1110	Fundamentals of IT Security.....	3
CSEC2204	Managing Directory Services.....	3
ENGL1101	College Writing.....	3
HUM2236	Technology in the Humanities.....	3
MATH1114	College Algebra.....	4
PSYC1200	General Psychology.....	3
14 credits MnTC Electives*.....		14

*To earn an AS degree, students must complete courses from 6 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Integrated & Professional Studies Associate of Applied Science (AAS) - 60 credits Detroit Lakes, Fergus Falls, Moorhead, Online, Wadena

The Integrated & Professional 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 several subjects and current or past workplace education and training experiences into a degree program and builds on a current area of study or industry-related experience and training. Students work collaboratively with faculty and staff to create a degree plan that meets individualized educational needs. Students who enroll in the program will complete 33 specialized career technical credits, 12 general education credits (in at least three Minnesota transfer goal areas), in addition to 15 credits in core foundational areas.

Track: Integrated & Professional Studies- AAS

Requirement	Title	Credits
ENGL1101	College Writing.....	3
ILS1100	Integrative Learning Seminar I.....	1
ILS2100	Integrative Learning Seminar II.....	2
PDEV1115	Career Transitions.....	3
3 credits from the following		3
BUS1100 Business Computers		
CPTR1104 Introduction to Computer Technology		
3 credits from the following		3
COMM1100 Communication and Effective Human Relations		
COMM1120 Introduction to Public Speaking		
COMM1140 Interpersonal Communication		
12 credits MnTC Electives.....		12
33 credits Career Electives.....		33

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Track: Integrated Studies Emphasis

Requirement	Title	Credits
ILS2100	Integrative Learning Seminar II.....	2
27 credits Core and General Education credits.....		27
31 credits Career Electives.....		31

Track: Professional Studies Emphasis

Requirement	Title	Credits
PDEV2001	Industry Prior Learning.....	6
PDEV2970	Experiential and Applied Learning Capstone.....	3
3 credits from the following		3
BUS1141 Introduction to Business		
BUS2204 Principles of Management		
BUS2310 Hospitality Management		
3 credits from the following		3
LEAD1102 Nature of Leadership		
LEAD1103 Introduction to Supervision		
18 credits from the following		3-12
PDEV2701 Applied Coop Experience I		
PDEV2702 Applied Coop Experience II		
27 credits Core and General Education credits.....		27

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Liberal Arts and Sciences Associate of Arts (AA) - 60 credits Detroit Lakes, Fergus Falls, Moorhead, Online, Wadena

The Associate in Arts is a liberal arts degree that includes the first two years of most bachelor's degrees and is designed for transfer to a four-year university. Students who complete M State's Associate in Arts degree, which includes the Minnesota Transfer Curriculum, are assured of a smooth transfer into Minnesota State Colleges and Universities system institutions as well as into specific majors at all the campuses of the University of Minnesota.

Liberal Arts and Sciences AA Requirements:

- Successful completion of a minimum of 60 semester credits numbered 1000 or above.
- Achieve an overall M State GPA of 2.00 and a GPA of 2.00 within the Minnesota Transfer Curriculum (MnTC). Transfer courses with grades of A-D will be included in the GPA calculation for the MnTC.
- Earn at least 20 of the 60 credits at M State.
- Complete a minimum of 40 credits from the MnTC and fulfill individual requirements in each of the ten MnTC goal areas as listed below.

Minnesota Transfer Curriculum (MnTC) Requirements:

Students may satisfy the MnTC requirement with a variety of courses and credits. Some courses will meet more than one of the ten (10) required goal areas. Fulfilling the minimum requirements in each goal area may not satisfy the 40 credit minimum. Some additional credits beyond the minimum requirements in goals 1-10 could be needed to achieve the overall 40 credit MnTC requirement.

<u>Requirement</u>	<u>Title</u>	<u>Credits</u>
ENGL1101	College Writing.....	3
One of the following courses.....		3
	ENGL1205 Writing About Literature	
	ENGL1210 Writing About Current Issues	
	ENGL1215 Professional and Technical Writing	
One of the following courses.....		3
	COMM1120 Introduction to Public Speaking	
	COMM1130 Small Group Communication	
	COMM1140 Interpersonal Communication	
<u>Goal Area 2</u>	*courses must be from at least 2 different disciplines.....	6
<u>Goal Area 3</u>	*at least 1 course must include a lab.....	6
<u>Goal Area 4</u>		3
<u>Goal Area 5</u>	*courses must be from at least 2 different disciplines.....	9
<u>Goal Area 6</u>	*courses must be from at least 3 different disciplines.....	9
<u>Goal Area 7</u>		3
<u>Goal Area 8</u>		3
<u>Goal Area 9</u>		3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Liberal Arts and Sciences: Social Science Emphasis Associate of Arts (AA) - 60 credits Detroit Lakes, Fergus Falls, Moorhead, Online

The Associate of Arts degree with Emphasis in Social Science provides the necessary lower division coursework for transfer to a four-year major in sociology, social work or human services. Transferability of courses from Minnesota State Community and Technical College (M State) to public higher education systems in Minnesota is enhanced by transfer agreements that are in place. Coursework will transfer in its entirety to the Bachelor of Social Work at Minnesota State University Moorhead and may transfer in part or entirety to other programs and/or post-secondary institutions.

Social Work Track

Requirement	Title	Credits
BIOL1104	Biology of Human Concerns	3
COMM1120	Introduction to Public Speaking	3
ECON1150	Essentials of Economics	3
ENGL1101	College Writing	3
POLS1120	American National Government	3
PSYC1200	General Psychology	3
PSYC2222	Lifespan Development	3
SOC1111	Introduction to Sociology	3
SW2250	Introduction to Social Work/Social Welfare	3
3 credits from the following.....		3
	ENGL1205 Writing About Literature	
	ENGL1210 Writing About Current Issues	
	ENGL1215 Professional and Technical Writing	
3 credits MnTC Goal Area 1 Electives		3
3 credits MnTC Goal Area 3 Electives		3
3 credits MnTC Goal Area 4 Electives		3
9 credits MnTC Goal Area 6 Electives		9
3 credits MnTC Goal Area 8 Electives		3
9 credits MnTC or Technical Electives*		9

*To earn an AA degree, students must meet the individual requirements of all 10 goal areas of the MnTC. Of the 60 total credits required in the program, a minimum of 40 credits must be from the MnTC.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Sociology Track

Requirement	Title	Credits
BIOL1104	Biology of Human Concerns	3
COMM1120	Introduction to Public Speaking	3
ECON1150	Essentials of Economics	3
ENGL1101	College Writing	3
SOC1111	Introduction to Sociology	3
POLS1120	American National Government.....	3
PSYC1200	General Psychology.....	3
3 credits from the following.....		3
ENGL1205 Writing About Literature		
ENGL1210 Writing About Current Issues		
ENGL1215 Professional and Technical Writing		
3 credits MnTC Goal Area 1 Electives		3
3 credits MnTC Goal Area 3 Electives		3
3 credits MnTC Goal Area 4 Electives		3
9 credits MnTC Goal Area 6 Electives		9
3 credits MnTC Goal Area 8 Electives		3
15 credits MnTC or Technical Electives*		15

*To earn an AA degree, students must meet the individual requirements of all 10 goal areas of the MnTC. Of the 60 total credits required in the program, a minimum of 40 credits must be from the MnTC.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Limited Scope Radiography Diploma - 46 credits Detroit Lakes

The Limited Scope Radiography program prepares students to become competent entry-level limited scope radiographers. The limited scope radiographer works under the direction of a health care provider and communicates with and positions patients for specified types of radiography examinations. The limited scope radiographer provides quality care to patients; manipulates radiographic equipment and accessories; selects and adjusts technical factors; provides radiation protection for patients, self and others; obtains diagnostic images; performs image evaluation; and carries out activities associated with equipment quality control. Students are equipped with the knowledge and skills necessary to perform a variety of radiography exams on patients in various health care settings.

Requirement	Title	Credits
BIOL2260	Human Anatomy and Physiology I.....	3
COMM1140	Interpersonal Communication.....	3
LSR1100	Introduction to Limited Scope Radiography and Patient Care.....	3
LSR1120	Image Production I.....	4
LSR1140	Radiation Protection.....	3
LSR1160	Radiographic Procedures I.....	5
LSR1220	Image Production II.....	3
LSR1230	Imaging Equipment and Quality Control.....	3
LSR1240	Radiobiology.....	2
LSR1260	Radiographic Procedures II.....	4
LSR1280	Radiographic Clinical I.....	4
LSR1380	Radiographic Clinical II.....	7
RADT1102	Fundamental Concepts of Radiologic Technology.....	2

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

LPN to Associate Degree Nursing Bridge Associate of Science (AS) - 32 credits Detroit Lakes, Fergus Falls, Moorhead, Wadena

The LPN to Associate Degree Nursing option is designed for licensed practical nurses seeking to become registered nurses. This option is offered at the Detroit Lakes, Fergus Falls, Moorhead and Wadena campuses. Students who have taken the required general education prerequisites and are accepted to the program take a two-credit Role Transition course in the semester prior to the start of their program and then join the Associate Degree Nursing students in the second year of their nursing 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 facilities, clinics, and community health and other health-related facilities. Upon completion of the nursing program, an Associate of Science degree is awarded by the college. Nursing graduates may apply to take the National Council Licensing Exam-RN (NCLEX-RN) following graduation. 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 Minnesota Board of Nursing has officially approved the Associate Degree Nursing program at M State.

Requirement	Title	Credits
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	Introduction to Sociology	3
3 credits MnTC Electives*		3

*To earn an AS degree, students must complete courses from 6 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Massage Therapy Diploma - 31 credits Wadena

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.

Requirement	Title	Credits
BIOL1170	Essentials of Human Anatomy and Physiology	4
THPY1101	Nutrition and Wellness.....	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
THPY1151	Business Development	3
THPY1156	Massage Pathophysiology.....	3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Medical Administrative Assistant Associate of Applied Science (AAS) - 60 credits Online

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 in 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.

Requirement	Title	Credits
ADMM1104	Medical Language Applications I	3
ADMM1110	Medical Documentation I	4
ADMM1122	Medical Office Procedures.....	4
ADMM1150	Medical Billing/Insurance	4
ADMM1152	Outpatient Coding.....	4
ADMM1160	Medical Documentation II	3
ADMM1200	Medical Office Technology Tools.....	2
ADMM2104	Medical Language Applications II	3
ADMM2122	Medical Office Management	3
ADMM2130	Medical Office Career Insight	2
ADMM2150	Medicare Coding and Billing Applications.....	3
ADMM2320	Medical Office Capstone.....	1
ADMM2500	Human Disease Applications for Administrative Health Professionals.....	3
HLTH1110	Introduction to Anatomy and Physiology.....	3
6 credits from the following.....		3
COMM1120 Introduction to Public Speaking		
COMM1130 Small Group Communication		
COMM1140 Interpersonal Communication		
3 credits from the following.....		3
PSYC1200 General Psychology		
PSYC2220 Abnormal Psychology		
PSYC2222 Lifespan Development		
9 credits MnTC Electives.....		9

*To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Medical Coding Diploma - 44 credits Online

M State's Medical Coding program provides students with the training necessary to assign medical diagnoses and procedure codes to patient records utilizing nationally recognized classification systems. These codes are used for medical billing, research, reporting, statistics and administrative purposes. Graduates of the program are eligible to take national coding certification examinations such as the Certified Coding Associate (CCA) or the Certified Professional Coder (CPC).

Track: Diploma

Requirement	Title	Credits
BUS1100	Business Computers.....	3
BIOL1170	Essentials of Human Anatomy and Physiology.....	4
ENGL1101	College Writing.....	3
HITM1151	Introduction to Health Information Management.....	3
HITM1155	Medicolegal Aspects.....	3
HITM1165	Information Systems in Health.....	3
HITM1236	Essentials of Medical Coding.....	2
HITM2224	Inpatient Procedure Coding.....	2
HITM2230	Medical Science for Health Information Professionals.....	3
HITM2237	Outpatient Procedure Coding.....	2
HITM2264	Revenue Cycle Management.....	3
HITM2283	Intermediate Diagnosis Coding.....	3
HITM2286	Advanced Medical Coding.....	3
HITM2302	Medical Coding Exam Review.....	1
HLTH1116	Medical Terminology.....	3
3 credits from the following		3
COMM1120 Introduction to Public Speaking		
COMM1130 Small Group Communication		
COMM1140 Interpersonal Communication		

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Medical Coding and Insurance Diploma - 50 credits Online

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.

Requirement	Title	Credits
ADMM1104	Medical Language Applications I	3
ADMM1110	Medical Documentation I	4
ADMM1122	Medical Office Procedures.....	4
ADMM1150	Medical Billing/Insurance	4
ADMM1152	Outpatient Coding.....	4
ADMM1200	Medical Office Technology Tools.....	2
ADMM2104	Medical Language Applications II	3
ADMM2130	Medical Office Career Insight	2
ADMM2150	Medicare Coding and Billing Applications.....	3
ADMM2152	Advanced Coding	4
ADMM2154	Hospital Billing	2
ADMM2255	Evaluation & Mgmt Coding Practices.....	1
ADMM2258	Certified Professional Coder Examination Review.....	1
ADMM2320	Medical Office Capstone.....	1
ADMM2500	Human Disease Applications for Administrative Health Professionals.....	3
HLTH1110	Introduction to Anatomy and Physiology.....	3
3 credits from the following.....		3
	COMM1120 Introduction to Public Speaking	
	COMM1130 Small Group Communication	
	COMM1140 Interpersonal Communication	
3 credits MnTC Electives.....		3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Medical Laboratory Technology Associate of Applied Science (AAS) - 60 credits Fergus Falls, Moorhead

Medical laboratory technologists perform a wide range of routine laboratory procedures associated with blood and body fluid analysis. In cooperation with affiliate health care facilities, the college offers a two-year hybrid program (online lectures, campus-based labs) for training medical laboratory technologists. The curriculum includes general education, science, medical laboratory technology courses and a 16-week clinical experience at an affiliate health care laboratory. Upon completion of the program, students are prepared for the American Society of Clinical Pathology (ASCP) Board of Certification exam. The majority of Medical Laboratory Technology graduates work in hospital and clinic laboratories. Graduates may articulate to a four-year institution to receive a bachelor of science degree in Medical Laboratory Science.

Students must earn a grade of C or better in all program courses to graduate from this program.

Requirement	Title	Credits
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
CHEM1100	Fundamental Concepts of Chemistry.....	3
ENGL1101	College Writing	3
ENGL1215	Professional and Technical Writing.....	3
MLT1109	Phlebotomy Skills Lecture	1
MLT1116	Basic Lab Techniques Lecture	1
MLT1117	Basic Lab Techniques Lab	1
MLT1119	Phlebotomy Skills Lab	1
MLT1124	Immunohematology	3
MLT1125	Immunohematology Lab	1
MLT1131	Laboratory Calculations Lecture	1
MLT1216	Hematology	2
MLT1217	Hematology Lab.....	1
MLT1227	Biological Fluids.....	1
MLT1228	Biological Fluids Lab.....	1
MLT2131	Diagnostic Chemistry	3
MLT2132	Diagnostic Chemistry Lab	1
MLT2151	Introduction to Molecular Diagnostics	1
MLT2223	Clinical Urinalysis and Body Fluids	2
MLT2224	Clinical Immunohematology.....	3
MLT2227	Clinical Chemistry and Immunology.....	3
MLT2231	Clinical Microbiology	3
MLT2232	Clinical Hematology and Coagulation	3
MLT2266	Diagnostic Microbiology	3
MLT2268	Diagnostic Microbiology Lab	1
MLT2316	Immunology	1
MLT2317	Immunology Lab	1
MLT2346	Clinical Applications.....	1
MLT2350	Professional Issues in Medical Laboratory Technology	2

To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Music Associate of Fine Arts (AFA) - 68 credits Fergus Falls

The Associate in Fine Arts 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.

Requirement	Title	Credits
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 and Ear Training I	1
MUSC1124	Sight Singing and Ear Training II	1
MUSC2223	Sight Singing and Ear Training III	1
MUSC2224	Sight Singing and Ear Training IV	1
MUSC2231	Advanced Theory and Musicianship III	3
MUSC2232	Advanced Theory and Musicianship IV	3
PHYS1107	Physics of Music	3
9 credits from the following		9
MUSC1114 Beginning Class Piano		
MUSC1151 Individual Voice Lessons		
MUSC1181 Private Instrumental Lessons		
MUSC1185 Private Music Composition Lessons		
MUSC1191 Individual Piano Lessons		
MUSC2251 Individual Voice Lessons		
MUSC2281 Private Instrumental Lessons		
MUSC2285 Advanced Music Composition		
MUSC2291 Individual Piano Lessons		
8 credits from the following		8
MUSC1135 Voice Ensemble		
MUSC1141 Concert Choir		
MUSC1162 Jazz Ensemble		
MUSC1164 Concert Band		
MUSC1168 Pep Band		
15 credits MnTC Electives*		15

*To earn this AFA degree, students must complete courses from 6 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Nail Technician Certificate - 16 credits Wadena

The Nail Technician 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 Cosmetology, which is the cosmetology licensing body, requires 350 hours of clinical time in order to become licensed in Minnesota. Upon completion of 350 hours and passing of the state exam, a license will be issued.

Track: Nail Technician - Certificate

Requirement	Title	Credits
COSM1000	Principles and Practices.....	3
COSM1007	Gel Nail Applications.....	1
COSM1100	Salon Safety.....	1
COSM1161	Nail Structure and Growth.....	1
COSM1179	Minnesota Cosmetology Laws and Rules.....	1
COSM1202	Salon Practicum Nail Technician.....	6
COSM2003	License Preparation Nail Technician.....	1
COSM2200	Manicuring/Pedicuring.....	1
COSM2400	Advanced Nail Techniques.....	1

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Payroll Specialist Diploma - 32 credits Moorhead, Online

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

Requirement	Title	Credits
ACCT1101	Payroll.....	3
ACCT1124	Spreadsheet Applications	3
ACCT2211	Financial Accounting I.....	3
ACCT2212	Financial Accounting II.....	3
ACCT2218	QuickBooks	2
BUS1100	Business Computers.....	3
HRES1122	Human Resource Management.....	3
HRES1130	Benefits Administration	3
6 credits from the following.....		6
	ACCT2210 Managerial Accounting	
	ACCT2255 Income Tax-Individual	
	ACCT2256 Income Tax-Business	
	ACCT2616 Intermediate Accounting I	
	ACCT2640 Accounting Internship	
	BUS1141 Introduction to Business	
	BUS2150 Legal Environment of Business	
	BUS2204 Principles of Management	
	BUS2206 Principles of Marketing	
3 credits MnTC Goal Area 1 Electives		3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Phlebotomy Technician Certificate - 16 credits Fergus Falls, Moorhead

The Phlebotomy Technician program provides students with the training necessary for employment and advancement in the health care field. Upon satisfactory completion of the classroom training at the college, each student is assigned to an affiliating clinical site for five weeks of daytime phlebotomy clinical experience. During this period, the student performs phlebotomy and other related procedures under the direct supervision of a medical laboratory technician or technologist. Graduates of the one-semester Phlebotomy Technician program are eligible to take the Board of Certification examination of the American Society for Clinical Pathology (ASCP).

Track: Certificate - 16 Credits

Requirement	Title	Credits
BIOL2260	Human Anatomy and Physiology I.....	3
BIOL2261	Human Anatomy and Physiology I Lab.....	1
MLT1109	Phlebotomy Skills Lecture.....	1
MLT1112	Clinical Phlebotomy.....	3
MLT1116	Basic Lab Techniques Lecture.....	1
MLT1117	Basic Lab Techniques Lab.....	1
MLT1119	Phlebotomy Skills Lab.....	1
MLT2350	Professional Issues in Medical Laboratory Technology.....	2
3 credits MnTC Goal Area 1 Electives.....		3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Plumbing Technology Diploma - 36 credits Moorhead

The Plumbing Technology program is designed for apprentice plumbers and others entering a plumbing career. It begins with safety, tools and materials used in the industry with a strong emphasis on the Minnesota and North Dakota plumbing codes, covering both residential and commercial installation practices and standards. An introduction to blueprints and isometric drawings will be presented, as well as backflow prevention theory and devices. Graduates will be eligible for applicable hours on their apprenticeship card.

Requirement	Title	Credits
PLBG1101	Piping and Job Safety	2
PLBG1103	Plumbing Trade Tools.....	2
PLBG1115	Faucets and Fixtures	2
PLBG1119	Materials and Fittings.....	4
PLBG1123	Plumbing Code I	3
PLBG1125	Plumbing Lab I.....	2
PLBG1131	Grade and Elevation	2
PLBG1133	Blueprint Reading	2
PLBG1135	Drainage, Waste and Venting	4
PLBG1137	Water Distribution	3
PLBG1141	Plumbing Code II	3
PLBG1145	Plumbing Lab II.....	2
PLBG1150	Plumbing Technology Internship.....	2
3 credits from the following.....		3
COMM1130 Small Group Communication		
COMM1140 Interpersonal Communication		
ENGL1101 College Writing		
MATH1000 Technical Mathematics		
PHIL1200 Applied and Professional Ethics		
PHIL1201 Ethics		
PSYC1101 Human Interaction		
PSYC1200 General Psychology		

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Political Science Pathway Associate of Arts (AA) - 60 credits Detroit Lakes, Fergus Falls, Moorhead, Online, Wadena

The Political Science Transfer Pathway AA offers students the opportunity to complete an Associate of Arts degree with course credits that directly transfer to designated political science bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field.

Requirement	Title	Credits
ENGL1101	College Writing	3
POLS1120	American National Government.....	3
3 credits from the following.....		3
	COMM1120 Introduction to Public Speaking	
	COMM1130 Small Group Communication	
	COMM1140 Interpersonal Communication	
3 credits from the following.....		3
	ENGL1205 Writing About Literature	
	ENGL1210 Writing About Current Issues	
	ENGL1215 Professional and Technical Writing	
3 credits from the following.....		3
	POLS1130 State and Local Government	
	POLS2204 Comparative Government	
	POLS2206 Global Politics	
	POLS2950 Introduction to Social Research	
3 credits from the following.....		3
	POLS2204 Comparative Government	
	POLS2206 Global Politics	
6 credits MnTC Goal Area 3 Electives.....		6
	One course must include a lab	
3 credits MnTC Goal Area 4 Electives.....		3
3 credits MnTC Goal Area 5 Electives.....		3
	Credits must be taken from at least two different disciplines	
	One discipline will be met by taking POLS courses listed above	
9 credits MnTC Goal Area 6 Electives.....		9
	Credits must be taken from at least three different disciplines	
21 credits MnTC Electives*		21

*To earn an AA degree, students must meet the individual requirements of all 10 goal areas of the MnTC. Of the 60 total credits required in the program, a minimum of 40 credits must be from the

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

PowerSports Technology Associate of Applied Science (AAS) - 69 credits Moorhead

Powersport technicians maintain, troubleshoot and repair equipment found in the powersport industry, including marine, snowmobile, motorcycle, all-terrain vehicle (ATV) and lawn equipment. In this program, you will gain the knowledge and hands-on experience to perform competently at the dealership level and be trained to gain the soft skills to help you toward the goal of management, manufacturer technical service representative or business ownership. Students will perform services on modern products using specialty tools and factory test equipment. Along with taking factory certification exams, students learn how to plan and perform repairs according to manufacturers' recommended procedures.

Requirement	Title	Credits
PWST1000	Introduction to PowerSports	3
PWST1002	Snowmobile, Off Road Vehicle and Motorcycle Maintenance	3
PWST1014	Personal Watercraft and Marine Engine Maintenance	3
PWST1015	Marine Engine Installation and Set Up	3
PWST1017	Fuel Systems I	3
PWST1021	Ignition, Charging and Starter Systems	3
PWST1025	Fuel Systems II	3
PWST1080	Snowmobile Engines	3
PWST1115	Electrical Foundations	3
PWST2013	Power Hydraulics	3
PWST2016	Outboard Engine Systems	3
PWST2017	Marine Drive Systems	3
PWST2115	All-Terrain Vehicles Systems	3
PWST2206	Chainsaws and Generators	3
PWST2210	Snowmobile Clutch and Drive Systems	3
PWST2304	Motorcycles I	3
PWST2308	Advanced Snowmobiles	3
PWST2312	Advanced Motorcycle Systems	3
3 credits ENGL Electives		3
3 credits POLS Electives		3
3 credits PSYC Electives		3
6 credits MnTC Electives*		6

*To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

PowerSports Technology Certificate - 30 credits Moorhead

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 and marine 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.

Requirement	Title	Credits
PWST1000	Introduction to PowerSports	3
PWST1002	Snowmobile, Off Road Vehicle and Motorcycle Maintenance	3
PWST1014	Personal Watercraft and Marine Engine Maintenance.....	3
PWST1017	Fuel Systems I	3
PWST1021	Ignition, Charging and Starter Systems	3
PWST1025	Fuel Systems II	3
PWST1080	Snowmobile Engines	3
PWST1115	Electrical Foundations	3
PWST2304	Motorcycles I	3
3 credits MnTC Electives.....		3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

PowerSports Technology Diploma - 60 credits Moorhead

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, personal watercraft and marine engines 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.

Requirement	Title	Credits
PWST1000	Introduction to PowerSports	3
PWST1002	Snowmobile, Off Road Vehicle and Motorcycle Maintenance	3
PWST1014	Personal Watercraft and Marine Engine Maintenance.....	3
PWST1015	Marine Engine Installation and Set Up.....	3
PWST1017	Fuel Systems I.....	3
PWST1021	Ignition, Charging and Starter Systems	3
PWST1025	Fuel Systems II	3
PWST1080	Snowmobile Engines	3
PWST1115	Electrical Foundations	3
PWST2013	Power Hydraulics.....	3
PWST2016	Outboard Engine Systems.....	3
PWST2017	Marine Drive Systems.....	3
PWST2115	All-Terrain Vehicles Systems	3
PWST2206	Chainsaws and Generators	3
PWST2210	Snowmobile Clutch and Drive Systems	3
PWST2304	Motorcycles I	3
PWST2308	Advanced Snowmobiles	3
PWST2312	Advanced Motorcycle Systems.....	3
6 credits MnTC Electives.....		6

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Practical Nursing Diploma - 40 credits Moorhead

The Practical Nursing program prepares students to practice within the scope of a practical nurse. Students are 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. Students receive supervised learning experiences in caring for individuals in a variety of healthcare settings, such as hospitals, long-term care facilities and physician clinics. 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 an annual National Background Check. The Practical Nursing program is offered on the Moorhead campus. The Minnesota Board of Nursing has approved the Practical Nursing program at M State, along with national accreditation from the National League for Nursing Commission for Nursing Education Accreditation (NLN CNEA).

Students must earn a grade of C or better in all program courses to graduate from this program.

Requirement	Title	Credits
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
HLTH1005	Introduction to Medical Terminology	1
PNSG1509	Foundations of Adult Nursing Care I.....	6
PNSG1512	Practical Nursing Pharmacology.....	2
PNSG1513	Clinical I Practical Nurse Foundations	3
PNSG1518	Foundations of Adult Nursing Care II.....	5
PNSG1520	Nursing Care of Women, Newborns and Children	2
PNSG1522	Transition to Practical Nursing Practice	1
PNSG1524	Practical Nursing Mental Health.....	2
PNSG1528	Clinical II Practical Nursing	4
PSYC2222	Lifespan Development	3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Psychology Transfer Pathway Associate of Arts (AA) - 60 credits Detroit Lakes, Fergus Falls, Moorhead, Online, Wadena

The Psychology Transfer Pathway AA offers students a powerful option: the opportunity to complete an Associate of Arts degree with course credits that directly transfer to designated psychology bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field.

Requirement	Title	Credits
ENGL1101	College Writing	3
PSYC1200	General Psychology.....	3
PSYC2900	Statistics for Behavioral and Social Sciences	4
3 credits from the following.....		3
	COMM1120 Introduction to Public Speaking	
	COMM1140 Interpersonal Communication	
3 credits from the following.....		3
	ENGL1205 Writing About Literature	
	ENGL1210 Writing About Current Issues	
	ENGL1215 Professional and Technical Writing	
4 credits from the following.....		4
	MATH1114 College Algebra	
	MATH1213 Introduction to Statistics	
3 credits from the following.....		3
	PSYC1101 Human Interaction	
	PSYC1500 Positive Psychology	
	PSYC2220 Abnormal Psychology	
	PSYC2222 Lifespan Development	
	PSYC2224 Social Psychology	
	PSYC2226 Behavior and Environmental Management	
	PSYC2230 Personality Psychology	
	PSYC2950 Introduction to Social Research	
3 credits from the following.....		3
	PSYC2220 Abnormal Psychology	
	PSYC2222 Lifespan Development	
	PSYC2224 Social Psychology	
10 credits MnTC Goal 3 Electives (One lab course/ One BIOL prefix required).....		10
3 credits MnTC Goal 5 Elective (other than a PSYC prefix).....		3
9 credits MnTC Goal Area 6 Electives.		9
Credits must be taken from three different disciplines- One PHIL course required		

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

3 credits MnTC Goal Area 9 Electives	3
3 credits MnTC Goal Area 10 Electives.....	3

*To earn an AA degree, students must meet the individual requirements of all 10 goal areas of the MnTC. Of the 60 total credits required in the program, a minimum of 40 credits must be from the MnTC.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Radiologic Technology Associate of Applied Science (AAS) - 79 credits Detroit Lakes

The Radiologic Technology program prepares individuals to perform various radiologic procedures. The radiologic technologist instructs and positions patients, manipulates radiographic equipment, adjusts exposure factors, provides radiation protection for patient and self, develops radiographic images, evaluates the quality of finished radiographs and carries out activities associated with quality control. The student radiologic technologist carries out these functions under the supervision or upon the direction of a registered radiologic technologist. Graduates of the Radiologic Technology program are eligible for the national certification exam administered by the American Registry of Radiologic Technologists. Successful completion of this exam qualifies the graduate as a Registered Radiologic Technologist.

Students must earn a grade of C or better in all program courses to graduate from this program.

Requirement	Title	Credits
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
RADT1133	Principles of Radiobiology	4
RADT1140	Radiographic Imaging.....	4
RADT1146	Radiographic Procedures III	4
RADT1180	Radiographic Clinical I.....	5
RADT1190	Radiographic Clinical II	5
RADT2101	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

To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Sonography - Echocardiography Technology Associate of Applied Science (AAS) - 70 credits Fergus Falls

Sonography is a noninvasive imaging technology that visualizes the body's tissue and organs with sound waves to assist in diagnosing diseases. Echocardiography (ultrasound of the heart) is a specialized field of sonography that requires professional training to assist physicians in diagnosing diseases and assessing overall cardiac health. The Echocardiography Technology program prepares students to become entry-level cardiac sonographers competent in the cognitive (knowledge), psychomotor (skills) and affective (behavior) learning domains of professional echocardiography. This program includes training for an in-demand practice area that meets a healthcare workforce need and complements existing allied health programs at M State. Upon successfully completing coursework and clinical experiences, students will have developed the minimum knowledge and competencies to sit for registry exams in the echocardiography profession. Moreover, the student will have the opportunity to learn to work effectively with other allied healthcare professionals, patients and families to promote patient safety, diagnosis and recovery.

Requirement	Title	Credits
BIOL2260	Human Anatomy and Physiology I.....	3
BIOL2261	Human Anatomy and Physiology I Lab.....	1
BIOL2262	Human Anatomy and Physiology II.....	3
BIOL2263	Human Anatomy and Physiology II Lab.....	1
COMM1140	Interpersonal Communication.....	3
ECHO1050	Intro to Echocardiographic Anatomy and Physiology.....	1
ECHO1055	Intro to Echocardiographic Views.....	1
ECHO1100	Adult Echocardiography I.....	3
ECHO1105	Adult Echocardiography Lab I.....	3
ECHO1110	Adult Echocardiography II.....	3
ECHO1115	Adult Echocardiography Lab II.....	3
ECHO1120	Ultrasound Physics and Instrumentation I.....	3
ECHO1125	Ultrasound Physics and Instrumentation II.....	3
ECHO2100	Adult Echocardiography III.....	3
ECHO2105	Adult Echocardiography Lab III.....	2
ECHO2200	Adult Echocardiography Clinical I.....	7
ECHO2220	Adult Echocardiography Review.....	1
ECHO2225	Adult Echocardiography Clinical II.....	1
HLTH1116	Medical Terminology.....	3
PHIL1200	Applied and Professional Ethics.....	3
PSYC1101	Human Interaction.....	3
PHYS1105	Fundamental Concepts in Physics.....	3
SOC1111	Introduction to Sociology.....	3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Sport Management Associate of Science (AS) - 60 credits Fergus Falls

The Sport Management program is designed to provide theoretical and practical preparation for sport management leaders in the business of sports. The program allows students to develop skills and knowledge in management, communication, public relations, facilities and finance as they relate to sports.

Requirement	Title	Credits
ACCT2211	Financial Accounting I.....	3
BIOL1107	Environmental Science Issues.....	3
BIOL1108	Environmental Science Issues Lab.....	1
BUS1100	Business Computers.....	3
BUS1141	Introduction to Business.....	3
BUS2204	Principles of Management.....	3
BUS2206	Principles of Marketing.....	3
COMM1120	Introduction to Public Speaking.....	3
ENGL1101	College Writing.....	3
ENGL1215	Professional and Technical Writing.....	3
MATH1114	College Algebra.....	4
PHIL1201	Ethics	3
PDEV1102	Contemporary Career Search.....	1
PE2100	Introduction to Sport Management.....	3
PE2254	Sports in Society.....	3
3 credits from the following		3
ECON2210 Macroeconomics		
ECON2222 Microeconomics		
9 credits PE Electives.....		9
6 credits MnTC Electives*		6

*To earn an AS degree, students must complete courses from 6 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Surgical Technology Associate of Applied Science (AAS) - 60 credits Moorhead

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 surgeons and be active members of the surgical team. Throughout the perioperative experience, students will demonstrate proficiency in surgical asepsis with the preparation and use of surgical equipment, instruments and supplies while employing an understanding of anatomy, physiology, pathophysiology and microbiology.

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
- Complete MATH0095 or test into a higher level math course

Students must earn a grade of C or better in all program courses to graduate from this program.

Requirement	Title	Credits
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
PHIL1200	Applied and Professional Ethics	3
PSYC222	Lifespan Development.....	3
SURT1205	Surgical Terminology	2
SURT1210	Surgical Technology I	6
SURT1200	Introduction to Surgical Technology.....	3
SURT1215	Surgical Pharmacology.....	3
SURT1222	Surgical Technology II	6
SURT1225	Surgical Pathophysiology	3
SURT1230	Surgical Technology III	4
SURT1250	Surgical Clinical I	6
SURT1255	Surgical Clinical II	6

To earn an AAS degree, students must complete courses from 3 of the 10 MnTC goal areas.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Survey Technician Certificate - 23 credits Moorhead

This certificate program 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. The Survey Technician program includes knowledge and training in property and land surveys, construction project design, field training in level surveys, total station and global positioning equipment, and road design and construction principles. This program is only offered on the Moorhead campus.

Requirement	Title	Credits
BUS1100	Business Computers.....	3
CADD1000	AutoCAD Basics.....	3
CIVL1100	Survey I: Fundamentals of Surveying.....	3
CIVL1119	Survey II: Land Surveys.....	3
CIVL1138	CADD II: Plan Layout.....	3
CONM1102	Site/Building Layout.....	2
ENGT1118	Construction and Manufacturing Math.....	3
ENGT1126	Engineering Graphics.....	3

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Visual Arts Certificate - 24 credits Fergus Falls, Online

This certificate offers an introduction to various methods and principles in art-making and art historical research. Students will learn to develop complexity in conceptual discourse and discipline in physical practice. Topics may be diverse depending on student's choice of courses. Courses topics include but are not limited to Drawing; Painting; Ceramics; Art and the Environment; Renaissance to Contemporary Art History; African, Asian, Islamic, and Mesoamerican Art History, etc.

Requirement	Title	Credits
ART1110	Introduction to Art	3
ART1129	Art History: African, Asian, Islamic and Mesoamerican	3
ART2001	Art and the Environment	3
HUM1110	Native American Culture	3
12 credits from the following.....		12
	ART1101 Drawing I	
	ART1107 Foundations of Art, 2-D	
	ART1109 Foundations of Art, 3-D	
	ART1114 Painting I	
	ART1117 Printmaking I	
	ART1124 American Art	
	ART1127 Art History: Prehistory to the Middle Ages	
	ART1128 Art History: Renaissance to Contemporary	
	ART1140 Handbuilt Ceramics	
	ART1142 Introduction to Ceramics	
	ART2000 Intermediate Art Studio	
	ART2114 Photographic Art I	
	ART2115 Introduction to Digital Photography	
	ART2116 Mixed Media I	
	ART2201 Foundation Digital Imaging	
	ART2241 Advanced Ceramics	



COURSE DESCRIPTIONS

2025-2026

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

COURSE DESCRIPTIONS

ACCT1101	Payroll	3	3/0/0
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.			
Prerequisites: None			
Corequisites: None			
ACCT2210	Managerial Accounting	4	4/0/0
This course focuses on providing financial information to management for strategic decision-making related to cost analysis and cost management.			
Prerequisites: ACCT2211			
Corequisites: None			
ACCT2212	Financial Accounting II	3	3/0/0
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.			
Prerequisites: None			
Corequisites: ACCT2211			
ACCT2255	Income Tax-Individual	3	3/0/0
This course provides an explanation and interpretation of the Internal Revenue Code as applied to individual income tax returns. Topics covered include filing requirements, filing status, gross income and exclusions, business income and expenses, tax credits and tax estimates.			
Prerequisites: None			
Corequisites: None			
ACCT2616	Intermediate Accounting I	3	3/0/0
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.			
Prerequisites: ACCT2212			
Corequisites: None			
ACCT2640	Accounting Internship	1--4	N/A
This course provides students with actual work experience in accounting careers. Student is responsible for obtaining accounting internship.			
Prerequisites: This internship is for currently enrolled Accounting Majors only and must be approved by instructor.			
Corequisites: None			
ADMM1110	Medical Documentation I	4	2/2/0
This course covers the fundamentals of healthcare documentation and medical record production, legal and ethical issues and responsibilities, software usage and utilization of medical references in healthcare-related communication and research.			
Prerequisites: None			
Corequisites: None			

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

COURSE DESCRIPTIONS

ADMM1150	Medical Billing/Insurance	4	3/1/0
This course provides information related to medical billing and health insurance. Topics covered include billing and statement preparation in the medical office, introduction to medical coding, types of health insurance coverage, insurance claim processes and related ethical and legal issues. Prerequisites: None Corequisites: ADMM1104 Medical Language Applications I OR HLTH1116 Medical Terminology			
ADMM1160	Medical Documentation II	3	1/2/0
This course is an extension of Medical Documentation I, expanding skills in the English language, technology, medical knowledge, proofreading, editing, research and extracting information from healthcare records. Prerequisites: ADMM1104, ADMM1110 Corequisites: None			
ADMM2104	Medical Language Applications II	3	2/1/0
This course is a continuation of Medical Language Applications I and prepares nonclinical students to provide effective written or oral communication in encounters with patients, health care providers and other health care staff. Construction, definition, spelling, pronunciation, and proper written and verbal usage of medical terminology pertaining to pharmacology, surgical and anesthesia procedures, laboratory and pathology, oncology, psychiatry and psychology, and physical and occupational therapy are emphasized. Students will apply medical language knowledge to simulated real-life applications from a medical office environment. In-depth analysis and application of verbal and written communication is covered. Prerequisites: ADMM1104 Corequisites: None			
ADMM2130	Medical Office Career Insight	2	2/0/0
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. Prerequisites: ADMM1122 Corequisites: None			
ADMM2152	Advanced Coding	4	2/2/0
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. Prerequisites: ADMM1152 Corequisites: None			
ADMM2255	Evaluation and Management Coding Practices	1	0.5/0.5/0
This course will teach the students to appropriately assign evaluation and management codes based on the physician documentation using 1995, 1997 and 2021 E/M Coding guidelines. Students will abstract information from healthcare documentation and assign appropriate levels of service. Prerequisites: ADMM1152 Corequisites: None			

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

COURSE DESCRIPTIONS

ADMM2260	Certified Professional Coder - Hospital Examination Review	1	1/0/0
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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.

Prerequisites: ADMM2252

Corequisites: None

ADMM2500	Human Disease Applications for Administrative Health Professionals	3	2/1/0
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Knowledge of human diseases is crucial for administrative health personnel to efficiently and accurately assist health care providers and staff with the many administrative tasks associated with health care treatment. This course focuses on common signs and symptoms of disease affecting the human body including associated procedures, diagnostic testing and treatment. Recognition of emergent and urgent symptoms is addressed. Knowledge of the many aspects of human disease is needed to effectively provide health care support services and interact with patients presenting electronically, verbally or in person with administrative health personnel. Practical applications in communication, documentation and billing for the administrative medical office are emphasized.

Prerequisites: None

Corequisites: HLTH1110

ADMS1104	Skillbuilding	1	0/1/0
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This course emphasizes improved computer keyboarding speed and accuracy while strengthening basic keyboarding techniques.

Prerequisites: Placement by assessment

Corequisites: None

ADMS1112	Desktop Publishing	3	1/2/0
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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.

Prerequisites: None

Corequisites: None

ADMS1120	Administrative Office Procedures	3	2/1/0
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This course covers the skills and procedures required for the administrative office professional within the automated modern office. Topics may include time management, leading teams, handling conflict resolution, managing projects, planning and scheduling events, and arranging travel. Students will develop skills in office procedures, telephone techniques, evaluating equipment and software purchases, budgeting, managing inventory and processing mail. This course will provide the student with in-depth exposure to the roles and responsibilities of an office professional, both ethically and professionally.

Prerequisites: None

Corequisites: None

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

COURSE DESCRIPTIONS

ADMS1130	Office Software Applications	3	2/1/0
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This course is designed to provide the office professional with software application skills in spreadsheets, databases and email as used in the office environment. Spreadsheet topics may include formatting documents, managing workbooks and worksheets, filtering and sorting, and utilizing importing and exporting of data. Databases may also include creating and utilizing tables, queries, forms and reports, and refining sorting and filtering to generate forms and reports. Email topics may include sending, replying and forwarding email, creating contacts, customizing calendar settings, scheduling meetings and appointments, and creating groups and distribution lists.

Prerequisites: None

Corequisites: None

ADMS1190	Keyboarding II	1	0/1/0
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This course covers advanced formatting and text editing techniques that focus on developing enhanced proof-reading, editing and revising skills. Emphasis is on improving speed and increasing accuracy in the operation of the alpha, numeric, symbol and punctuation keys and in developing text editing concepts, critical thinking and decision-making skills.

Prerequisites: None

Corequisites: ADMS1100

ADMS1410	Office Administration	3	3/0/0
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This course covers skills and procedures required for the administrative office professional within today's office. Students will develop skills in customer service, telephone techniques, appointment scheduling, meeting and event planning, virtual office procedures, records management and project management. Topics will focus on professional practices occurring in the modern work environment using technology applications.

Prerequisites: None

Corequisites: None

AGRI1100	Principles of Agronomy	3	3/0/0
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This course explores the principles and practices of plant and related sciences as applied to increasing productivity and improvement of field crops. Emphasis is on crop selection and improvement through the breeding of crop varieties, seeds and seedlings, crop growth and development, crop production hazards, and the harvest and storage of field crops.

Prerequisites: None

Corequisites: None

AGRI1200	Introduction to Animal Science	3	3/0/0
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This course provides an introduction to animal science, with an emphasis on physiology, nutrition, animal breeding and management as applied to beef cattle, dairy cattle, poultry, sheep and swine production.

Prerequisites: None

Corequisites: None

AGRI1400	Farm Marketing and Management	3	3/0/0
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This course is an introduction to concepts, strategies and technology for farm planning, economic accounting systems and marketing techniques.

Prerequisites: None

Corequisites: None

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

COURSE DESCRIPTIONS

AGRI2200	Principles of Farm and Ranch Management	3	3/0/0
This course emphasizes utilization of land, labor, capital and management in the organization and operation of a farm, and includes the decision-making processes involved in establishing a farm business. Analyzing, budgeting, and using principles of economics are considered in decision-making. Prerequisites: ACCT2211, BUS2204 Corequisites: None			
AMST1101	Automotive Equipment Fundamentals	2	1/1/0
This course is designed to give students an understanding of an automotive shop environment. They will learn occupational safety, proper use of power and hand tools, shop equipment, fasteners, precision measuring instruments, electronic information, writing electronic repair orders and industry expectations. Prerequisites: None Corequisites: None			
AMST1105	Brakes	3	1/2/0
This course covers the fundamental principles of disc and drum brakes, hydraulic systems, parking brakes and power assist units. Students learn about the operation, diagnosis and repair of various brake systems. Additionally, the course includes an introduction to electric brake control systems. Prerequisites: None Corequisites: AMST1101			
AMST1111	Automotive Electronics	3	2/1/0
This course involves understanding Ohm's law, multimeter usage, schematic reading, electrical circuit operation and electronic components. The student will perform electrical tests and repairs on training boards and on various vehicles. This course is a prerequisite for all second-year automotive courses. Prerequisites: None Corequisites: AMST1101			
AMST1114	Basic Maintenance Service	1	1/0/0
This course will provide the introduction to basic vehicle maintenance. Included will be identification of service points and procedures required for maintenance. Fluid types, brake inspection, tire rotation and service information will be addressed. Prerequisites: None Corequisites: None			
AMST1126	Engines II	3	1/2/0
This course covers the disassembly, diagnosis, measurement, service, assembly and adjustment of engines and components. Cylinder heads, valve trains, cylinder block assemblies, cooling and lubrication systems are thoroughly covered. Prerequisites: None Corequisites: AMST1101, AMST1122			
AMST1132	Drivetrains I	3	2/1/0
This course covers service and theory of operation of clutch, manual transmission, drive shaft and drive axle systems. Service involves removal, disassembly, repair, reassembly and adjustment of these systems. Noise vibration and harshness in the drive train system will be diagnosed and repaired. Prerequisites: None Corequisites: AMST1101			

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AMST1136	Drivetrains II	3	1/2/0
This course covers drive axles, drive shafts, front and rear wheel bearings and analysis of vehicle noise vibration and harshness. Theory, service skills and diagnosis are covered on bench and in-vehicle units. Drive line phasing, alignment and balance are covered. Prerequisites: None Corequisites: None			
AMST2206	Body Electrical and Mechanical	3	1/2/0
This course teaches diagnosis and repair of interior and exterior lighting, safety devices, comfort systems, convenience accessories, door, window and seat control systems. Students understand, diagnose and repair vehicle security systems, remote functions and safety systems using service information and various scan tools. Students understand the processes for software transfers, updates and reprogramming of electrical modules. Prerequisites: None Corequisites: TRNS1102			
AMST2211	Exhaust Analysis and Fuel Systems	3	2/1/0
This course will cover the various emission devices used on an automobile as well as the fuel delivery to maintain an efficient operating engine. Items covered will be positive crankcase ventilation systems, exhaust gas recirculation 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. Prerequisites: None Corequisites: AMST1101, AMST1111			
AMST2214	Electronic Powertrain Control I	3	2/1/0
This course is an 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. Prerequisites: None Corequisites: AMST1101, AMST1111			
AMST2219	Electronic Powertrain Control I	3	2/1/0
This class covers engine control inputs and outputs, allowing students to evaluate sensor data and its relationship to engine performance. The course discusses various scan tools, including factory and aftermarket options. Students also learn to access service information and diagnose powertrain-related concerns. Prerequisites: AMST1101 Corequisites: None			
AMST2221	Electronic Powertrain Control II	4	2/2/0
Fuel delivery, fuel injection and control, crankcase emissions, exhaust gas re-circulation, evaporative emissions and catalytic converters are covered in this course. Emphasis is on different monitors and on-board diagnostic strategies for fuel, ignition and emissions systems. The class covers powertrain diagnostics and root cause analysis. Prerequisites: None Corequisites: None			

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AMST2223	Electronic Braking and Suspension Systems	4	2/2/0
This course covers electronic brake and suspension control systems. Students learn Antilock Braking System (ABS), electronic ride control, variable suspension control, electronic power steering and Advanced Driver Assistance Systems (ADAS) operation and uses. Prerequisites: AMST1102, AMST1105 Corequisites: None			
AMST2233	Automatic Transmissions I	3	2/1/0
This course involves the principles of the multiple systems combined into an automatic transmission. The student will understand planetary gearing, clutch operation, band application and one-way clutching as they pertain 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. Prerequisites: AMST1101, AMST1111 Corequisites: None			
AMST2237	Automatic Transmissions II	3	1/2/0
The student will practice many of the procedures used in transmission diagnosis, vehicle repair sequences, scan tool data interpretation and diagnosis, and transmission removal, installation and adjustment. Transmission cooling system diagnosis and service are also covered. Prerequisites: None Corequisites: AMST1101, AMST1111, AMST2233			
ANTH1100	Introduction to Anthropology	3	3/0/0
Meets MnTC Goal Areas 5 and 8. This course is a survey of human nature through time and around the world. It examines the physical nature of our species, archaeology, the study of cultural behavior and linguistic studies. Prerequisites: None Corequisites: None			
ANTH2104	Anthropology of Environmental Health	3	3/0/0
This course meets MnTC Goal Area(s) 8 and 10. Using an anthropological approach, students will identify and analyze environmental influences on health. Health concerns related to residential, occupational and other environments are explored. Problems pertaining to air, water, food safety, solid waste, housing, land use, toxic waste and sanitation will be addressed through a cultural lens to allow students to understand environmental health from a global perspective. Prerequisites: None Corequisites: None			
ARCH1126	Residential Project I	3	1/2/0
This course covers the design development and documentation of single-family living. Students will be introduced to residential design styles as well as proper documentation methods. Prerequisites: CADD1000, ENGT1134 Corequisites: None			

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ARCH2220	Specification Writing for Construction	3	1/2/0
This course covers the implementation and inclusion of specifications, construction materials and finishes into a set of construction documents.			
Prerequisites: None			
Corequisites: None			
ARCH2226	Residential Project II	4	1/3/0
This course introduces building design and construction requirements for multi-family housing. The course covers the processes for the selection of building materials and their integration into construction documents.			
Prerequisites: ARCH1126			
Corequisites: None			
ARCH2232	Civil and Structural Integration	3	2/1/0
This course will review the incorporation of civil and structural engineering drawings in coordination with building systems. Content will include analysis of civil and structural drawings and their relationship to commercial and residential building types.			
Prerequisites: ARCH1126			
Corequisites: None			
ARCH2242	Mechanical and Electrical Integration	3	1/2/0
This course reviews the examination of mechanical, plumbing and electrical systems in both residential and commercial buildings. Content includes analysis of plumbing and heating, ventilation and air conditioning (HVAC) systems, and power and lighting systems.			
Prerequisites: ARCH1122, ARCH1126			
Corequisites: None			
ARCH2248	CADD Alternatives	3	1/2/0
This course will familiarize the student with computer drafting and modeling software for the graphic design of residential construction.			
Prerequisites: None			
Corequisites: None			
ART1101	Drawing I	3	2/1/0
Meets MnTC Goal Areas 2 and 6. 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.			
Prerequisites: None			
Corequisites: None			
ART1109	Foundations of Art, 3-D	3	2/1/0
Meets MnTC Goal Areas 2 and 6. 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.			
Prerequisites: None			
Corequisites: None			

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ART1114	Painting I	3	2/1/0
Meets MnTC Goal Areas 2 and 6. 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.			
Prerequisites: None			
Corequisites: None			
ART1128	Art History: Renaissance to Contemporary	3	3/0/0
Meets MnTC Goal Areas 2, 6 and 8. This introductory course gives students a deeper appreciation and knowledge of Western art and the cultures that created it. The course focuses on the fascinating changes that occurred in the Italian Renaissance and continues through to modern artists and influences of the 20th century.			
Prerequisites: None			
Corequisites: None			
ART1140	Handbuilt Ceramics	3	2/1/0
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.			
Prerequisites: none			
Corequisites: None			
ART1142	Introduction to Ceramics	3	2/1/0
Meets MnTC Goal Areas 2 and 6. This course introduces methods for production of ceramic artworks. Students learn about pottery tools, media, construction techniques and firing.			
Prerequisites: None			
Corequisites: None			
ART2000	Intermediate Art Studio	3	2/1/0
Meets MnTC Goal Areas 2 and 6. This course is designed to allow students to work in close proximity to the instructor in areas of particular interest to each individual student. Students research and examine relevant historical and contemporary art movements, contexts and methods to inform their social, historical, philosophical, artistic, etc., choices regarding subject matter. Emphasis is on the development of artworks, artist statements and exhibitions.			
Prerequisites: None			
Corequisites: None			
ART2114	Photographic Art I	3	3/0/0
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.			
Prerequisites: None			
Corequisites: None			

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ART2116	Mixed Media I	3	2/1/0
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.			
Prerequisites: None			
Corequisites: None			
ART2241	Advanced Ceramics	3	2/1/0
Meets MnTC Goal Area 6. This course will build on the skills developed in Introduction to Ceramics, ART1142, with emphasis on wheel throwing, glazing and firing techniques.			
Prerequisites: ART1142			
Corequisites: None			
ASL1101	American Sign Language and Deaf Culture I	3	3/0/0
This is the first in a series of courses designed to develop the skills and knowledge needed to communicate in American Sign Language (ASL). This course introduces information about the Deaf community and Deaf culture. It will familiarize students with basic ASL vocabulary and grammar, including hand shapes, body movements and facial expressions to convey meaning. The course includes interactive activities, cultural awareness education and individual feedback, with emphasis on appropriate language use in common communication settings.			
Prerequisites: Assessment into ENGL1101			
Corequisites: None			
ASL1103	American Sign Language and Deaf Culture III	3	3/0/0
This is the third in a series of courses designed to develop the skills and knowledge needed to communicate in American Sign Language (ASL). The course will focus on speed, fluency, vocabulary expansion and conversational skills, along with reinforcement of appropriate grammar usage. It also will examine attitudes, values and cultural norms of the Deaf Community.			
Prerequisites: ASL1102, Grade of B or better in ASL1102			
Corequisites: None			
ASL1105	Advanced Fingerspelling and Numbers	3	3/0/0
This course focuses on enhancing expressive and receptive fingerspelling and numbers in American Sign Language (ASL). ASL1105 will expand the emphasis on using fingerspelling, lexicalized and abbreviated words, and ASL numbers, along with continued study of the complex rules and patterns of ASL number systems.			
Prerequisites: ASL 1101 and a grade of B or better in ASL 1101			
Corequisites: None			
BIOL1107	Environmental Science Issues	3	3/0/0
Meets MnTC Goal Areas 2, 3 and 10. This courses 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.			
Prerequisites: None			
Corequisites: None			

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BIOL1115	Introduction to Biotechnology	3	3/0/0
Meets MnTC Goal Area 3. This course is designed to acquaint students with the field of biotechnology including historical development, current technologies and future trends. An overview of the molecular and genetic principles and processes used to manipulate living organisms and their products will be presented, as well as forensic, medical, agricultural and industrial applications. The course will also examine the ethical implications of biotechnology and genetic engineering. Laboratory simulations and other lab-like experiences provide opportunities for students to perform techniques common in the field, gather and analyze experimental data and troubleshoot procedures. Prerequisites: None Corequisites: None			
BIOL1123	General Biology II	4	3/1/0
Meets MnTC Goal Areas 3 and 10. This course is an introduction to living organisms, emphasizing evolution, biological diversity and ecology. Topics will include mechanisms of evolution, classification and diversity of life, structure and function of organisms, and interaction of organisms at all levels of an ecosystem. This course includes a laboratory component incorporating field activities, microscopic work, dissection and plant systems. Along with BIOL1122, this course is part of a two-semester sequence of general biology that can be taken in any order. Prerequisites: Assessment into ENGL 1101 or college level writing equivalent. Corequisites: None			
BIOL2010	General Ecology	4	3/1/0
Meets MnTC Goal Areas 3 and 10. This course provides a study of the structure and function of ecological systems, including an application of ecological principles to local and global environmental issues. Topics covered include energy flow, nutrient cycling, organization, ecological succession, population dynamics (including the ecology of species interactions and factors that influence and regulate population numbers) and linkages among species and ecosystem functions. Lecture is accompanied by laboratory and field exercises. Prerequisites: BIOL1122, BIOL1123, Completion of MATH 1020 or placement into MATH 1114 Corequisites: None			
BIOL2220	General Microbiology	4	3/1/0
Meets MnTC Goal Area 3. This course provides an overview of the structure and function of microorganisms, including archaea, bacteria, viruses, fungi and parasites. Students will examine the molecular diversity, genetics, physiology and ecology of these organisms in relation to microbial evolution, industrial and applied applications, and host-pathogen interactions. Lecture is accompanied by laboratory experiences, including aseptic technique, differential staining procedures, cultural and physical characteristics, biochemical testing, microbial control, microbiology of water and soil, and identification of unknown cultures. Prerequisites: BIOL1122 Corequisites: None			
BIOL2260	Human Anatomy and Physiology I	3	3/0/0
Meets MnTC Goal Area 3. This course is a comprehensive introductory overview of human anatomy and physiology that includes basic fundamental concepts of cell biology, tissues and organs making up the integumentary, skeletal, muscular and nervous systems. It is the first of a two-semester sequence in which anatomy and physiology are studied with an emphasis on structure and functions of systems. This course contains a lab-like component. Prerequisites: Assessment into ENGL 1101 or college level writing equivalent. Corequisites: None			

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BIOL2262	Human Anatomy and Physiology II	3	3/0/0
Meets MnTC Goal Area 3. This course is a continuation of Anatomy and Physiology I. Topics will include the study of cells, tissues and organs making up the endocrine, cardiovascular, lymphatic and immune, respiratory, digestive, urinary and reproductive systems. Emphasis is on the structure and function of included systems. This course contains a lab-like component.			
Prerequisites: Assessment into ENGL 1101 or college level writing equivalent., BIOL2260			
Corequisites: None			
BIOL2267	Medical Microbiology	3	3/0/0
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.			
Prerequisites: Assessment into ENGL 1101.			
Corequisites: None			
BIOL2970	Internship Experience	1--3	N/A
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 and may be repeated up to two times. The student may choose from one, two or three 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.			
Prerequisites: Instructor approval			
Corequisites: None			
BLDG1110	Principles of Residential and Commercial Construction	3	1/2/0
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.			
Prerequisites: Instructor Approval			
Corequisites: None			
BLDG1120	Construction Estimating I	2	1/1/0
This course covers the mathematical procedures used in material estimating and completing quantity takeoffs for building projects.			
Prerequisites: None			
Corequisites: None			

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BUS1141	Introduction to Business	3	3/0/0
This course offers a broad overview of the business world for both business and non-business majors. It is an introduction to the business environment, business ownership, management, marketing, technology and information, human resources, accounting and legal studies. This course introduces students to the concepts and knowledge of key business functions within the context of the global economy. This class will provide a foundation for other business courses and help students discover their career path while learning the fundamentals of business. Prerequisites: None Corequisites: None			
BUS1300	Financial Statement Analysis	3	3/0/0
This course covers principles used in analyzing financial statements and budgets. Students learn how to prepare, read and analyze financial statements. Topics include analysis of income statements, balance sheets, flow of funds, risk, obtaining and spreading statements, cash flow projections, capital accounts and financial ratios. Prerequisites: None Corequisites: None			
BUS2204	Principles of Management	3	3/0/0
This course examines the historical and philosophical foundations of management as well as current theory and practices. Managerial decisions as a planner, organizer, motivator, controller and leader of a diverse workforce in a competitive environment are identified and evaluated. The course is a study of the basic principles of business management, including the functional, scientific, behavioral and systems approaches along with the role of projects in contemporary organizations. Current literature, concepts, models and applications may be included as well as the use of case studies. Prerequisites: None Corequisites: None			
BUS2310	Hospitality Management	3	3/0/0
This course provides students with a comprehensive overview of hospitality management including lodging, food and beverage, entertainment, recreation, travel and service companies, as well as an overview of the tourism industry. Students will be exposed to local industries through guest speakers and/or field trips. Prerequisites: None Corequisites: None			
BUS2700	Technology Research and Presentation	3	2/1/0
Business technology is a continuously evolving catalyst for opportunity and innovation. It is necessary to learn and share new technologies and innovations in order to maintain a competitive advantage; therefore this course requires students to do comprehensive research on a preapproved business technology or innovation topic. Students will develop and present a written report and visual presentation designed to educate their peers. Prerequisites: BUS1100, ENGL1101 Corequisites: None			
CADD1100	Solid Modeling with AutoCAD	2	1/1/0
This course will cover the solid modeling tools and functions in AutoCAD. Students will learn to create and manipulate primitive solids, extrusions, sweeps and lofts. They will learn to utilize the Boolean functions, solid editing commands and derived view drawing tools required to generate complex solid models and create industry-standard drawing layouts based on the designed geometry. Prerequisites: CADD1000 Corequisites: None			

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CADD1114	Introduction to Solids and Parametric Modeling	4	2/2/0
This course is an introduction to solid modeling and model derived drawing layouts using the latest versions of the AutoCAD, Inventor and SolidWorks drawing software. Prerequisites: CADD1102, MCDD1102 Corequisites: None			
CADD1210	Introduction to Autodesk Inventor	2	1/1/0
This course will introduce students to the part modeling and drawing layout tools in Autodesk Inventor software. Students will learn the concepts of parametric sketching and modeling, feature creation and editing, and model derived bidirectionally associative drawing layouts. Prerequisites: None Corequisites: None			
CADD1410	Introduction to Autodesk Inventor	3	2/1/0
This course introduces students to the part modeling and drawing layout tools in Autodesk's Inventor software. Students learn the concepts of parametric sketching and modeling, sketched feature creation and editing, placed feature creation and editing, and model-derived drawing layouts. Prerequisites: CADD1000, DET1104 Corequisites: None			
CADD2214	Advanced Solids and Parametric Modeling	4	2/2/0
This course covers advanced part modeling, assembly modeling, sheet metal and presentation files in the latest versions of the Inventor and SolidWorks drawing software. Prerequisites: CADD1114 Corequisites: None			
CHEM1111	General 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) intended for science majors. Students will learn the general chemistry principles: problem solving, nomenclature, atomic structure, electronic structure, stoichiometry, titration, reaction types, molecular structure, thermochemistry, electronic structure, and properties and laws of gases. The course includes a lab. Students completing the two-semester sequence will be competent in all areas listed in General Chemistry I & II of the Minnesota State Chemistry Transfer Pathway. Prerequisites: MATH1020 Corequisites: None			
CHEM2224	Organic Chemistry I	5	4/1/0
Meets MnTC Goal Areas 2 and 3. This course is the first course of a two-course series (CHEM2224 and CHEM2225). Students will learn organic chemistry principles including introduction to the classification, structure, nomenclature, reactions and reaction mechanisms of carbon compounds. The following topics will be included: structure and properties of organic compounds, nomenclature, structural representation and interpretation, isomerism, acid base properties of organic molecules, reaction representation and interpretation, reactions of organic molecules (mechanistic representations, proton transfer, nucleophilic substitution, elimination, electrophilic addition and free radical), reaction considerations and basic principles of spectroscopy. 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. Prerequisites: CHEM1112 Corequisites: None			

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CHEM2970	Internship Experience	1--3	N/A
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 and may be repeated up to two times. The student may choose from one, two or three 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. Prerequisites: Instructor approval Corequisites: None			
CIVL1119	Survey II: Land Surveys	3	1/2/0
Students will learn civil engineering technology land surveying principles including topographic surveys, utilities, drainage and roadway alignment. This course emphasizes the use of Total Station and Global Positioning Systems (GPS) for collecting data as well as civil engineering software for processing data. Additionally, students will utilize GPS functionality on the Trimble TSC3 data collector and Trimble Business Center software. Prerequisites: CIVL1100 Corequisites: None			
CIVL2209	Construction Inspection	3	2/1/0
This course involves the study and performance of procedures necessary in the inspection and documentation of general construction of public works projects. Topics include inspector responsibilities, project management and aggregate base, concrete and bituminous inspection. Prerequisites: CIVL1102 Corequisites: None			
COMM1100	Communication and Effective Human Relations	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. Prerequisites: ENGL0040, ENGL0050 Corequisites: None			
COMM1130	Small Group Communication	3	3/0/0
Meets MnTC Goal Areas 1 and 2. This course focuses on communication issues in small groups and the importance of small group work in business today. An emphasis will be placed on improving communication skills for successful teamwork, group cohesiveness and the responsibility to group goals and tasks. Students will be provided with opportunities to build their group communication skills through practice. Prerequisites: Assessment into ENGL 1101 Corequisites: None			

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COMM2200	Intercultural Communication	3	3/0/0
Meets MnTC Goal Areas 1 and 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 world-views. Students will observe and describe their own cultural background and will learn to respectfully communicate with members of other cultures. Prerequisites: Assessment into ENGL 1101 Corequisites: None			
CONM1101	Construction Documents and Codes	3	2/1/0
This course provides an introduction to understanding construction drawings, specifications, processes and building codes. Prerequisites: None Corequisites: None			
CONM1104	Construction Management Principles	2	2/0/0
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. Prerequisites: None Corequisites: None			
CONM1124	Building Systems	3	3/0/0
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. Prerequisites: None Corequisites: None			
CONM2206	Building Codes	2	2/0/0
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. Prerequisites: None Corequisites: None			
CONM2210	Construction Scheduling	3	2/1/0
Planning and scheduling are important management tools. In this course students will work with scheduling techniques commonly used in the construction industry to bring projects to timely and economically successful completion. Prerequisites: None Corequisites: CONM2217			

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CONM2213	Safety Management	2	2/0/0
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. Prerequisites: None Corequisites: None			
CONM2222	Construction Management Internship	2	0/0/2
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. Prerequisites: None Corequisites: None			
COSM1002	Client Consultations	1	1/0/0
This course is for cosmetology and esthiology students. Students will develop the skills necessary for a successful client consultation to achieve the client's desired outcome. Prerequisites: None Corequisites: None			
COSM1004	Cosmetic Chemistry and Makeup Applications	1	1/0/0
This course covers the composition of product ingredients, changes produced by cosmetic products, color theory, makeup applications, eyelash and eyebrow tinting, air brush makeup, camouflage makeup and facial structure. Prerequisites: None Corequisites: None			
COSM1006	Spa Therapies	1	1/0/0
This course covers advanced spa services, body treatments and alternative related therapies. Students will be able to identify, explain and determine spa treatments and services suited for individual clients needs. Prerequisites: None Corequisites: None			
COSM1010	Eyelash Extensions	1	1/0/0
This course is for cosmetology students, esthiology students and anyone who wishes to perform eyelash extensions. "Eyelash extensions" means the application, removal and trimming of threadlike natural or synthetic fibers to an eyelash, and includes the cleansing of the eye area and lashes. Eyelash extensions do not include color agents, straightening agents, permanent wave solutions, bleaching agents, applications to the eyebrow or any other cosmetology service. Prerequisites: None Corequisites: None			

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COSM1101	Introduction to Cosmetology	3	1/2/0
In this course students will learn basic techniques pertaining to hair, skin and nails and meet a portion of the hours required by the State Board of Cosmetology. The course content will include a brief overview of all cosmetology topics required for licensure by the State Board of Cosmetology. Upon completion, students could earn up to 75 hours (based on attendance) toward their cosmetology license. Students who elect to take the course a second time could earn up to 75 additional hours toward their cosmetology license.			
Prerequisites: None			
Corequisites: None			
COSM1117	Shampooing and Rinsing	1	1/0/0
This course covers shampooing and draping. Students will learn the importance of selecting the correct shampoo for various hair types.			
Prerequisites: None			
Corequisites: None			
COSM1129	Hairstyling	1	1/0/0
This course will instruct students in conducting services in a safe environment. Students will learn the styling and finishing techniques to complete a hairstyle to the satisfaction of the client.			
Prerequisites: None			
Corequisites: None			
COSM1153	North Dakota Laws and Rules	1	1/0/0
This course prepares students for the North Dakota Laws and Rules portion of their state license examination.			
Prerequisites: Graduate from a Minnesota cosmetology program or hold a valid Mn license.			
Corequisites: None			
COSM1159	Facials and Hair Removal	1	1/0/0
Students will learn the uses of various skin care products and how to apply them to different skin types. Students will learn many types of hair removal techniques and basic massage movements to assist in providing skin care services.			
Prerequisites: None			
Corequisites: None			
COSM1163	Hair Color	1	1/0/0
In this course students will learn how to conduct a color service in accordance with a client's needs and the importance of using a variety of salon products and techniques to achieve the appropriate color outcome.			
Prerequisites: None			
Corequisites: None			
COSM1179	Minnesota Cosmetology Laws and Rules	1	1/0/0
This course prepares students for the Laws and Rules portion of their state license examination.			
Prerequisites: None			
Corequisites: None			

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

COURSE DESCRIPTIONS

COSM1202	Salon Practicum Nail Technician	1--6	N/A
In this course, students work in a licensed school salon to meet requirements stipulated by the State Board of Cosmetology. The course includes instruction in applied science and skills in cleaning, conditioning, shaping, reinforcing, coloring and enhancing of nails, and in the application and repair of artificial enhancements. Each student is required to complete a specific minimum number of clinical exercises, as well as a minimum number of clinical hours, to fulfill requirements set by the State Board of Cosmetology. Prerequisites: None Corequisites: None			
COSM1204	Salon Practicum Hair Technician	1--16	N/A
In this course, students work in a licensed school salon to meet requirements stipulated by the State Board of Cosmetology. The course includes instruction in applied science and skills in shampooing, scalp and hair conditioning, hair design and shaping, chemical hair control, hair coloring and hair styling. Each student is required to complete a specific minimum number of clinical exercises, as well as a minimum number of clinical hours, to fulfill requirements set by the State Board of Cosmetology. Prerequisites: None Corequisites: None			
COSM1304	Hair Extension Techniques	1	1/0/0
In this course, students will learn a variety of hair extension techniques including sew-in wefts, bead, fusion and tape-in extensions. Students will learn the limits with extensions, consultation, color matching, applications, blending, maintenance, removal and pricing. Prerequisites: None Corequisites: None			
COSM2003	License Preparation Nail Technician	1	1/0/0
This course will prepare the nail technician student for the general theory exam, written practical exam and Minnesota laws and rules exam issued by the Minnesota State Board of Cosmetology. Additionally, the student will practice mock tests in preparation for skills certification. Nail technician students will review their knowledge and skills in all theory and practical topics learned throughout their training. Completion of this course will help the student identify areas of weakness that need additional review prior to scheduling their state exams. Prerequisites: None Corequisites: None			
COSM2005	License Preparation Hair Technician	1	1/0/0
This course will prepare the hair technician student for the general theory exam, written practical exam and Minnesota laws and rules exam issued by the Minnesota State Board of Cosmetology. Additionally, the student will practice mock test out in preparation for skills certification. Hair technician students will review their knowledge and skills in all theory and practical topics learned throughout their training. Completion of this course will help the student identify areas of challenge that need additional review prior to scheduling their state exams and completing cosmetology skills certification. Prerequisites: None Corequisites: None			

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COURSE DESCRIPTIONS

COSM2200	Manicuring/Pedicuring	1	1/0/0
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In this course students will learn basic manicuring and pedicuring procedures. Students will understand the importance of providing services in a safe environment.

Prerequisites: None

Corequisites: None

COSM2400	Advanced Nail Techniques	1	1/0/0
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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.

Prerequisites: None

Corequisites: None

COSM2800	Alexandria Body Sugaring	1	1/0/0
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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.

Prerequisites: None

Corequisites: None

CPTR1040	Introduction to Programming Logic	3	2/1/0
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This course introduces students to computer programming logic and troubleshooting. Students are introduced to algorithm development and structure programming. These concepts are foundational to learning to program and general troubleshooting.

Prerequisites: None

Corequisites: None

CPTR1104	Introduction to Computer Technology	3	2/1/0
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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.

Prerequisites: None

Corequisites: None

CPTR1108	CISCO 1	3	1/2/0
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This is an introduction to networks course that covers the architecture, structure, functions and components of the Internet and other computer networks. Students achieve a basic understanding of how networks operate while building simple local area networks (LANs). Students perform basic configurations for routers and switches and implement Internet Protocol.

Prerequisites: None

Corequisites: None

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COURSE DESCRIPTIONS

CPTR1118	CISCO 2	3	2/1/0
This course covers the architecture, components and operations of routers and switches in small networks and introduces wireless local area networks (WLANs) and security concepts. Students learn how to configure and troubleshoot routers and switches for advanced functionality using security best practices and resolve common issues with protocols in both Internet Protocol Version 4 (IPv4) and Internet Protocol Version 6 (IPv6) networks. Prerequisites: CPTR1108 Corequisites: None			
CPTR1122	System Maintenance	3	2/1/0
The focus of this course is troubleshooting computers and computing-related equipment. The course begins with an overview of basic electronics and progresses to building and troubleshooting computing equipment and IoT (Internet of Things) devices. It also deals with optimizing the performance of systems. Prerequisites: None Corequisites: None			
CPTR1129	RPG Programming	4	2/2/0
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. Prerequisites: None Corequisites: None			
CPTR1135	Beginning Networking	3	2/1/0
This is an introductory networking course designed to expose the student to various components of networking in both home and enterprise settings. Topics covered include various network types, how networks communicate and current networking practices. Wired and wireless networks will be discussed, along with their various layouts and required components. The student also will learn basic best practices for network security and network management. Prerequisites: None Corequisites: None			
CPTR2001	Scripting for Automation	3	2/1/0
Students will build on the skills learned in Introduction to Programming and Scripting. Students will learn scripting styles, procedures and methods for system, database, web and network environments. Prerequisites: CPTR1001 Corequisites: None			
CPTR2200	CISCO 3	3	2/1/0
This course describes the architecture, components, operations and security to scale for large, complex networks, including wide area network (WAN) technologies. The course emphasizes network security concepts and introduces network virtualization and automation. Students learn how to configure, troubleshoot and secure enterprise network devices and understand how application programming interfaces (API) and configuration management tools enable network automation. Prerequisites: CPTR1118 Corequisites: None			

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COURSE DESCRIPTIONS

CPTR2224	Linux I	3	2/1/0
This course deals with Linux installation, configuration and system administration. This course lays the groundwork for continued study of Linux.			
Prerequisites: None			
Corequisites: None			
CPTR2234	Linux II	3	2/1/0
The primary focus of this course is Linux networking, security, ethics and privacy.			
Prerequisites: CPTR2224			
Corequisites: None			
CPTR2236	Network Security	3	2/1/0
This course deals with the understanding of basic network security. Students learn how to manage systems to guard against various security threats.			
Prerequisites: None			
Corequisites: None			
CPTR2240	Database Administration	3	2/1/0
Students in this course will identify core database concepts and create database models. Installation, configuration and maintenance of a database management system (DBMS) will be covered. Students will analyze and administer a database's performance optimization. Additional topics will include user administration within the database, backup and restoration, and database normalization.			
Prerequisites: None			
Corequisites: None			
CPTR2245	Enterprise Network Technologies	3	2/1/0
This course will introduce information technologies used in an enterprise network environment. This course follows computing development from single hardware/single operating system operation to virtualization to container technology to implementation on the cloud. Students work with technology from each phase of computing development. The class discusses current trends within enterprise networking.			
Prerequisites: CPTR1040			
Corequisites: None			
CPTR2255	Software Security and Testing	3	2/1/0
This course is an introduction to software security and testing. Students will learn the importance of this aspect of software development by exploring historical and current needs in the area of stable and secure software development. The use of development operations in these areas will be included.			
Prerequisites: None			
Corequisites: None			
CPTR2265	Software Engineering	3	2/1/0
This course is an introduction to the principles of software engineering. The course covers historical and contemporary practical methods, with topics including development operations, waterfall development, iterative development, evolutionary development, source control ecosystems and testing ecosystems.			
Prerequisites: CPTR1001			
Corequisites: None			

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COURSE DESCRIPTIONS

CPTR2275	Data Analytics	3	2/1/0
This course is an Introduction to data analytics. Students will explore historical roots and reasons for business intelligence. They will be introduced to big data, data mining and data warehousing and how they help businesses. Database scalability and optimization also will be covered. Prerequisites: None Corequisites: None			
CPTR2296	Topics in Computers	3	1/2/0
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. Prerequisites: None Corequisites: None			
CRJU1102	Policing and Practices	3	3/0/0
This course includes an introduction into the development of American policing and an understanding of the modern roles and functions of police in a democratic society. These roles and functions include responsibilities in peace-keeping, law enforcement, community policing and customer service. Minnesota Peace Officer Standards and Training Board learning objectives are also covered. Prerequisites: None Corequisites: None			
CRJU1106	Introduction to Corrections/Probation	3	3/0/0
This course examines the historical and contemporary correctional theories and programs with emphasis on the current organizational structure. Probation, parole and correctional alternatives are also explored. Prerequisites: None Corequisites: None			
CRJU1109	Law Enforcement Behavioral Science	3	3/0/0
This course is devoted primarily to Minnesota Peace 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. Prerequisites: None Corequisites: None			
CRJU1117	Special Topics in Criminal Justice	3	3/0/0
This course looks at a variety of contemporary issues that are considered to be hot spots in law enforcement and criminal justice such as police pursuits, deadly force, gangs, terrorism, etc. Applicable Minnesota Police Officer Standards and Training Board learning objectives are also covered. Prerequisites: None Corequisites: None			

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CRJU2202	Criminal Procedures	3	3/0/0
This course covers the study of constitutional law and criminal procedures utilizing the opinions of the United States Supreme Court and 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 Peace Officer Standards and Training Board learning objectives relating to criminal procedure are also covered. Prerequisites: None Corequisites: None			
CRJU2209	Criminal Investigations	3	3/0/0
This course covers the methodology of criminal investigations from preliminary investigation to court proceedings. It also covers evidence recognition, collection and preservation. Police reporting relevant to investigations is also covered, along with all Minnesota Peace Officer Standards and Training Board learning objectives relating to investigation of crime. Prerequisites: None Corequisites: None			
CRJU2235	Criminal Justice Internship	3	0/0/3
This is a practical learning experience in criminal justice in the area of the student's interest. This course is usually scheduled after the student has completed one full year of coursework. Prerequisites: None Corequisites: None			
CSCI1121	Computer Science I	4	4/0/0
This course is an introduction to computer science. It includes algorithm design and structured programming using a high-level programming language. Key components of this course are designing, coding, debugging and documenting programs using techniques of good programming style. This course is intended primarily as a first course for computer science majors and/or minors. Prerequisites: None Corequisites: None			
CSEC1110	Fundamentals of IT Security	3	2/1/0
Security is an important component of information technology. This course introduces industry-recommended security guidelines and controls. Students will practice implementing several examples of controls and encrypting data in transit and for storage. Prerequisites: None Corequisites: None			
CSEC2210	Security Breaches and Countermeasures	3	2/1/0
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. Prerequisites: CSEC1110 Corequisites: None			

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CSEC2228	Network Defense	3	2/1/0
This course introduces students to the various methodologies for defending the information technology network infrastructure. Students 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. Prerequisites: CPTR2236 Corequisites: None			
CVRI1100	Cardiovascular Technology Survey	2	1/1/0
This course introduces the student to the history and emerging role of cardiovascular technologist. Students will learn medical terminology and have opportunities to observe the role of the cardiovascular technologist in various settings. Students in this course will incur the cost of and be required to receive clear national and Minnesota Department of Health background checks and be listed in the North Dakota Board of Nursing Unlicensed Assistive Personnel Directory. Prerequisites: None Corequisites: clear Minnesota Department of Health background check, clear national background check, North Dakota Board of Nursing Unlicensed Assistive Personnel registration			
CVRI1110	Cardiovascular Anatomy and Physiology	3	3/0/0
This course provides the cardiovascular technology student an in-depth review of normal anatomy and physiology of the cardiac, cardiovascular, peripheral vascular and neurovascular systems, and renal regulation of blood pressure. The pathophysiology of these systems is examined in order to understand and apply treatment modalities in the cardiovascular catheterization laboratory. Prerequisites: None Corequisites: BIOL2262, BIOL2263, CVRI1100			
CVRI1130	Cardiovascular Technology I	3	2/1/0
This course prepares students to participate in cardiovascular diagnostic and interventional procedures with adult patients. Students will differentiate cardiovascular complications and emergencies, prepare and position patients for various procedures, and set up and maintain sterile fields. Students will learn concepts related to hemodynamics including cardiac output, performance of hemodynamic calculations and recognition of blood flow determinants. Prerequisites: None Corequisites: CVRI1105, CVRI1110, CVRI1120			
CVRI2130	Cardiovascular Technology II	5	3/2/0
This course builds on the knowledge and skills gained in Cardiovascular Technology I. Students will learn diagnostic and interventional procedures related to peripheral vascular, neurovascular, congenital and pediatric conditions, and complications and emergencies. Prerequisites: CVRI1120, CVRI1130 Corequisites: None			
CVRI2146	Cardiovascular Electrocardiography	1	1/0/0
Students will learn electrocardiography (ECG) electrode placement, ECG measurements and rhythm interpretation for patients experiencing cardiac conditions treated in the cardiac catheterization laboratory. Prerequisites: CVRI1120 Corequisites: None			

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CVRI2262	Cardiovascular Technology Practicum I	5	0/0/5
In part one of this capstone course, students will apply the knowledge and skills gained throughout the Cardiovascular Technology program. Students will become certified in Advanced Cardiac Life Support (ACLS) before being assigned to various cardiovascular catheterization laboratory opportunities. Students will function as a part of the cardiovascular team under the supervision of a preceptor. Students will participate in experiences Monday through Friday for the duration of the academic term. Shifts may rotate between day, evening, night and on-call shifts. Prerequisites: current Advanced Cardiac Life Support certification, current American Heart Association Health Care Provider CPR, current, clear Minnesota Department of Health criminal background check, current, clear national background check, Successful completion (C or better) of all Cardiovascular Technology Program requirements, up-to-date immunizations and health form Corequisites: None			
CVRI2264	Cardiovascular Technology Practicum III	5	0/0/5
In part three of this capstone course, students will apply the knowledge and skills gained throughout the Cardiovascular Technology program. Students will function as a part of the cardiovascular team under the supervision of a preceptor. Students will participate in experiences Monday through Friday for the duration of the academic term. Shifts may rotate between day, evening, night and on-call shifts. Prerequisites: None Corequisites: CVRI2262, CVRI2263			
DCNH1118	CNH (Case New Holland) Supervised Occupational Experience (SOE) II	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. Prerequisites: None Corequisites: None			
DCNH2218	CNH (Case New Holland) Supervised Occupational Experience (SOE) III	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. Prerequisites: None Corequisites: None			
DCNH2242	Advanced Engines and Fuel Systems	6	2/4/0
This course is designed to give students an understanding of medium- and heavy-duty diesel engines used in Case New Holland equipment. Engines being studied include but are not limited to Cummins, Iveco, International Harvester and New Holland. Areas of study include base engine components, intake and exhaust systems, emission control devices, lubrication systems, cooling systems and fuel systems. Prerequisites: DSET1132, DSET1136 Corequisites: None			
DENT1102	Dental Anatomy	2	2/0/0
The lecture portion of the course introduces the student to basic terminology for understanding the structures that form the foundation for tooth function, normal anatomy of the oral cavity, and tooth and root morphology. Special topics include survey of dental anomalies and forensic dentistry. Prerequisites: None Corequisites: None			

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DENT1104	Dental Health Care Providers II	1	1/0/0
This course will build on student learning in Introduction to Healthcare Providers I. Students will be challenged to go beyond definitions and practices and understand the what, why and how of blood-borne pathogens, concepts, standards and procedures of infection control, medical emergencies, first aid in the dental setting and patient privacy rights. Prerequisites: None Corequisites: None			
DENT1122	Dental Ethics and Jurisprudence	1	1/0/0
This course focuses on the ethical and legal implications of providing dental, dental assisting and dental hygiene care. The practice acts for Minnesota and North Dakota will also be studied. Prerequisites: None Corequisites: None			
DET1106	Mechanical Drawing II	4	2/2/0
The objective of this course is to develop students' use and knowledge of mechanical fasteners and welding symbols and their application on weldment drawings and documentation of basic assemblies and sub-assemblies. Students will also develop an understanding of tolerancing types and rules, including fundamental knowledge of geometric dimensioning and tolerancing symbols, datums and material conditions. Prerequisites: CADD1000, DET1104 Corequisites: None			
DET2120	Structural Design and Detailing	3	2/1/0
This course provides a comprehensive introduction to structural drafting and design, utilizing industry-standard tools to develop fundamental knowledge of structural engineering principles. Students learn to create detailed structural models, drawings and documentation. Key topics include the modeling of structural components, creation of professional construction documentation, and the coordination of structural designs within multidisciplinary projects. Prerequisites: CADD1000 Corequisites: None			
DET2210	Advanced Modeling with Inventor	3	2/1/0
This course covers advanced part modeling, assembly modeling, sheet metal, frame generator and presentation files in the latest version of the Inventor software package. Prerequisites: CADD1410, DET1106 Corequisites: None			
DET2246	Tool Design	3	1/2/0
The objective of this course is to develop an understanding of jigs, fixtures and dies and their function in part production. Students will analyze component pieces, classifications of jigs and fixtures, design criteria and costs associated with building and implementing various types of tooling. Prerequisites: None Corequisites: CADD2200, CADD2210			

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DET2250	Reverse Engineering Applications	4	1/3/0
The objective of this course is for students to develop a set of production drawings of an existing product. Students will be required to reverse engineer the product and create all necessary views, layouts, annotations and instructions required for the product to be manufactured and assembled, while collaborating with a work group similar to those found in industry. Prerequisites: CADD2200, CADD2210, DET1106, DET2246 Corequisites: None			
DMKT2210	Social Media Marketing	3	3/0/0
This course is a study of how organizations use social media to support their marketing strategies through social listening, social analytics and social engagement. Students will learn techniques to create engaging content for social platforms, identify influencers, deliver content to a target audience and measure success by using key performance indicators. Emphasis will be placed on how to leverage social media marketing to build a brand, drive demand, engage buyers and increase revenue. Prerequisites: None Corequisites: None			
DMKT2310	Digital Marketing UX Design	3	3/0/0
This course covers the key elements in creating user-friendly, functional and aesthetically pleasing web pages to improve the customer experience. Emphasis will be placed on examining both the topics of user experience design (UX) and user interface design (UI) in the development of web pages for both desktop and mobile devices. Students will apply skills learned by developing web page designs using content management software for a portfolio. Prerequisites: DMKT2200 Corequisites: None			
DMKT2330	Email and MMS Marketing	3	3/0/0
This course will cover mobile and email marketing techniques as a part of a multi-channel digital marketing strategy. Mobile marketing strategies are aimed at target audiences through websites, email, multimedia messaging service (MMS), social media and applications. Course content also will include techniques in developing effective email marketing campaigns optimized for mobile devices. Prerequisites: None Corequisites: None			
DMKT2410	Digital Marketing Capstone	3	3/0/0
This course is designed to provide students an opportunity to integrate and apply the knowledge they have acquired throughout the digital marketing curriculum into a business situation. This is an application course in which students are required to demonstrate the ability to understand and solve complex digital marketing problems. Students will assess an organization's marketing problem or opportunity and create a digital marketing strategy designed to improve the overall performance of the organization. Prerequisites: None Corequisites: None			
DNAS1105	Clinical Assisting II	5	1/4/0
Dental assisting students apply skills in a clinical setting. This course prepares the student to adapt chairside skills to assist with dental specialties as they are performed in the general practice. Students will apply skills developed in Dental Anatomy, Biomaterials, Biodental Science and Dental Practice Management as they apply to the practice of dental assisting. Prerequisites: DNAS1103 Corequisites: None			

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COURSE DESCRIPTIONS

DNAS1106	Biodental Science	3	3/0/0
This course provides an introduction to anatomy and physiology, an introduction to dental histology, embryology and an overview of head and neck anatomy using the universal charting system. This course is also designed to give the student a basic concept of microbiology, disease transmission and a survey of oral pathology and pharmacology. The student will also be introduced to the basic concepts of understanding nutrition in the dental profession. Prerequisites: DENT1103 Corequisites: None			
DNAS1119	Advanced Functions	5	2/3/0
This course is designed to provide the student with instruction and practice to perform the clinical competency in the following intra-oral functions approved by the Minnesota Board of Dentistry: taking radiographic exposures, performing mechanical polishing, taking preliminary impressions and bite registrations, applying topical fluoride, placing and removing periodontal dressing, removing excess cement, monitoring nitrous oxide-induced patients, induction of nitrous oxide/oxygen sedation, removing excess bond 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. Prerequisites: DNAS1103 Corequisites: None			
DNAS1210	Dental Assisting Radiology Lab I	1	0/1/0
Dental Assisting students will be introduced to techniques and processes for exposing digital full mouth series and extra-oral digital radiographs on skulls, manikins and patients. Students will utilize these techniques and processes to expose digital radiographs and evaluate them for diagnostic value according to M State Dental Criteria for Radiographic Acceptability. Prerequisites: None Corequisites: DENT1106			
DNAS1215	Dental Specialties	1	1/0/0
This course introduces the student to the dental specialties of pediatric dentistry, periodontics, oral and maxillofacial surgery, endodontics, orthodontics and prosthodontics, both fixed and removable. This course will provide the student with an introduction to the clinical procedures with each of the specialties listed. Students will research various dental assisting specialties by interviewing dental assistants in specialty practices. Prerequisites: None Corequisites: None			
DNHY1106	Head and Neck Anatomy	2	2/0/0
This course covers the study of hard and soft tissues of the head and neck including the skeletal, muscular and nervous systems, with particular emphasis on the masticatory system. Prerequisites: Acceptance into the dental hygiene program Corequisites: None			

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DNHY1109	Dental Hygiene Radiology Lab	2	0/2/0
Dental Hygiene students will be introduced to techniques and processes for exposing digital full mouth series and extra-oral digital radiographs on skulls, manikins and patients. Students will utilize these techniques and processes to expose digital radiographs and evaluate them for diagnostic value according to M State Dental Criteria for Radiographic Acceptability.			
Prerequisites: None			
Corequisites: None			
DNHY1112	Dental Hygiene Practice I	3	0/3/0
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.			
Prerequisites: None			
Corequisites: None			
DNHY1114	Radiology Lab II	1	0/1/0
Dental Hygiene students will be introduced to techniques and processes for exposing digital full-mouth series and extra-oral digital radiographs on skulls, manikins and patients. Students will utilize these techniques and processes to expose digital radiographs and evaluate them for diagnostic value according to M State Dental Criteria for Radiographic Acceptability.			
Prerequisites: DENT1106, DNHY1113			
Corequisites: None			
DNHY1119	Dental Hygiene Principles II	4	4/0/0
In this course, students will continue their study of the dental hygiene process of care introduced in DNHY 1110, focusing on dental hygiene diagnosis, care planning (including patients with special needs) and non-surgical periodontal therapy.			
Prerequisites: None			
Corequisites: None			
DNHY1124	Pain Control Lab	2	0/2/0
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.			
Prerequisites: DNHY1106, DNHY1136			
Corequisites: None			
DNHY1132	Dental Hygiene Practice III	1	0/1/0
This lab course is a continuation of DNHY1123 with emphasis on Minnesota Board of Dentistry allowable procedures for dental hygienists.			
Prerequisites: DNHY1123			
Corequisites: None			

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DNHY2210	Dental Hygiene Principle IV	2	2/0/0
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. Prerequisites: DNHY1130 Corequisites: None			
DNHY2219	Periodontology	2	2/0/0
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. Prerequisites: None Corequisites: None			
DNHY2223	Dental Hygiene Practice V	6	0/6/0
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. Prerequisites: None Corequisites: DNHY2246			
DNHY2232	Dental Hygiene Review	1	1/0/0
This course is designed to assist students in reviewing content in preparation to write the National Board Dental Hygiene Examination. Prerequisites: DNHY2213 Corequisites: None			
DNHY2246	Clinical Affiliation II	1	0/0/1
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. Prerequisites: None Corequisites: DNHY2223			
DSET1101	Software Systems in Transportation	2	1/1/0
This course introduces students to proprietary software used in the diesel technology industry. Students will become familiar with various software from industry-leading manufacturers. Prerequisites: None Corequisites: None			
DSET1110	Power Train I	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. Prerequisites: DSET1100 Corequisites: None			

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DSET1114	Vehicle Brakes	3	1/2/0
This course covers hydraulic and air brake system operation, service and diagnosis. Anti-lock braking systems will also be covered.			
Prerequisites: None			
Corequisites: None			
DSET1124	Diesel Shop Management	1	1/0/0
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.			
Prerequisites: None			
Corequisites: None			
DSET1132	Introduction to Engine Theory	2	2/0/0
This course introduces the theory of today's diesel engines, including operation, repair and maintenance. Students will learn the proper industry procedures for removing, replacing, diagnosing, troubleshooting, rebuilding and assembling diesel engines.			
Prerequisites: None			
Corequisites: None			
DSET1140	Supervised Occupational Experience I	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.			
Prerequisites: None			
Corequisites: None			
DSET2200	Introduction to Electronic Controls	3	1/2/0
Students in this course are exposed to various original equipment manufacturer (OEM) software used to diagnose computer control systems in the transportation, construction and agricultural industries. Coursework includes the operation, diagnosis and repair of sensors and actuators used on engines, transmissions, brakes and hydraulic systems.			
Prerequisites: DSET2204			
Corequisites: None			
DSET2206	Electronic Controls	3	1/2/0
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.			
Prerequisites: DSET1100, DSET1130			
Corequisites: None			
DSET2214	Suspension and Alignment	3	1/2/0
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.			
Prerequisites: DSET1100			
Corequisites: None			

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DSET2218	Advanced Fuels	3	1/2/0
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. Prerequisites: DSET1106 Corequisites: None			
DSET2240	Supervised Occupational Experience II	3	0/0/3
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. Prerequisites: None Corequisites: None			
DSET2250	Bobcat Electrical and Hydraulic Systems	2	1.5/0.5/0
This course is designed to give students an understanding of the electrical and hydraulic systems used on Doosan/ Bobcat equipment. Areas of study include electrical and hydraulic structure on compact track and skid loaders. Prerequisites: None Corequisites: None			
DTRK1140	Supervised Occupational Experience 1	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. Prerequisites: None Corequisites: None			
DTRK2238	Transmissions and Drive Systems	4	1/3/0
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. Prerequisites: DSET1110 Corequisites: None			
DTRK2242	Advanced Engines and Fuel Systems	6	2/4/0
This course is designed to give students 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 truck diesel engines manufactured by Caterpillar, Cummins, Detroit, Navistar, Mack and Volvo. Prerequisites: DSET1132, DSET1136 Corequisites: None			
EAP1101	Reading and Editing Strategies II	3	3/0/0
This course is for students in their second semester of study in the English for Academic Purposes (EAP) cohort and pairs with ENGL1101: College Writing and an academic content course. Students will continue to develop language skills necessary to read and understand a variety of texts. The course also will continue development of editing skills and build research skills, including the critical analysis of sources. Prerequisites: None Corequisites: ENGL1101			

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ECE1107	Child Growth and Development	3	3/0/0
This course provides an overview of the developmental stages of children ages prenatal through 8, including physical, social, emotional, language, cognitive and creative development. While studying the integration of theory and developmentally appropriate best practice, students observe children and analyze characteristics of development at various stages. Attention is focused on theory, developmentally appropriate, best practice and environmental factors that may affect development. Prerequisites: None Corequisites: None			
ECE1111	Diverse Children and Family Relations	3	3/0/0
This course covers relationships between a caregiver/teacher, child, family and community. Students explore teaching and environmental strategies that promote understanding and support diverse cultural and family structures. Students examine cultural diversity/dynamics, bias, sensitivity, theory and the importance of the context of family, culture and society as they relate to learning and child development. Prerequisites: None Corequisites: None			
ECE1115	Creative Activities and Environment	3	3/0/0
This course provides an overview of developmentally appropriate learning experiences in home, center-based and school settings. Students integrate knowledge of developmental needs, environments and teaching strategies to enhance all areas of a child's emerging development throughout the curriculum. Prerequisites: None Corequisites: None			
ECE2103	Children with Exceptionalities	3	3/0/0
Students in this course examine strategies that support inclusive programs for children and families. The course addresses legal and ethical requirements, including eligibility and qualification for services. Topics include the Americans with Disabilities Act, the Individuals with Disabilities Education Act, and both typical and atypical development. Students also explore methods for adapting curriculum to meet the needs of children with developmental differences and strategies for cultivating partnerships with families. Prerequisites: None Corequisites: None			
ECE2107	Introduction to Language and Literacy	3	3/0/0
This course provides an overview of language and literacy development for children birth to age 8. Students research, evaluate, plan and design developmentally appropriate language and literacy-rich experiences for children. Students also learn teaching strategies utilized to promote literacy development within the program/school setting and home. Prerequisites: None Corequisites: None			

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ECHO1055	Intro to Echocardiographic Views	1	0/1/0
This course provides hands-on learning in an echocardiography laboratory as simulated in a clinical environment. Students will be introduced to ultrasound imaging equipment, transducer position, echocardiographic views and scanning techniques following an adult transthoracic two-dimensional echocardiography exam protocol. Students will also become familiar with transducer motions associated with echocardiographic imaging. Prerequisites: None Corequisites: None			
ECHO1105	Adult Echocardiography Lab I	3	0/3/0
This course provides hands-on learning in an echocardiography laboratory as simulated in a clinical environment. Students familiarize with ultrasound imaging equipment, system controls, transducer position, and scanning techniques following an adult transthoracic echocardiography exam protocol. Prerequisites: None Corequisites: ECHO1100			
ECHO1115	Adult Echocardiography Lab II	3	0/3/0
Students will continue to build on the ultrasound scanning skills learned in ECHO1100. Content includes the development of a full adult transthoracic echocardiography scanning protocol. In addition, students will learn the required measurements to determine the severity of cardiovascular disease. Prerequisites: None Corequisites: ECHO1110			
ECHO1125	Ultrasound Physics and Instrumentation II	3	3/0/0
This course continues exploration of the theoretical and abstract principles that form the technological basis of diagnostic medical sonography. Topics include Doppler physics and instrumentation, artifacts, quality assurance and hemodynamics. Physics applications and collaborative learning will be highly emphasized. Prerequisites: None Corequisites: ECHO1110, ECHO1115			
ECHO2105	Adult Echocardiography Lab III	2	0/2/0
Students will continue to build on the ultrasound scanning skills learned in ECHO1105 and ECHO1115. Content includes continued skill enhancement of a full adult transthoracic echocardiography scanning protocol. In addition, students will continue to master the content of the required measurements to determine the severity of cardiovascular disease. Prerequisites: None Corequisites: ECHO2100			
ECHO2200	Adult Echocardiography Clinical I	7	0/0/7
This course provides a supervised clinical practicum that prepares students to develop cognitive, psychomotor and affective learning domains for adult transthoracic echocardiography. Students demonstrate increasing proficiency in the required echocardiography imaging modalities that allow them to achieve clinical competency. Prerequisites: ECHO2100, ECHO2105 Corequisites: None			

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ECHO2220	Adult Echocardiography Review	1	1/0/0
Students will review material learned in ECHO1100, ECHO1110 and ECHO2100. This course will cover material to prepare students for the National Registry exam. Students will review cardiac anatomy, physiology, heart and vascular pressures, chamber quantification, system operations, scanning views with associated anatomy, Color/Spectral Doppler and quantification of abnormal findings.			
Prerequisites: None			
Corequisites: ECHO2210			
ECON1150	Essentials of Economics	3	3/0/0
Meets MnTC Goal Areas 2 and 5. This course is an introductory study of economics and exposes the student to a variety of economic concepts. In order to enjoy a successful career, people need to understand how economics impacts the environment in which they live and work. This course helps satisfy those needs by exploring the principles of microeconomics, macroeconomics and international economics. At the microeconomic level, students will learn how the choices they make affect particular markets. They will examine resource allocation and pricing structure by analyzing demand and supply applications. Students will survey the competitive environment by exploring the market structures of perfect competition, monopolistic competition, monopoly and oligopoly. At the macroeconomic level, students will learn about the business cycle by analyzing the gross domestic product (GDP), the inflation rate, the unemployment rate, deficit spending, the national debt and other economic indicators. They will also investigate the debate over activism and non-activism in monetary and fiscal policies. Finally, the student will examine international issues including tariffs/quotas, foreign exchange, the concept of comparative advantage and trends in globalization. This course is not intended for business or economics majors.			
Prerequisites: None			
Corequisites: None			
ECON2222	Microeconomics	3	3/0/0
Microeconomics stresses the concepts of scarcity, production possibilities, supply and demand curves, elastic and inelastic goods and services, competition, monopolies, oligopolies, poverty and income distribution in the United States. In general, microeconomics examines the functioning of individual industries and the behavior of the individual.			
Prerequisites: None			
Corequisites: None			
ED2205	Introduction to Education and Technology	2	2/0/0
This course is an introduction to the career of teaching, along with the development of technology skills. Specific variables related to teaching as a profession are explored including professional roles and responsibilities, students, curriculum and the structure of schools. This course is to be taken concurrently with ED 2206.			
Prerequisites: None			
Corequisites: None			
ED2208	Drug Education	2	2/0/0
This course explores the physical, mental, and social aspects of the use and abuse of drugs. Topics include history of use, classifications of drugs, and the effects of drug use on the family and society. Emphasis is placed on the role drugs have in our society and our responsibility in preventing abuse.			
Prerequisites: ED2204			
Corequisites: None			

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ED2233	Strategies for Working With Individuals With Autism Spectrum Disorder 4	4/0/0
This course will introduce students to evidence-based and research-focused intervention strategies commonly implemented when serving individuals with autism spectrum disorders (ASD). Team-based collaborative consultation for individuals diagnosed with ASD is also addressed. Topics include direct instruction, communication skills training, social and emotional skills training and general supportive strategies. This course is cross-listed with PSYC 2233. Prerequisites: None Corequisites: None		
EDUC1113	Career and Life Planning	2 2/0/0
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. Prerequisites: None Corequisites: None		
ELEC1102	Introduction to Electric Circuit Theory	4 2/2/0
This introductory course provides the student with knowledge of electrical theory including atomic structure, Ohm's law, series circuits, parallel circuits, complex circuits and sine wave principles as related to the National Electrical Code. Prerequisites: None Corequisites: None		
ELEC1107	Introduction to Residential Wiring	3 1/2/0
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. Prerequisites: None Corequisites: None		
ELEC1110	Electric Motors and Generators	4 2/2/0
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. Prerequisites: ELEC1102 Corequisites: None		
ELEC1114	National Electrical Code	2 2/0/0
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. Prerequisites: ELEC1104 Corequisites: None		
ELEC1116	Conduit/Tool Applications	2 0/2/0
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. Prerequisites: ELEC1100 Corequisites: None		

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ELEC1122	Introduction to Electrical Materials	1	0/1/0
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. Prerequisites: None Corequisites: None			
ELEC1130	Electrical Blueprints	3	2/1/0
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 computer-aided design (CAD) drawings. Prerequisites: ELEC1124 Corequisites: None			
ELEC1170	Predictive Maintenance Technology	2	1/1/0
This course is designed to introduce students to the current predictive maintenance technology used in the best maintenance practices of 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. Students will also be introduced to best maintenance practices and their impact on the future of industry in the United States. Prerequisites: None Corequisites: None			
ELEC2202	Heating/Cooling Controls	3	1/2/0
This course introduces basic electric heating, gas, oil, heat pump and cooling system installation and control. Topics include installing wiring for heating and air conditioning systems, replacing controls, measuring instruments and schematic interpretation. Prerequisites: ELEC1107 Corequisites: None			
ELEC2206	Introduction to Motor Control Applications	3	2/1/0
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. Prerequisites: ELEC1108, ELEC1110 Corequisites: None			
ELEC2211	Electronic Motor Control	3	2/1/0
This course provides application of basic theory and operation to electronic motor control including semi-conductors, rectifiers, regulators and amplifiers. Prerequisites: ELEC1108 Corequisites: None			

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ELEC2214	Industrial Wiring	2	1/1/0
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. Prerequisites: ELEC1114 Corequisites: None			
ELEC2217	Building Automation I	2	0/2/0
This course introduces students to building automation systems. These systems are becoming critical required components used for green buildings, energy conservation and building safety systems. Topics covered in this course include electrical energy production, alternative energy sources and interconnection of renewable sources to existing power systems. This course also covers green utilization equipment and controls such as lighting, heating, ventilating and air conditioning, and plumbing. Prerequisites: None Corequisites: None			
ELEC2220	Electrician Internship	3	0/0/3
This course provides the student with the opportunity to work for an electrician or in another approved electrical setting. The student will experience working at the job site with other employees and under various working conditions. Prerequisites: None Corequisites: None			
ELEC2225	Transformers	2	0/2/0
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. Prerequisites: ELEC1108 Corequisites: None			
ELEC2230	Electrical Building Information Modeling	2	1/1/0
This course will provide the student with an introduction to Building Information Modeling (BIM) concepts, terminology and application of best practices being used in the electrical industry. Prerequisites: ELEC1130 Corequisites: None			
ELEC2238	Low Voltage Wiring	2	1/1/0
This course provides students with an understanding of installation procedures and National Electrical Code (NEC) requirements for coax, telephone, fire alarm, security, fiber optic, cat 4, cat 5 and other low-voltage wiring systems. Prerequisites: None Corequisites: None			

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ELEC2244	National Electrical Code Changes	1	1/0/0
This course covers recent changes in the National Electrical Code and how they affect current wiring practices. The course is approved for continuing education hours.			
Prerequisites: ELEC1104			
Corequisites: None			
ELEC2248	Code Applications	2	1/1/0
This course applies the principles of the National Electrical Code to job-specific situations.			
Prerequisites: ELEC1104, ELEC1114			
Corequisites: None			
ELL0050	English Language Learner Foundations	4	3/1/0
This grammar-based course is for non-native learners of English and is designed to prepare students to succeed in college-level fundamental courses. The course supports progress toward fluency in the English skill areas of speaking, listening, reading and writing through intensive study of grammatical structures. Content is chosen especially to provide sound models for needed basic written forms.			
Prerequisites: None			
Corequisites: None			
ELL0060	English Language Learner Reading	3	3/0/0
This reading course is for non-native learners of English. Students will learn the skills and vocabulary necessary to read college-level materials with emphasis given to effective note taking and summarizing. Students will engage in frequent large and small group discussions of reading material and be exposed to a variety of reading strategies.			
Prerequisites: None			
Corequisites: None			
ELL0075	American English Pronunciation	2	2/0/0
This pronunciation course is for non-native speakers of English. It is designed to help students improve their ability to be clearly understood in spoken communication in the United States. Through focusing on general speaking habits, intonation, syllabification, stress, rhythm, contraction and vowel and consonant sounds, students will learn how to more accurately adjust their pronunciation to general North American English pronunciation.			
Prerequisites: None			
Corequisites: None			
ELL1060	English Language Learner Writing I	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.			
Prerequisites: None			
Corequisites: None			

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ELL1085	English Language Learner Writing II	3	3/0/0
This writing course is for multi-lingual learners of English and is designed to prepare students for college-level writing tasks and courses. Students will practice the writing process while creating 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. Prerequisites: Successful completion of ELL1060: ELL Writing I or by placement. Corequisites: None			
ELWT1102	Electrical Line Worker Theory I	4	2/2/0
This course provides the student with basic electrical theory involved in the production and use of electrical energy. In addition, the student practices basic direct current circuitry calculations and rigging skills including basic knots and splices pertaining to the electrical industry. Prerequisites: None Corequisites: None			
ELWT1106	Climbing Electrical Structure	4	0/4/0
This course provides the student with the knowledge and skills to safely climb and frame various electrical structures to heights of 50 feet. Topics include free-hand and safety-strap climbing, and installation and removal of pole line hardware. Prerequisites: None Corequisites: None			
ELWT1110	Line Worker Theory II	4	2/2/0
This course provides the study of the principles of alternating current high voltage distribution circuitry. Included in this course are mathematical computation of AC power, conductor application including practice at armor rodding, hand and pre-formed ties, overvoltage and overcurrent installations, and street lighting circuits. Prerequisites: ELWT1102 Corequisites: None			
ELWT1114	Line Construction Reports	2	2/0/0
This course provides the student with an understanding of the design of line work construction drawings and equipment installation orders. Prerequisites: ELWT1108 Corequisites: None			
ELWT1118	Field Construction I	3	0/3/0
This course covers the installation of single-phase high voltage systems under actual field conditions. The overhead construction component of the course includes structural assembly, including grounding requirements, guying, conductor installation including stringing and tying, single-phase transformer, capacitor and regulator installation. The second component of the course is underground installation, covering trencher operation, primary and secondary cable termination, services, pad mount transformers and sectionalizing cabinets, and street lighting. Prerequisites: None Corequisites: None			

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ELWT1122	Field Construction III	3	0/3/0
This course gives the student a basic understanding of overhead transmission structure construction and installation requirements for 69KV systems. Students will also participate in two industry hot line schools, one sponsored by the Minnesota Municipal Utilities Association and the other by the Minnesota Rural Electric Cooperatives. Prerequisites: None Corequisites: None			
ELWT1132	Electrical Line Worker Internship	3	0/0/3
In this course, the student will learn apprentice line work skills under the supervision of an appropriate industry representative. Prerequisites: Instructor approval Corequisites: None			
EMS1100	Introduction to Emergency Medical Services	2	2/0/0
This course provides students with basic knowledge of emergency medical services (EMS). Students will learn about the history of EMS, EMS systems and operations, legal and ethical aspects of EMS, documentation, and disaster and initial hazmat response in EMS. Prerequisites: None Corequisites: None			
EMS1210	Emergency Medical Technician Fundamentals Lab	1	0/1/0
The purpose of this laboratory course is to discuss, perform and relate the concepts taught in the EMT Fundamentals course. This will be done in group discussions and demonstrations, and in individual and group scenarios. This hands-on course will teach and test the physical and mental skills necessary for the appropriate assessment and treatment of patients in small groups and/or individually. Instruction includes rigorous questioning and skill demonstration in front of instructors and peers. Prerequisites: None Corequisites: None			
ENGL0091	English Foundations	3	3/0/0
This course integrates the beginning levels of college-level reading and writing. Students will practice various reading strategies and develop proficiency in comprehending, summarizing and interpreting college-level texts as well as practice strategies designed to strengthen their writing skills, including grammar, usage and mechanics. Prerequisites: Course placement is determined by assessment Corequisites: None			
ENGL0098	Accelerated English	3	3/0/0
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. Prerequisites: Course placement is determined by assessment or completion of ENGL 0091 with a grade of C or higher. Corequisites: None			

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ENGL1205	Writing About Literature	3	3/0/0
Meets MnTC Goal Area 1. This course builds on the foundations of College Writing and provides students with additional opportunities to develop fluency in their writing through a process approach. Students will read critically from a variety of literary genres, explore meaning through academic research and respond through discussion and writing.			
Prerequisites: ENGL1101			
Corequisites: None			
ENGL1215	Professional and Technical Writing	3	3/0/0
Meets MnTC Goal Area 1. This course provides instruction in writing and designing professional and technical documents, including print and non-print correspondence, descriptions, instructions, reports and proposals, along with promotional material. Analysis, critical thinking and synthesis of sources will be covered, along with the development of presentation skills. Coursework also includes a formally documented, multi-source professional project.			
Prerequisites: ENGL 1101 College Writing			
Corequisites: None			
ENGL2228	A Well Examined Life: Reading and Writing Memoir	3	3/0/0
Meets MnTC Goal Areas 6F and 7. This course focuses on the writing of personal memoir as well as an in-depth study of the literary genre of memoir; it may also include creative essay writing. It is a workshop designed to offer students practice in the composition of memoir and other narrative modes of writing, as well as a study of the memoir as literature. This course places emphasis on the creation of fine arts as well as the formal, critical analysis of them.			
Prerequisites: ENGL1101			
Corequisites: None			
ENGL2235	Introduction to Literature: Drama	3	3/0/0
Meets MnTC Goal Areas 2, 6 and 8. This literature course will introduce students to the growing interdependence of the people of the world through a close study of drama. Studying drama written by various writers around the world will allow students to develop an understanding of and an appreciation for the human condition and culture. The course will also cover the basic elements and concepts of drama.			
Prerequisites: ENGL1101			
Corequisites: None			
ENGL2238	Literature, Illness and the Human Condition	3	3/0/0
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.			
Prerequisites: ENGL1101			
Corequisites: None			
ENGL2302	American Ethnic Literature	3	3/0/0
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.			
Prerequisites: ENGL1101			
Corequisites: None			

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ENGL2321	Women in Literature	3	3/0/0
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.			
Prerequisites: ENGL1101			
Corequisites: None			
ENGL2323	Horror and Supernatural Fiction	3	3/0/0
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.			
Prerequisites: ENGL1101			
Corequisites: None			
ENGL2325	Contemporary World Literature	3	3/0/0
Meets MnTC Goal Areas 6 and 8. This course provides students an opportunity to read, discuss and analyze contemporary literature from around the world. The focus of the course is on fiction, although students may also be introduced to other contemporary world literature such as poetry, non-fiction and drama.			
Prerequisites: ENGL1101			
Corequisites: None			
ENGL2373	Young Adult Literature	3	3/0/0
Meets MnTC Goal Areas 2, 6 and 7. This course introduces students to the enduring appeal of Young Adult Literature (YAL). Students will read and respond to diverse historical and contemporary texts. Emphasis is placed on reading, analyzing and evaluating YAL from various contextual frameworks, such as the development of the genre, critical perspectives, social issues and adolescent experiences.			
Prerequisites: ENGL1101			
Corequisites: None			
ENGR1100	Project Management	1	1/0/0
This course provides an overview of the construction industry and introduces the student to the duties and responsibilities of the construction professional. The emphasis of this course will be on the importance of the industry and career possibilities for successful students.			
Prerequisites: None			
Corequisites: None			
ENGR2210	Engineering Mechanics I	3	3/0/0
This course provides an introduction to the principles of mechanics, including equilibrium of particles and rigid bodies; distributed forces, centroids and centers of gravity; moments of inertia of areas; analysis of simple structures and machines; and various types of friction.			
Prerequisites: MATH1134			
Corequisites: None			

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ENGR2230	Mechanics of Materials	3	3/0/0
This course provides an introduction to the study of stress, strain, deformation and failure of elastic bodies subjected to external forces. Topics include the relationships between the applied loads and the resulting stresses and deformations in an elastic body, stress-strain relations and the design of structural members subjected to known loads. Prerequisites: ENGR2210 Corequisites: None			
ENGT1100	Introduction to Building Information Modeling	3	3/0/0
Building Information Modeling (BIM) is increasingly recognized as a best practice in construction, building design and related disciplines. BIM provides processes and technologies to improve productivity and efficiency in these industries. This course will provide the student an introduction to BIM concepts, terminology and application of best practices. Prerequisites: CADD1000 Corequisites: None			
ENGT1126	Engineering Graphics	3	1/2/0
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. Prerequisites: None Corequisites: None			
ENST2001	Fundamentals of Utilities	4	4/0/0
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. Prerequisites: None Corequisites: None			
ENST2222	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. Prerequisites: None Corequisites: None			
ENTR1101	Entrepreneurship I: Finding Your Opportunity	3	3/0/0
This course is designed for those who have a current business or aspire to create business opportunities. Students assess their skills, attitudes and behaviors related to entrepreneurial and innovative mindsets. Concepts and exercises focus on practical and repeatable processes and applications that identify unmet customer needs to generate ideas that become an innovation of value. Students create and present (pitch) business ideas. This course contains content and information on entrepreneurial mindset and entrepreneurial thinking. Prerequisites: None Corequisites: None			

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ENTR1301	Entrepreneurship III: Running and Growing Your Business	3	3/0/0
In this course, students who are operating a business or have a solid business model learn how to build a firm foundation for running and growing their business. Students develop a detailed business plan as well as present and pitch a business plan to entrepreneurial professionals. The focus of the course is on the financial, marketing and operational functions within a business needed for sustained growth and success. Prerequisites: ENTR1101, ENTR1201 Corequisites: None			
ESTH1201	Salon Practicum AP Esthetician	1--12	N/A
In this course, students will work in a licensed school salon to meet requirements stipulated by the State Board of Cosmetology. The course includes instruction in applied science and skills in skin analysis, client consultation, dermaplaning or a machine exfoliation service, chemical peels (alpha hydroxy acids, beta hydroxy acids, trichloroacetic acids and blended acid peels), electrical energy services (direct current, indirect current, sound energy and light energy), advanced facial treatments using lymphatic drainage and advanced extractions, skin needling, and infection control and safety procedures. Each student is required to complete a specific minimum number of clinical exercises as well as a minimum number of clinical hours to fulfill requirements set by the State Board of Cosmetology. Prerequisites: Cosmetology Diploma or MN license Esthetician Certificate or MN license Corequisites: None			
ESTH1903	Advanced Exfoliation	3	3/0/0
This course will provide practical knowledge and practice of exfoliation using advanced chemicals and devices, including but not limited to BHA chemical peels, AHA chemical peels, TCA chemical peels, crystal and diamond microdermabrasion, hydro dermabrasion and dermaplaning. Students will learn to recognize and treat skin conditions, conduct advanced consultations, and perform client charting and health screening. Students will understand wound healing as it relates to advanced esthetics and proper pre- and post-surgical at-home care. This class will cover training in advanced product chemistry and ingredients. Prerequisites: None Corequisites: None			
FIRE1100	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. Prerequisites: None Corequisites: None			
FIRE1111	Firefighter Skills I	2	0/2/0
This course covers the objectives of the Minnesota Fire Service Certification Board for certification as a Firefighter I. The MFSCB objectives are based on National Fire Protection Association 1001 Standard for Fire Fighter Professional Qualifications. This will prepare the student to function at the minimum level of training for entry into a fire protection career field. Prerequisites: None Corequisites: None			

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FIRE1115	Firefighter Skills II	2	0/2/0
This course covers the objectives of the Minnesota Fire Service Certification Board for certification as a Firefighter II. The MFSCB objectives are based on National Fire Protection Association 1001: Standard for Fire Fighter Professional Qualifications. This course will prepare the student to function at or above the minimum level of training for entry into a fire protection career field. Prerequisites: FIRE1111 Corequisites: None			
FIRE1140	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. Prerequisites: FIRE1100, FIRE1106, FIRE1108 Corequisites: None			
FIRE1152	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. Prerequisites: FIRE1100, FIRE1106, FIRE1108 Corequisites: None			
FIRE2021	Fire and Emergency Services Administration	2	2/0/0
This course introduces students to the organization and management of a fire and emergency services department and the relationship of 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 for State Certification for Fire Officer I and Fire Officer II. Prerequisites: None Corequisites: None			
FIRE2041	Fire Protection Systems	2	2/0/0
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. Prerequisites: None Corequisites: None			
FIRE2060	Strategy and Tactics	2	2/0/0
This course provides the principles of fire ground control through utilization of personnel, equipment and extinguishing agents. Prerequisites: None Corequisites: None			

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FYE1000	Student Success Strategies	1	1/0/0
This course will help students develop practical strategies for success in college and in life. Students will engage in interactive assignments to explore, identify and clarify goals and will develop a better understanding of themselves by analyzing personal choices.			
Prerequisites: None			
Corequisites: None			
GAS1001	Underground Utility Locating	2	0/2/0
This course provides the skills and procedures necessary to locate and accurately mark underground utilities including gas, electrical, water and cable.			
Prerequisites: None			
Corequisites: None			
GAS1003	Gas Utility Equipment Training	5	1/4/0
This is an Introductory course that prepares students for basic field utility work. The course includes safety procedures, equipment operations and maintenance.			
Prerequisites: None			
Corequisites: None			
GAS2001	Forklift Certification	1	0/1/0
This course offers an Occupational Safety and Health Administration-compliant program consisting of field training, a knowledge test and a hands-on evaluation for all forklift operations.			
Prerequisites: None			
Corequisites: None			
GAS2003	Gasless Leak Detection	3	1/2/0
This course will provide hands-on training for responding to gas emergencies and conducting hazardous leak investigations.			
Prerequisites: None			
Corequisites: None			
GDTC1100	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.			
Prerequisites: None			
Corequisites: None			
GDTC1113	Design and Layout I	3	2/1/0
As the first of three layout and design courses in a series, this foundational course introduces students to the basic elements and principles of design. Students will produce a variety of design projects that will familiarize them with the creative process, basic design theories, branding philosophies and production techniques. Most projects will be created using Adobe Creative Suite applications.			
Prerequisites: None			
Corequisites: GDTC1120			

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GDTC1120	Adobe InDesign I	3	2/1/0
In this course, students will be introduced to basic through intermediate functions of Adobe InDesign. Developing proficiency in software vocabulary, applied techniques and overall efficiency will be emphasized throughout the course. Students will create a variety of industry-related graphic design projects that effectively incorporate type and imagery in single- and multiple-page InDesign documents. These projects will involve simple to complex tasks that will reinforce students' basic design knowledge and skills.			
Prerequisites: None			
Corequisites: GDTC1113			
GDTC1127	Digital Photo / Video	3	2/1/0
Students will develop basic photographic and video production skills and knowledge in this course, using a digital camera for a variety of assignments.			
Prerequisites: None			
Corequisites: None			
GDTC1151	Process Printing Theory	3	2/1/0
In this course, students will gain an understanding of the foundational theory of the printing process and be introduced to printing terminology.			
Prerequisites: None			
Corequisites: None			
GDTC2205	Adobe Photoshop II	3	2/1/0
This course covers digital image creation, manipulation and preparation for output using a variety of advanced functionalities of Adobe PhotoShop.			
Prerequisites: GDTC1105			
Corequisites: None			
GDTC2224	Interactive Design II	3	2/1/0
This course focuses on the understanding and use of content management systems, database software and principles of user interface and user experience design to create and edit responsive interactive design projects for web and mobile purposes.			
Prerequisites: GDTC1124			
Corequisites: None			
GDTC2245	Adobe Illustrator II	3	2/1/0
This course covers the use of Adobe Illustrator to create and manipulate electronic illustrations, logos and artwork.			
Prerequisites: GDTC1135			
Corequisites: None			
GDTC2250	Design Campaigns	3	2/1/0
In this course, students will apply branding, advertising and graphic design principles to build integrated campaigns. These campaigns will require students to employ a variety of media, such as print, digital, social media, wearable, out-of-home and some non-traditional applications. Students will learn preparatory research and basic marketing planning to lay the groundwork for their projects.			
Prerequisites: GDTC1124, GDTC2212			
Corequisites: None			

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GDTC2276	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.			
Prerequisites: GDTC2203, GDTC2212			
Corequisites: None			
GEOG1160	Global Physical Geography	3	3/0/0
Meets MnTC Goal Areas 8 and 10. This course emphasizes the interactions of biological, geographical and climactic systems in the development of the patterns of regional environments on the surface of the earth and their interactions with human activities.			
Prerequisites: None			
Corequisites: None			
HEAT2218	Gas Heating	2	1/1/0
This course covers gas heating units, primarily furnaces. Emphasis is placed on understanding the operating systems and the operating sequence as it exists within the furnace, including mechanical, electrical and combustion. Diagnosis and repair of malfunctioning furnaces is a significant portion of this course.			
Prerequisites: None			
Corequisites: None			
HIST1101	Western Civilization: Ancient to 1600s	3	3/0/0
Meets MnTC Goal Areas 5 and 8. This course provides a discussion of the political, economic, cultural and social factors which have shaped the history of Western Civilization. Topics include ancient civilizations, the development of the major religions of the Western world, the Medieval period, the Renaissance and Reformation, the rise of capitalism, the development of the nation state and the Age of Absolutism.			
Prerequisites: None			
Corequisites: None			
HIST1201	American History to 1877	3	3/0/0
Meets MnTC Goal Areas 5 and 7. This course provides a discussion of the political, economic, cultural and social factors which have shaped American history. Topics include European exploration and colonization, the American Revolution and Founding period, the rise of democracy and industrialization, sectional conflict, the Civil War and Reconstruction.			
Prerequisites: None			
Corequisites: None			
HIST1301	World History: Ancient to 1500s	3	3/0/0
Meets MnTC Goal Areas 5 and 8. This course provides an introductory survey of the global story of humanity, from its prehistoric origins to the emergence of global commerce. Topics include the first civilizations, development of diverse world religions, and technological, political, artistic and philosophical contributions of past cultures across the world. Particular emphasis is given to the many ways in which geographically distinct peoples have interacted and influenced each other since ancient times.			
Prerequisites: None			
Corequisites: None			

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HIST1500	European Experience	3	3/0/0
Meets MnTC Goal Areas 5 and 8. This course combines an on-campus component with a trip to Europe. During the on-campus portion of the course students will learn about major events in British and French history such as the French Revolution, the Napoleonic era, the War of the Roses and the reign of Henry VIII. After the on-campus component is completed, students embark on a 10-day trip to Paris and London, where they visit historical sites they studied during the on-campus portion of the course.			
Prerequisites: None			
Corequisites: None			
HIST2600	History of Baseball	3	3/0/0
Meets MnTC Goal Area 5. This course covers the history of American baseball, from its origins through the modern era. The course explores professionalism, labor relations and the relationship between baseball and the growth of urban cities in the 19th and 20th centuries. Issues of race, class and gender are also addressed, as well as how the game has intersected with politics, economics and social change in American life.			
Prerequisites: None			
Corequisites: None			
HITM1155	Medicolegal Aspects	3	2/1/0
This course focuses on the application of legal principles, policies, regulations and standards for the control and use of health information.			
Prerequisites: HITM1151			
Corequisites: None			
HITM1220	Foundations of Medical Coding	3	2/1/0
This course introduce students to coding and classification systems used in the delivery of health care, along with the basic rules and regulations of coding.			
Prerequisites: HITM1151, HLTH1116			
Corequisites: None			
HITM2218	Intermediate Procedure Coding	3	1/2/0
This course is a continuation of coding guidelines using the current procedural classification systems. Students will practice assigning procedure codes to clinical information found in a health record while maintaining ethical coding standards.			
Prerequisites: BIOL1170, HITM1220			
Corequisites: None			
HITM2230	Medical Science for Health Information Professionals	3	3/0/0
This course provides students with an understanding of fundamental concepts of pathological conditions and therapeutics associated with multiple medical conditions. A working knowledge of the nature and cause of disease processes, including etiology, signs, symptoms and diagnostic evaluation, is covered. Appropriate treatment modalities are covered for each body system, including pharmacological, preventative, palliative, therapeutic and surgical. This allows health information professionals to apply diagnosis and treatment knowledge to code assignment according to current guidelines.			
Prerequisites: BIOL1170, HLTH1116			
Corequisites: None			

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HITM2253	Quality Management Studies	3	2/1/0
This course covers the components of quality improvement systems in healthcare, such as quality assessments, performance improvement and risk management. Prerequisites: BUS1100, HITM1151, MATH0095 Corequisites: None			
HITM2264	Revenue Cycle Management	3	2/1/0
This course covers the current revenue cycle systems used in the healthcare industry, from initial patient encounter to receipt of payment. Prerequisites: HITM1151, HITM1236, MATH0085 Corequisites: None			
HITM2286	Advanced Medical Coding	3	1/2/0
This course provides advanced cases for students to code utilizing various classification systems, with added emphasis on evaluating and auditing code assignment. Prerequisites: HITM2224, HITM2237, HITM2283, MATH0085 Corequisites: None			
HITM2302	Medical Coding Exam Review	1	1/0/0
This course assists students in the development of a personal plan to prepare for a nationally recognized medical coding certification exam. This course is taken during a student's final semester. Prerequisites: Instructor Permission Required Corequisites: None			
HITM2320	Registered Health Information Technician (RHIT) Exam Review	1	1/0/0
This course assists students in the development of a personal plan to prepare for the Registered Health Information Technician (RHIT) certification examination offered by the American Health Information Management Association (AHIMA). This course should be taken during a student's final semester. Prerequisites: Pre-requisite: Instructor approval. Corequisites: None			
HLTH1005	Introduction to Medical Terminology	1	1/0/0
The course introduces the building of medically rooted words, including prefixes and suffixes. A foundation is created for the continued development of medical and health vocabulary for students desiring programs in health-related fields. The student learns to spell, pronounce, define, analyze and formulate terminology related to body structure, disease process, diagnosis and treatment. Prerequisites: None Corequisites: None			
HLTH1110	Introduction to Anatomy and Physiology	3	3/0/0
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. Prerequisites: None Corequisites: None			

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HLTH1115	Introduction to Nursing in Long Term Care	3	1/2/0
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. Prerequisites: None Corequisites: None			
HLTH1122	CPR-First Aid	1	0.5/0.5/0
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. Prerequisites: None Corequisites: None			
HLTH2215	EMT Basic	6	4/2/0
This course follows the current National Standard Curriculum and will include all skills and classroom information necessary to provide emergency care at the basic life support level. Modules presented include preparation of the EMT-B, airway, patient assessment (medical and trauma), medical/behavioral emergencies and OB/GYN, trauma, infants and children, ambulance operations and interventions (medications and semi-automatic defibrillation). Upon successful completion of the EMT-B course, the student will be eligible to take the state/national registry computer and practical examinations. Prerequisites: None Corequisites: None			
HRES1126	Talent Acquisition	3	3/0/0
This course covers the basic knowledge of the factors to be considered and the strategies used in the employment process. Prerequisites: None Corequisites: None			
HRES1134	Training and Development	3	3/0/0
This course covers basic information about the characteristics of effective training and development programs in building an engaged workforce. Prerequisites: None Corequisites: None			
HRES2212	Strategic Compensation	3	3/0/0
This course provides an understanding of employee compensation both direct and indirect, and how it relates to business strategy. Prerequisites: None Corequisites: None			

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HRES2245	Human Resources Internship	1--4	N/A
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. Prerequisites: None Corequisites: None			
HRES2254	Human Resource Competency Evaluation	3	2/1/0
This course reviews and reinforces the principles covered in the Human Resource program through the development of simulated activities related to program outcomes. Students will demonstrate the skills needed in conducting an effective job search. Prerequisites: Instructor approval required for enrollment into capstone HRES course. Corequisites: None			
HUM1105	Religion in the Humanities	3	3/0/0
Meets MnTC Goal Areas 6 and 8. This course is an exploration and study of religious expression and experience as well as an introduction to the world's major religions. The focus of the course will be on human expression of religious belief and philosophy in literature, film, music and art, and it will cover a variety of world religions including Buddhism, Hinduism, Islam, Judaism and Christianity. Throughout the course, students will explore diversity and human religious expression as a way of enhancing their global perspective. Prerequisites: None Corequisites: None			
HUM1132	Women in the Humanities	3	3/0/0
Meets MnTC Goal Areas 6 and 7. This course is a study of the contributions of women in the humanities as writers, artists and social reformers with emphasis on 20th century women. The course will incorporate individual studies of Quaker women, frontier women, African American women and Native American women. Prerequisites: None Corequisites: None			
HUM1201	Religion and the American Experience	3	3/0/0
Meets MnTC Goal Areas 6 and 7. This course will explore the relationship between religion and the ongoing development of American culture, especially as it relates to the role diversity plays in American history, arts, entertainment and institutions. Students will explore the variety of religious traditions that have been a part of the American experience and how they impacted and adapted to a changing national identity. Topics may include Native American thought and colonialism, the part played by Protestantism in the development of American ideals, the role of race and immigration in American religious identity, and the contemporary struggle among traditional Christian thought, secularism, reclaimed primal religions and modern world religions. Prerequisites: None Corequisites: None			

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HUM2230	World Cinema	3	3/0/0
Meets MnTC Goal Areas 6 and 8. This course will introduce students to films from non-English speaking countries around the globe. The course will study stories and societies through cinema, readings and lecture. Students will consider their own worldview while they screen films and analyze multiple themes and ideas as a means of enriching their global perspective.			
Prerequisites: None			
Corequisites: None			
HUM2301	Heroes, Moral and Cultural	3	3/0/0
Meets MnTC Goal Areas 2 and 6. The term "hero" is sometimes used synonymously with the term "role model," and in this class we will identify what characteristics are present in the heroic figure as well as explore the motives of the hero. Why do we expect our heroes to suffer? The vast majority of heroes are single; why? Is it related to the notion of "incorruptibility," or is it to spare them the "hard decisions" (to save a spouse or three other strangers)? Are there links or analogies to the story of Jesus? What do we admire about heroes? Is it the chameleon property? What kinds of things can be considered "superpowers" and what do they represent figuratively, metaphorically, mythically, symbolically, morally and culturally? Are heroes archetypically different according to gender, or are heroes gender-neutral? Are heroes representatives of the culture they originate in, or are they products of that culture, or both? Are heroes representatives of a particular moral position, or are they a "generic good?" These are the types of questions we will explore in this class.			
Prerequisites: None			
Corequisites: None			
HVAC1103	Electricity for Heating, Ventilating and Air Conditioning	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.			
Prerequisites: None			
Corequisites: None			
HVAC1128	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.			
Prerequisites: None			
Corequisites: None			
HVAC2202	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.			
Prerequisites: None			
Corequisites: None			

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HVAC2221	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. Prerequisites: HVAC1103 Corequisites: None			
HYEV2601	Advanced Automotive Electrical Systems	3	3/0/0
This course is designed for students to understand basic electrical terms, use of a multi-meter, use of an oscilloscope, and diagnosis and repair of various network systems used on today's vehicles. This course is a refresher to prepare students for working on complex high-voltage systems and networks. Prerequisites: Graduated from an automotive technology program or have at least 5 years working as an automotive technician. Corequisites: None			
HYEV2606	Electric Platform Technologies	2	1/1/0
This course focuses on electric plug-in platforms, batteries, electric drive motors and modules unique to plug-in vehicles. It also covers vehicle diagnostics, charging stations and charging diagnostics specific to this platform, as well as service and diagnosis. Prerequisites: AMST1101, AMST1112 Corequisites: None			
ILS2100	Integrative Learning Seminar II	2	2/0/0
Meets MnTC Goal Area 2. This course provides a cohesive, integrative learning experience for the liberal arts and sciences student. The student will integrate skills and knowledge developed and acquired throughout his or her course of study in the disciplines. The course requires the student to embark on a comprehensive inter-disciplinary academic quest designed to demonstrate research, oral and written communication, and critical thinking skills. Prerequisites: Completion of 40 credits, ILS1100 Corequisites: None			
IPP2213	Topics in Interpreting	3	3/0/0
This course focuses on addressing recently identified trends, skills and knowledge relevant to the development of interpreting students. The course content consists of introducing special topics in the area of interpreting, including team interpreting, religion, medical, mental health, deaf/blind, video remote, and video relay interpreting. This course also examines current certification exams and assessments. Prerequisites: IPP1111 Corequisites: None			
LEAD1102	Nature of Leadership	3	3/0/0
The objective of this course is to study the major theories of leadership in order for students to improve their ability to use the basic skills of leadership, as well as examine the various approaches to leadership. This course allows students to identify and evaluate contemporary leadership issues in today's complex society. Prerequisites: None Corequisites: None			

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LEAD2001	Managerial Leadership	3	3/0/0
The objective of this course is to help students prepare for mid-level leadership roles by improving their managerial and leadership capabilities. This course is designed to help students understand the character and challenges of leadership at the organizational level. It explores how leadership skills can be developed and effectively applied in various settings while focusing on the leadership-management framework, employee engagement and quality service. Prerequisites: None Corequisites: None			
LSR1120	Image Production I	4	3/1/0
This course is designed to introduce the student to image acquisition techniques. A comprehensive review of technical factors and their impact on image quality will be covered, along with technique charts and their components. Students also will be introduced to x-ray production processes, the fundamental properties of x-rays and the basic components of imaging equipment. Prerequisites: None Corequisites: LSR1100, LSR1140, LSR1160			
LSR1160	Radiographic Procedures I	5	2/3/0
This course provides the information students need to perform radiographic/imaging procedures related to the thoracic viscera, abdomen, and the upper and lower extremities (including shoulder girdle and podiatric exams). General medical and radiographic terminology, anatomy, routine positions and projections are the focus of the class. Radiographic equipment and accessory manipulation, selection of technical factors, correct body mechanics, and patient care skills and monitoring techniques will be practiced in the lab. Prerequisites: None Corequisites: LSR1100, LSR1120, LSR1140			
LSR1230	Imaging Equipment and Quality Control	3	2/1/0
This course addresses the functional, physical and design components of radiographic (fixed and mobile) equipment. Intricate details of the equipment are covered, including but not limited to equipment circuitry, generators, transformers, x-ray tube components and functions, and digital imaging detectors and processing components. The course is also designed to introduce the student to radiographic equipment and accessory quality control. Prerequisites: None Corequisites: LSR1220, LSR1240, LSR1260, LSR1280			
LSR1260	Radiographic Procedures II	4	2/2/0
This course provides the information students need to perform radiographic/imaging procedures related to the pelvic girdle, bony thorax, spine and skull. General medical and radiographic terminology, anatomy, routine positions and projections will be the focus of the class. Radiographic equipment and accessory manipulation, selection of technical factors, correct body mechanics, and patient care skills and monitoring techniques will be practiced in the lab. Prerequisites: None Corequisites: LSR1220, LSR1230, LSR1240, LSR1280			

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LSR1280	Radiographic Clinical I	4	0/0/4
This course will provide the student with opportunities to get hands-on experience in a variety of clinical settings. The student will work under the direct supervision of a registered radiologic technologist and will practice radiographic positioning and equipment manipulation to achieve diagnostic quality images. The focus of this clinical experience will be to obtain and pursue competence in radiographic exams of the chest, upper extremity, shoulder girdle and lower extremity (including podiatric exams). Prerequisites: None Corequisites: LSR1220, LSR1230, LSR1240, LSR1260			
MATH0055	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. Prerequisites: None Corequisites: None			
MATH0085	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 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. Prerequisites: Placement Exam Corequisites: None			
MATH0097	Essentials for Applied Statistics	2	2/0/0
Essentials for Applied Statistics is designed to support students taking MATH 1112 Applied Statistics. It must be taken in conjunction with a linked section of MATH 1112 Applied Statistics taught by the same instructor. The course focuses on algebra skills, basic set theory, math literacy and other topics needed for success in applied statistics. Prerequisites: None Corequisites: MATH1112			
MATH0100	Essentials for World of Math	1	1/0/0
This course is taken in conjunction with a linked section of World of Math (MATH 1100) and must be taken by students placing in the cut score range for the class or entering the course after successful completion of MATH 0095 Elementary Algebra II. It is comprised of algebra skills needed to be successful in World of Math. Topics include evaluating, simplifying and translating algebraic expressions, solving equations, solving and interpreting percent problems, and calculating and describing rate of change. Prerequisites: None Corequisites: MATH1100			

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

COURSE DESCRIPTIONS

MATH1020	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. Prerequisites: placement by assessment Corequisites: None			
MATH1101	Mathematical Reasoning	4	4/0/0
Meets MnTC Goal Areas 2 and 4. This course will introduce you to mathematical approaches to question asking, understanding, problem solving and presentation. Students will apply mathematical principles to varied disciplines including an exploration of a variety of social and global issues. Students will experience mathematics as a creative and evolving discipline. Practice in these areas may include problems involving sequences, methods of counting, probability, logic, statistics, finance, general problem solving and other topics. This course is not intended to prepare students for any subsequent course. It provides an alternative pathway to completing a college-level liberal arts mathematics course and is not intended for science, technology, engineering or math (STEM) students. Prerequisites: A grade of C or better in MATH 0095 or appropriate score on the math placement exam. Prerequisites: Completion of MATH 0095 with a grade of C or higher OR placement into college-level Math. Corequisites: None			
MATH1114	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. Prerequisites: None Corequisites: None			
MATH1116	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. Prerequisites: MATH1114 Corequisites: None			
MATH1122	Applied Calculus	3	3/0/0
Meets MnTC Goal Areas 2 and 4. This course is an introduction to optimization, 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. Prerequisites: MATH1114 Corequisites: None			
MATH1135	Calculus II	5	5/0/0
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. Prerequisites: MATH1134 Corequisites: None			

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COURSE DESCRIPTIONS

MATH2231	Calculus III	4	4/0/0
Meets MnTC Goal Areas 2 and 4. The course content includes a study of vectors in the plane and space, differentiation and integration of vector-valued functions, and partial differentiation, multiple integrals, including line and surface, in rectangular, polar, cylindrical, spherical and other systems, and a study of Stokes' Theorem, Green's Theorem, and the Divergence Theorem.			
Prerequisites: MATH1135			
Corequisites: None			
MATH2259	Differential Equations	4	4/0/0
This course includes first and second order differential equations with applications in physics, electrical engineering and chemistry. It also includes Laplace transforms, matrices, series solutions and systems of differential equations.			
Prerequisites: MATH2231			
Corequisites: None			
MCDD1106	Mechanical Engineering Drawing II	4	0/4/0
The objective of this course is to develop the student's use and knowledge of pictorial drawings, sheet metal, pattern layout and welding drawing. Mechanical fasteners will be identified.			
Prerequisites: MCDD1104			
Corequisites: None			
MCDD1124	Mechanical Drafting Applications I	3	1/2/0
The objective of this course is for students 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.			
Prerequisites: CADD1000, MCDD1104			
Corequisites: None			
MCDD1210	Drafting Practices	1	1/0/0
The objective of this course is to develop the student's knowledge of engineering communications, attitudes and finances.			
Prerequisites: None			
Corequisites: None			
MCDD2122	Geometric Dimensioning and Tolerancing	3	2/1/0
The objective of this course is to develop the student's understanding and application of a self-defined set of symbols, rules, definitions and conventions used to describe the size, form, orientation and location of part features.			
Prerequisites: CADD1100, MCDD1106			
Corequisites: None			
MCDD2204	Mechanical Engineering Drawing III	4	1/3/0
The objective of this course is to explore advanced applications of various industry drawing methods. Students will be introduced to and will construct drawings related to multiple drafting and engineering disciplines.			
Prerequisites: CADD1000, MCDD1106			
Corequisites: None			

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COURSE DESCRIPTIONS

MCDD2210	Advanced Modeling with Inventor	3	2/1/0
This course covers advanced part modeling, assembly modeling, sheet metal, frame generator and presentation files in the latest version of the Inventor drawing software package.			
Prerequisites: CADD1410, MCDD1106			
Corequisites: None			
MCDD2230	3D Printing and Prototyping	2	1/1/0
This course covers the basic concepts of rapid prototyping for manufacturing utilizing three-dimensional printers and scanning equipment.			
Prerequisites: CADD2120			
Corequisites: None			
MCDD2248	CNC Application	3	1/2/0
The objective of this course is to develop the student's knowledge of computer numerical control components and basic programming codes.			
Prerequisites: CADD1114, MCDD1106			
Corequisites: None			
MCDD2254	Computer Numerical Control	2	1/1/0
This course develops the student's knowledge of computer numerical control components, machines, and basic programming codes and functions.			
Prerequisites: CADD1000			
Corequisites: None			
MCS2230	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.			
Prerequisites: None			
Corequisites: None			
MGMT2225	Project Management	3	3/0/0
This course provides an introduction to all aspects of project management including the technical, cultural and interpersonal skills necessary to manage projects from initiation to completion. The course identifies the process groups and knowledge area of the PMBOK Â® (Project Management Body of Knowledge) guide. Topics include the strategic role of projects in contemporary organizations, working with stakeholders (customers, vendors, organizational cultures) and the technical management tools available for time management, schedules and costs, risks and project completion.			
Prerequisites: BUS2204			
Corequisites: None			

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COURSE DESCRIPTIONS

MKTG1120	Supervisory Leadership	3	3/0/0
The methods and techniques of leadership and supervision and their applications are emphasized in this course. The content covers such topics as delegation, motivation, training, orienting, evaluating and effectively increasing productivity. Prerequisites: None Corequisites: None			
MKTG2000	Integrated Marketing Communications	3	3/0/0
This course is an introduction to the field of integrated marketing communications (IMC) and its role in marketing plans. Emphasis is on the converging fields of advertising, public relations, sales promotion, personal selling and digital marketing. This course focuses on the marketing communications strategy that includes consumer insight and research, market segmentation, brand positioning, communication messages and media channels. Prerequisites: BUS2206 Corequisites: None			
MKTG2290	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 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. Prerequisites: Program Faculty Consent. Corequisites: None			
MKTG2402	Management and Marketing Seminar	3	3/0/0
This seminar provides an avenue for the exploration and investigation of special study topics in management and marketing. As a career enrichment course, it is designed to integrate the coursework taken and contribute to the student's personal and/or professional career goals. Students will develop technology and decision-making skills through simulation. Students will get hands-on learning opportunities through mentorships, guest speakers, podcasts, networking events, conferences, workshops or webinars related to business. Students will work closely with Career Services for job search preparation. Prerequisites: None Corequisites: MKTG2236			
MLT1109	Phlebotomy Skills Lecture	1	1/0/0
This course is designed for phlebotomy and Medical Laboratory Technician students. The course covers didactic knowledge and performance of venipuncture, capillary and arterial blood draws. It also emphasizes other body fluid collection, specimen processing, point-of-care analysis and specimen storage. Prerequisites: None Corequisites: None			

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COURSE DESCRIPTIONS

MLT1116	Basic Lab Techniques Lecture	1	1/0/0
This is an introductory course for Medical Laboratory Technology students covering the techniques, interpretation and correlation of results in urinalysis, hematology, chemistry, immunology, microbiology and immunohematology. Other topics included in the course are instrumentation, preparation of reagents, quality assurance and quality control, specimen collection, transportation, analysis and result reporting. Prerequisites: None Corequisites: None			
MLT1119	Phlebotomy Skills Lab	1	0/1/0
This course is designed for phlebotomy and Medical Laboratory Technician students. The course covers knowledge and performance of venipuncture, capillary and arterial blood draws. It also emphasizes other body fluid collection, specimen processing, point-of-care analysis and specimen storage. Prerequisites: None Corequisites: MLT1109			
MLT1125	Immunohematology Lab	1	0/1/0
This course is the laboratory component of MLT1124, Immunohematology, and addresses the analytical principles, techniques and correlation of results related to blood banking and transfusion medicine. The course covers techniques including evaluating criteria for specimen rejection, blood type and cross match procedures, antigen typing, identification of expected and unexpected antibodies, investigation of transfusion reactions and blood component preparation. Prerequisites: None Corequisites: None			
MLT1216	Hematology	2	2/0/0
This is an introductory course for Medical Laboratory Technology students covering the production, maturation, function and abnormalities of blood cells and coagulation to maintain body homeostasis. Prerequisites: None Corequisites: None			
MLT1227	Biological Fluids	1	1/0/0
This is an introductory course for Medical Laboratory Technology students. The course is an overview of the urinary system in health and disease. The course also includes study of other body fluids including cerebral spinal fluid, amniotic fluid, serous fluid, synovial fluid, sputum, semen and feces. Prerequisites: None Corequisites: None			
MLT2131	Diagnostic Chemistry	3	3/0/0
This is an introductory course for Medical Laboratory Technology students which covers the analytical principles, techniques and correlation of results in the science of body chemistry. Other topics included in the course are instrumentation, calculations, quality assurance and quality control, analysis and result interpretation. Prerequisites: None Corequisites: None			

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COURSE DESCRIPTIONS

MLT2151	Introduction to Molecular Diagnostics	1	1/0/0
This course is an introduction to specific molecular biology applications in the laboratory. The course includes a discussion of DNA, genetics, nucleic acid extraction and modification, blotting methods, polymerase chain reaction (PCR) and probe analysis in relation to the diagnosis of various diseases. Prerequisites: None Corequisites: None			
MLT2224	Clinical Immunohematology	3	0/3/0
This course is a clinical experience related to the performance of immunohematology testing under the supervision of laboratory personnel at an affiliate hospital. This course provides further investigation and study of the methods and techniques related to blood group serology and compatibility testing and selection of the proper blood components for transfusion medicine. Prerequisites: MLT2350 Corequisites: None			
MLT2231	Clinical Microbiology	3	0/3/0
This is a clinical experience course related to the performance of microbiological tests under the supervision of laboratory professionals at an affiliate laboratory. This course provides further investigation and study of the methods and techniques related to bacteriology, mycology and parasitology. Prerequisites: MLT2350 Corequisites: None			
MLT2266	Diagnostic Microbiology	3	3/0/0
This is an introductory course for Medical Laboratory Technology students which covers the analytical principles, techniques and correlation of results related to diagnostic microbiology. This course discusses microorganisms of medical importance in relationship to disease and diagnosis, emphasizing identification of common pathogenic bacteria, fungi, yeast, viruses and parasites in humans. Other topics included in the course are instrumentation, calculations, quality assurance and quality control, analysis and result interpretation. Prerequisites: None Corequisites: None			
MLT2316	Immunology	1	1/0/0
This is an introductory course for Medical Laboratory Technology students which covers fundamentals of the immune system. Other topics included in the course are discussion of laboratory methods that utilize principles of the immune system for diagnosis of disease and discussion of antigens and antibodies and their presence in health and disease. Prerequisites: None Corequisites: None			
MLT2346	Clinical Applications	1	1/0/0
The Clinical Applications course is intended to broaden the learner's knowledge and correlate laboratory testing theories with states of health and disease across various clinical courses. Students will evaluate case studies, research new methods, correlate test results to states of health and disease, and prepare for entering the workforce. Prerequisites: MLT1116, MLT1124, MLT1227 Corequisites: None			

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COURSE DESCRIPTIONS

MUSC1113	Beginning Class Voice	1	1/0/0
Meets MnTC Goal Area 6F. This course provides class instruction in the healthy use of the voice in singing and speaking and practical application of vocal techniques. Recommended for beginning voice students, for non-signers who would like to learn to sing, for anyone who uses his/her voice but especially for music, theater, speech, speech therapy and elementary education majors. A maximum of two semesters may be taken for a credit.			
Prerequisites: None			
Corequisites: None			
MUSC1115	America's Musical Heritage	3	3/0/0
Meets MnTC Goal Areas 6 and 7. This survey course for the general college student introduces the elements, structural designs and historical styles of music. Emphasis is placed on expansion of listening skills, musical experiences, field research and cultural contexts of American music styles, including jazz, country, R&B, hip hop, rap, salsa, reggae and urban folk styles.			
Prerequisites: None			
Corequisites: None			
MUSC1117	Beginning Class Guitar	2	2/0/0
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.			
Prerequisites: None			
Corequisites: None			
MUSC1118	Rock and Pop Music	3	3/0/0
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 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 from rhythm and blues to metal to rap and beyond.			
Prerequisites: None			
Corequisites: None			
MUSC1120	Intro to Recording and Producing	3	3/0/0
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 is used extensively to enhance understanding. This course serves as a springboard to further study and exploration of hardware and software tools for music creation.			
Prerequisites: None			
Corequisites: None			
MUSC1122	Music Theory II	3	3/0/0
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 MUSC1124.			
Prerequisites: None			
Corequisites: MUSC1124			

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COURSE DESCRIPTIONS

MUSC1124	Sight Singing and Ear Training II	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 with MUSC 1122.			
Prerequisites: None			
Corequisites: None			
MUSC1131	Civic Orchestra	1	1/0/0
The Civic Orchestra is a community orchestra that performs one concert each semester. The group meets one evening per week on a regularly scheduled basis. May be repeated for credit.			
Prerequisites: None			
Corequisites: None			
MUSC1141	Concert Choir	1	1/0/0
Meets MnTC Goal Area 6. The M State Concert Choir is a non-auditioned group that meets three times per week on a regularly scheduled basis. The group studies and prepares music from various musical periods and geographic regions, and performs a minimum of one concert each semester. The group also participates in campus life venues as they arise, and occasional tours. May be repeated for credit.			
Prerequisites: None			
Corequisites: None			
MUSC1150	History of Jazz	3	3/0/0
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.			
Prerequisites: None			
Corequisites: None			
MUSC1160	Music Business: Creating and Promoting Music	3	3/0/0
Meets MnTC Goal Area 6. Students study and prepare music in various contemporary styles. The group(s) will perform each semester. There will be special emphasis on aspects of music business and performance, including audio demo production, promotion, management and recording contracts, in addition to songwriting, improvisation and performing.			
Prerequisites: None			
Corequisites: None			
MUSC1164	Concert Band	1	1/0/0
Meets MnTC Goal Area 6F. The M State Concert Band is an instrumental group that meets three times per week on a regularly scheduled basis. The group will study and prepare music from a wide range of composers and styles and performs a minimum of one concert each semester. This ensemble will participate in campus life venues, festivals and occasional area tours. Small ensemble performances will also be included in this experience. May be repeated for credit.			
Prerequisites: None			
Corequisites: None			

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COURSE DESCRIPTIONS

MUSC1181	Private Instrumental Lessons	1	1/0/0
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.			
Prerequisites: None			
Corequisites: None			
MUSC1191	Individual Piano Lessons	1	1/0/0
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.			
Prerequisites: None			
Corequisites: None			
MUSC2221	Music Theory III	3	3/0/0
Meets MnTC Goal Area 6. This course offers continued study and application of concepts from MUSC1121 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.			
Prerequisites: None			
Corequisites: MUSC2223			
MUSC2223	Sight Singing and Ear Training III	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. Must be taken concurrently with MUSC 2231.			
Prerequisites: MUSC1124			
Corequisites: None			
MUSC2251	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.			
Prerequisites: None			
Corequisites: None			
MUSC2285	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.			
Prerequisites: MUSC1185			
Corequisites: None			

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

COURSE DESCRIPTIONS

NURS1400	Introduction to Professional Nursing	2	2/0/0
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This course introduces students 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 that integrate quality and safety for diverse patient populations, professional behavior, therapeutic communication, documentation and medical terminology.

Prerequisites: Acceptance into the Associate Degree Nursing Program , Current American Heart Association Basic Life Support, Current, clear national background check, Current, clear Minnesota Department of Health criminal background check, Experience as a nursing assistant as guided by the generic ADN application packet, Must be eligible to take English 1101 and Math 1114, Up-to-date immunizations and health form

Corequisites: None

NURS1415	Nursing Clinical I	2	0/2/0
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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.

Prerequisites: BIOL2260, BIOL2261, BIOL2267, BIOL2268, Current American Heart Association Basic Life Support, Current, clear national background check, Current, clear Minnesota Department of Health criminal background check, ENGL1101, Experience as a nursing assistant as guided by the generic ADN application packet, NURS1400, NURS1406, PSYC2222, Up-to-date immunizations and health form

Corequisites: None

NURS1426	Reproductive Health	2	2/0/0
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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.

Prerequisites: BIOL2260, BIOL2261, BIOL2267, BIOL2268, Current American Heart Association Basic Life Support, Current, clear national background check, Current, clear Minnesota Department of Health criminal background check, ENGL1101, Experience as a nursing assistant as guided by the generic ADN application packet, NURS1400, NURS1406, PSYC2222, Up-to-date immunizations and health form

Corequisites: None

NURS2426	Reproductive Disorders	2	2/0/0
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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.

Prerequisites: BIOL2260, BIOL2261, BIOL2262, BIOL2263, BIOL2267, BIOL2268, CHEM1100, Current American Heart Association Basic Life Support, Current, clear national background check, Current, clear Minnesota Department of Health criminal background check, ENGL1101, LPN, NURS2410, PSYC2222, Up-to-date immunizations and health form

Corequisites: None

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COURSE DESCRIPTIONS

NURS2438	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. Prerequisites: BIOL2260, BIOL2261, BIOL2262, BIOL2263, BIOL2267, BIOL2268, CHEM1100, Current American Heart Association Basic Life Support, Current, clear Minnesota Department of Health criminal background check, Current, clear national background check, ENGL1101, LPN, NURS2410, PSYC2222, Up-to-date immunizations and health form Corequisites: None			
NURS2448	Restorative Nursing II	3	3/0/0
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. Prerequisites: BIOL2202, Current American Heart Association Basic Life Support, Current, clear national background check, Current, clear Minnesota Department of Health criminal background check, Experience as a nursing assistant as guided by the generic ADN application packet if generic student OR LPN if advanced standing student, NURS2426, NURS2437, NURS2438, NURS2455, Up-to-date immunizations and health form Corequisites: None			
NURS2464	Nursing Leadership	1	1/0/0
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. Prerequisites: Current American Heart Association Basic Life Support, Current, clear Minnesota Department of Health criminal background check, Current, clear national background check, Experience as a nursing assistant as guided by the generic ADN application packet if generic student OR LPN if advanced standing student, NURS2437, Up-to-date immunizations and health form Corequisites: None			
PARA1101	Introduction to Paralegal	3	3/0/0
This course will introduce the basic knowledge and skills required of paralegals. Students will learn the basics of the American legal system along with skills such as researching legal issues, interviewing clients and witnesses, and drafting motions and pleadings. By the end of this course, students will have a clear understanding of what a paralegal does, the skills needed to be a successful paralegal and what it will take to begin a career as a paralegal. Prerequisites: None Corequisites: None			
PARA1104	Civil Law for Paralegals	3	3/0/0
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, mediation, arbitration and the role of the paralegal as it relates to civil law. Prerequisites: None Corequisites: None			

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COURSE DESCRIPTIONS

PARA1106	Wills, Trusts & Probate	3	3/0/0
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. Prerequisites: None Corequisites: None			
PARA2202	Legal Research and Writing II	3	3/0/0
This course is a continuation of Research and Writing I. Students will develop skills in identifying, analyzing and re-searching legal issues. Writing exercises will be more complex, including preparation of legal memoranda. Prerequisites: PARA1102 Corequisites: None			
PARA2210	Advanced Paralegal Practices	3	3/0/0
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. Prerequisites: None Corequisites: None			
PARA2216	Paralegal Internship	3	0/0/3
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 in-ternship in which they perform the duties of a paralegal. Prerequisites: None Corequisites: PARA2202			
PDEV1101	Campus Life- Active Living	3	3/0/0
This course is designed to help M State students strengthen and develop critical and creative thinking skills associ-ated 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, voca-tional 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, Prerequisites: None Corequisites: None			
PDEV1112	Job Search Skills	1	1/0/0
This course is designed to develop the application, resume writing, interviewing and job maintenance skills needed to conduct an effective job search. Prerequisites: None Corequisites: None			

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COURSE DESCRIPTIONS

PDEV1115	Career Transitions	3	3/0/0
This course is designed to support students' professional success and is divided into five key areas to help them prepare for professional success upon graduation. Students will research and explore various careers and fields, develop a personal brand that is unique and individual to their personality and professional goals, and establish a professional framework for career management and personal development. Prerequisites: Dean of Extended Learning Corequisites: None			
PDEV2701	Applied Coop Experience I	3--12	N/A
The course is designed to allow for career-related activities encountered in the student's area of specialization offered through a cooperative experience between the College, employer and student. Under supervision of the employer, the student combines classroom learning with work experience(s) directly related to an academic/technical discipline. Specific learning objectives guide the student through the work experience. Prerequisites: Permission Dean of Extending Learning Corequisites: None			
PDEV2970	Experiential and Applied Learning Capstone	3	3/0/0
This directed study course is designed to assess cognitive, affective and psychomotor learning that requires the command, analysis and synthesis of knowledge and skills. The course integrates prior learning and knowledge and experiential work experience to enable students to demonstrate their level of academic and hands-on learning experiences at the associate degree level. These credit hours serve as concentration hours for the program. Prerequisites: ENGL1101, PDEV1115 Corequisites: None			
PE1130	Beginning Golf	1	0/1/0
The purpose of this course is to cover the fundamentals of golf necessary to play at the beginning recreational level. Topics of discussion include rules, etiquette, equipment and terminology. Students will be taught in the classroom and on the golf course. An additional fee will be assessed. Prerequisites: None Corequisites: None			
PE1190	Varsity Football	1	0/1/0
The course presents students with the opportunity to participate in the sport of football at the college level. The student will have opportunities in a variety of situations to learn about and develop their self-image, characteristics of high achievement and physical skills in a competitive environment. May be repeated once for credit. Prerequisites: The participants of this class must be approved by the head football coach. Corequisites: None			
PE1193	Varsity Baseball	1	0/1/0
This course presents students with numerous opportunities in a variety of situations to learn and develop the characteristics of high achievement and physical skills in a competitive intercollegiate baseball setting. Prerequisites: The participants of this course must be approved by the head coach. Corequisites: None			

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PE1197	Varsity Volleyball	1	0/1/0
This course presents students with numerous opportunities in a variety of situations to learn and develop physical skills in a competitive intercollegiate volleyball setting. Prerequisites: The participants in this course must be approved by the head coach. Corequisites: None			
PE1200	Varsity Clay Target Competition	1	0/1/0
This course presents the opportunity to educate the participants in gun and range safety. This is a hands-on learning course emphasizing gun safety and safely handling shotguns while teaching the skills necessary to break clay targets. Students enrolled in this course will have the opportunity to compete in Minnesota College Athletic Conference clay target competition. Prerequisites: This course requires the permission of the coach and participants must have proper gun safety certification before participation in the course. Corequisites: None			
PE2111	Sports Facilities Management	3	3/0/0
This course will provide students with an introduction to the planning and management of sports facilities. Students will examine legal aspects of hosting sporting events. Topics will include security, liability, safety, maintenance, signage and operating facilities. Prerequisites: None Corequisites: None			
PE2114	Applied Coaching: Volleyball	1	1/0/0
This course provides students with the knowledge to teach the fundamentals of volleyball. Emphasis will be on rules, technique, strategy, game plan and practice planning. Other topics will include safety and proper equipment usage. Prerequisites: None Corequisites: None			
PE2145	Advanced Strength Training	1	0/1/0
This course is designed for students who have an advanced knowledge and skill of strength training. Students will be expected to employ safety in the weight room. Students will develop a needs analysis plan that includes best training practices and goals. Students also will construct a principles of progression outline and develop and implement an individual strength training program that can be documented for progression of training and measurement of goals. Prerequisites: PE1141 Corequisites: None			
PE2241	Principles of Coaching	3	3/0/0
This course is designed to introduce students to athletic coaching philosophies, basic coaching concepts in team and individual sports and theories involved in coaching. Emphasis will be on legal issues surrounding coaching, developing coaching philosophies, exploring diversity in coaching, and rules and regulations associated with coaching at different levels. Prerequisites: None Corequisites: None			

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PE2999	Athletic Leadership	1	0/1/0
This course is designed primarily for second-year student athletes to enhance leadership and mentoring skills and to promote community relations while participating in athletics. Students will have expanded leadership roles within their respective sports by mentoring first-year student athletes in academics and life skills, key components to college success, community adaptation and leadership, time management skills and the importance of seeking help at an early stage of personal or academic struggle. Students also will be required to participate in a community-based service learning activity designed by the instructor to positively enhance and market the Spartan Athletics image and brand. Prerequisites: This course requires the approval of the instructor prior to enrollment. Corequisites: None			
PHIL1201	Ethics	3	3/0/0
Meets MnTC Goal Areas 2, 6 and 9. This course is an introduction to the topic of ethics. In this course, the following questions are examined: What is ethics? How do we make ethical decisions? Are things that are legally right necessarily right? Should we consider our own interests when making ethical decisions? Are things ethically right simply because God says they are right? If our culture says something is ethically right, does that mean it is ethically right? The course also examines numerous topical ethical issues such as racism, terrorism and censorship. Prerequisites: None Corequisites: None			
PHIL2220	Environmental Ethics	3	3/0/0
Meets MnTC Goal Areas 9 and 10. This course examines the basic positions and concepts within the field of environmental philosophy. A primary emphasis will be placed upon understanding our moral obligations toward the natural environment. Representative course topics may include the following: What is nature? Do humans have direct duties toward the natural world? What is deep ecology? Should we conserve or preserve our natural environment? Do intrinsic values exist in nature? Is a land ethic possible? What is ecofeminism? Prerequisites: None Corequisites: None			
PHYS1106	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. Prerequisites: MATH1020 Corequisites: None			

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PHYS1402	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. Prerequisites: MATH1115 Corequisites: None			
PHYS1412	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. Prerequisites: MATH1134 Corequisites: None			
PLBG1101	Piping and Job Safety	2	2/0/0
This course introduces the student to the plumbing profession. Topics include history, safety, basic applied math, fundamentals of rigging and hand signals to equipment operators. Prerequisites: None Corequisites: None			
PLBG1115	Faucets and Fixtures	2	2/0/0
This course covers various faucets and fixtures used in plumbing, including residential and commercial fixtures, their installation and application. Prerequisites: None Corequisites: None			
PLBG1123	Plumbing Code I	3	3/0/0
This course introduces and familiarizes students with the Minnesota Plumbing Code and the North Dakota Plumbing Code. Definitions and miscellaneous statutes related to the plumbing codes will be covered. Prerequisites: None Corequisites: None			
PLBG1131	Grade and Elevation	2	2/0/0
This course covers grade and elevation as it pertains to pipe installation. Emphasis will be on identification and proper use of needed tools and the methods and calculations used in determining grade and elevation. Prerequisites: PLBG1123 Corequisites: None			

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PLBG1135	Drainage, Waste and Venting	4	4/0/0
This course covers drainage, waste and venting (DWV) as required in the Minnesota Plumbing Code and the North Dakota Plumbing Code. Emphasis is on differences between types of drainage, waste and venting systems and applying the code regulations in sizing the systems. Drawing isometrics for a DWV system will be covered. Prerequisites: PLBG1123 Corequisites: None			
PLBG1139	Backflow Basics	2	2/0/0
This course introduces backflow basics by covering types of backflow devices, their construction, the areas of application for the devices and the scope of their use. The requirements for licensure will be covered. Prerequisites: PLBG1123 Corequisites: None			
PLBG1145	Plumbing Lab II	2	0/2/0
In this course students will meet with the instructor for the purpose of applying, demonstrating and reinforcing content in the concurrent courses being taken online. Prerequisites: PLBG1125 Corequisites: None			
PNSG1509	Foundations of Adult Nursing Care I	6	4/2/0
This course introduces concepts of teamwork and collaboration, safety, quality improvement, professional identity and behavior, patient-centered and relationship-centered care, nursing judgment, evidence-based practice, managing care of the individual patient, informatics and technology. An introduction to the nursing process provides a beginning framework for decision making related to common health problems of adults and older adults. Principles of pathophysiology, nutrition and pharmacology are applied to basic health care concepts. A lab component includes focused assessments and basic nursing skills that support course concepts. Prerequisites: Acceptance into the Practical Nursing Program, Acceptance into the Practical Nursing Program AND experience as a nursing assistant as guided by the PN application packet AND current American Heart Association Basic Life Support AND current, clear Minnesota Department of Health criminal background chec, Current American Heart Association Basic Life Support, Current, clear Minnesota Department of Health criminal background check, Experience as a nursing assistant as guided by the PN application packet Corequisites: None			
PNSG1513	Clinical I Practical Nurse Foundations	3	0/3/0
This clinical course provides the student an opportunity to apply nursing judgment using the nursing process to implement safe, patient-centered and 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. Prerequisites: Acceptance into the Practical Nursing Program AND experience as a nursing assistant as guided by the PN application packet AND current American Heart Association Basic Life Support AND current, clear Minnesota Department of Health criminal background chec Corequisites: None			

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PNSG1520	Nursing Care of Women, Newborns and Children	2	2/0/0
This course provides an integrative approach to the care of childbearing women, newborns and children. Emphasis is placed on normal pregnancies, normal growth and development, and common pediatric disorders. Principles of pathophysiology, nutrition and pharmacology are applied. Prerequisites: BIOL2260, BIOL2261, Current American Heart Association Basic Life Support, Current, clear national background check, Current, clear Minnesota Department of Health criminal background check, Experience as a nursing assistant as guided by the PN application packet, PNSG1509, PNSG1512, PNSG1514, PSYC2222, Up-to-date immunizations and health form Corequisites: None			
PNSG1524	Practical Nursing Mental Health	2	2/0/0
This course 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. Principles of pathophysiology, nutrition and pharmacology are applied. Prerequisites: BIOL2260, BIOL2261, Current American Heart Association Basic Life Support, Current, clear national background check, Current, clear Minnesota Department of Health criminal background check, Experience as a nursing assistant as guided by the PN application packet, PNSG1509, PNSG1512, PNSG1514, PSYC2222, Up-to-date immunizations and health form Corequisites: None			
POLS1120	American National Government	3	3/0/0
Meets MnTC Goal Areas 5 and 9. This course provides an analysis of the organization, institutions and functions of the United States government. Prerequisites: None Corequisites: None			
POLS2204	Comparative Government	3	3/0/0
Meets MnTC Goal Areas 5 and 8. This course provides an introduction to the various systems of government used around the world. Students will compare the processes and institutions of both industrialized and underdeveloped nations and explore how cultures and histories have affected the development of those political systems. Prerequisites: None Corequisites: None			
POLS2950	Introduction to Social Research	3	3/0/0
Meets MnTC Goals 2 and 5. This course introduces methods and concepts used in the research process in the social sciences and related fields. Topics covered include the application of the scientific method to social and behavioral research, definitions and measurements of variables, research design, experiential methods and survey techniques. The use of literature reviews and the importance of critically evaluating research will be emphasized. Common descriptive and inferential statistics used in social science disciplines also will be introduced. This course is identical to SOC 2950 and PSYC 2950 and is cross-listed with both of those courses. Students may choose to enroll in the course with the prefix most appropriate to their transfer and career goals. Prerequisites: Completion of six (6) credits in SOC, PSYC, or POLS, ENGL1101, MATH1020 Corequisites: None			

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PSYC1200	General Psychology	3	3/0/0
Meets MnTC Goal Areas 5 and 9. This is a comprehensive introductory overview of psychology that studies human behavior and mental processes. Topics include (but are not limited to) research methods, the history of psychology, neuroscience and behavior, developmental psychology, sensation and perception, motivation and emotion, health psychology, learning and memory, personality, social psychology, psychopathology and treatments, and states of consciousness such as sleep and dreams.			
Prerequisites: None			
Corequisites: None			
PSYC1202	Introduction to Autism Spectrum Disorders	3	3/0/0
Meets MnTC Goal Area 5. This is a comprehensive introductory course to autism spectrum disorders (ASD). Students will gain a general understanding of the history, etiology, characteristics and assessment of ASD. This course will highlight current research regarding neurodevelopmental issues in autism, the diagnostic criteria used to identify children with ASD, and collaborative and interdisciplinary models of service delivery that ensure family-centered and culturally-competent approaches to assessment and intervention.			
Prerequisites: None			
Corequisites: None			
PSYC1400	Psychology of Health & Resiliency	1	1/0/0
This course uses a holistic approach to understanding health and resiliency, exploring and emphasizing the substantive research and clinical evidence demonstrating how to strive for and attain mental and physical health. Students will explore concepts such as stress, personality, happiness, purpose and work-life balance. This course is beneficial for students across career fields such as education, fire, health and law enforcement.			
Prerequisites: None			
Corequisites: None			
PSYC2220	Abnormal Psychology	3	3/0/0
Meets MnTC Goal Area 5. This course is an introduction to the diagnosis, etiology and treatment of maladaptive behavior. The course will include historical and theoretical approaches, prevention and community resources.			
Prerequisites: None			
Corequisites: None			
PSYC2224	Social Psychology	3	3/0/0
Meets MnTC Goal Areas 5 and 7. This course is designed to cover the issues and themes current in the field of social psychology. Examples of such issues include relational and physical aggression; the role of technology in group relations; stereotypes, prejudice and discrimination; and how group identification influences thinking and behavior. A range of psychological theories and concepts will be examined and compared historically as well as across multiple social contexts.			
Prerequisites: None			
Corequisites: None			

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PSYC2230	Personality Psychology	3	3/0/0
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 regard to personality, the variables that influence personality and how personality might influence behavior, as well as the development and assessment of personality.			
Prerequisites: None			
Corequisites: None			
PSYC2236	Special Topics for Autism Spectrum Disorder	3	3/0/0
This course provides in-depth study into current issues surrounding autism spectrum disorders (ASD). For example, this course may focus on the impact of mental health and medical issues on an individual's experience living with ASD. Content will vary depending upon current research-driven topics in the field at the time of course delivery.			
Prerequisites: None			
Corequisites: None			
PSYC2800	Psychology of Health and Resiliency	3	3/0/0
Meets MnTC Goal Area 5. This course studies the interaction of psychology and health, including how to attain mental and physical health through thoughts, emotions and behavior. Students will explore concepts such as stress, resiliency, personality, happiness, purpose and work-life balance. This course is beneficial for students across career fields such as education, fire, health and law enforcement.			
Prerequisites: None			
Corequisites: None			
PSYC2950	Introduction to Social Research	3	3/0/0
Meets MnTC Goals 2 and 5. This course introduces methods and concepts used in the research process in the social sciences and related fields. Topics covered include the application of the scientific method to social and behavioral research, definitions and measurements of variables, research design, experiential methods and survey techniques. The use of literature reviews and the importance of critically evaluating research will be emphasized. Common descriptive and inferential statistics used in social science disciplines will also be introduced. This course is identical to POLS 2950 and SOC 2950 and is cross-listed with both of those courses. Students may choose to enroll in the course with the prefix most appropriate to their transfer and career goals.			
Prerequisites: Completion of six (6) credits in SOC, PSYC, or POLS, ENGL1101, MATH1020			
Corequisites: None			
PWST1002	Snowmobile, Off Road Vehicle and Motorcycle Maintenance	3	1/2/0
This course is designed to train the student in proper maintenance techniques for on- and off-road land-based recreational vehicles. Students are encouraged to bring their personal recreational vehicle(s) or use the up-to-date industry products that the college offers or both. Trailer maintenance also will be covered. This is an excellent course for getting equipment ready for an upcoming winter or summer season.			
Prerequisites: None			
Corequisites: None			

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PWST1015	Marine Engine Installation and Set Up	3	2/1/0
This course will cover marine engine and drive systems: fundamentals, engine removal, engine installation and basic system testing.			
Prerequisites: None			
Corequisites: None			
PWST1021	Ignition, Charging and Starter Systems	3	1/2/0
This course is a continuation of the Electrical Foundation course and will cover the study of electrical systems used on power sports equipment. It will focus primarily on ignition and starting systems. Students will learn and apply 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. Students will apply the theories of ignition, induction, charging and starting systems.			
Prerequisites: None			
Corequisites: None			
PWST1080	Snowmobile Engines	3	1/2/0
This course covers snowmobile engine designs, component identification and engine service procedures, as well as snowmobile fuel systems and service.			
Prerequisites: None			
Corequisites: None			
PWST1302	Snowmobile I	5	2/3/0
This course covers snowmobile engine designs, component identification and engine service procedures. This course also covers snowmobile fuel systems and service.			
Prerequisites: None			
Corequisites: None			
PWST2013	Power Hydraulics	3	1/2/0
This course covers the theory and service of hydraulic systems used on a wide range of off-road applications. Hydrostatic transmissions, power steering and power trim system service will be performed. System troubleshooting as well as component service also will be included in this course.			
Prerequisites: None			
Corequisites: None			
PWST2017	Marine Drive Systems	3	1/2/0
This course covers the operational theory and service of the outboard and sterndrive drive units. Gear ratios, drive shaft housing and gear cases will be investigated. Complete drive system disassembly, measurement, analysis, shimming and rebuilding will be performed.			
Prerequisites: None			
Corequisites: None			
PWST2206	Chainsaws and Generators	3	1/2/0
This course offers a view of maintenance, diagnostics and post-repair inspections of chainsaws. Generator components and testing procedures are also covered. Students test generator voltages and learn how to diagnose and repair generators, and have the opportunity to complete several manufacturers' online service training programs.			
Prerequisites: PWST1115			
Corequisites: None			

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PWST2304	Motorcycles I	3	1/2/0
This course focuses on various types of four-cycle motorcycle and ATV engines. Students will learn engine service and maintenance procedures. Students will also learn about motorcycle fuel systems and related components. Prerequisites: None Corequisites: None			
PWST2312	Advanced Motorcycle Systems	3	1/2/0
This course is designed to test troubleshooting skills and knowledge. Students will be presented with motorcycle problems and, using a systematic approach, students will identify and repair the unit. This course is designed to simulate the role of a technician in a dealership. Students will be expected to write a work order, estimate repairs, make the repair and finalize the work order. Prerequisites: None Corequisites: None			
RADT1112	Introduction to Radiologic Technology and Patient Care	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 competence in routine and emergency patient care, patient transfer and safety procedures, infection control, aseptic and sterile environment procedures, and radiographic equipment manipulation. Prerequisites: None Corequisites: RADT1116, RADT1124			
RADT1124	Radiographic Procedures II	4	2/2/0
This course provides students with the knowledge necessary to perform routine and mobile radiographic procedures relative to the urinary system, lower extremity, pelvis, vertebral column and arthrology. Emphasis is 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 are also included. Prerequisites: None Corequisites: RADT1112, RADT1116			
RADT1140	Radiographic Imaging	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 are 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. Prerequisites: None Corequisites: RADT1132, RADT1146			

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RADT1180	Radiographic Clinical I	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. Prerequisites: None Corequisites: RADT1190			
RADT1270	Radiographic Procedures Bridge	4	2/2/0
This course provides students with the knowledge necessary to perform routine and mobile radiographic procedures relative to facial bones, arthrology, traumatic injury, surgical radiography and the bony thorax, urinary system and gastrointestinal system. Emphasis is 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 is also included. Additionally, students are introduced to highly specialized studies of the central nervous system, cardiovascular system, lymphatic system, reproductive system and cross-sectional imaging. Special imaging equipment, physical settings and techniques used in these highly specialized studies is also included. Prerequisites: Graduation from the M State Limited Scope Radiography program. Corequisites: None			
RADT2101	Radiographic Clinical III	4--5	N/A
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) clinical hours. Prerequisites: None Corequisites: RADT2110, RADT2224			
RADT2120	Radiographic Clinical V	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. Prerequisites: None Corequisites: RADT2130, RADT2280			
RADT2224	Imaging Equipment	4	2/2/0
This course is designed to establish a knowledge base in radiographic, fluoroscopic, mobile and tomographic equipment (including computed tomography) requirements and design including circuitry of the x-ray machine. The content will also provide a basic knowledge of quality control. Computer applications in the radiologic sciences related to image capture, display, storage and distribution are presented, as well. Prerequisites: None Corequisites: RADT2101, RADT2110			

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RADT2280	Radiologic Technology Registry Review	2	2/0/0
This course is designed to prepare students to write the national board exam administered by the American Registry of Radiologic Technologists (ARRT). A review of all coursework presented in the program, with an emphasis on the ARRT exam specifications, will be presented. Prerequisites: None Corequisites: RADT2120, RADT2130			
REFR1112	Refrigeration, Air Conditioning and Heating Lab	3	0/3/0
This course covers the operation and service procedures of domestic refrigeration and an introduction to residential heating and air conditioning and commercial refrigeration equipment. Prerequisites: None Corequisites: None			
REFR2204	Commercial Refrigeration and Air Conditioning Lab	3	0/3/0
This course covers practical applications related to commercial refrigeration and air conditioning equipment. The commercial refrigeration and air conditioning lab learning experience includes sequence of operation, troubleshooting, repair, maintenance and installation. Safety is emphasized throughout the course. Prerequisites: Completion of HVAC/R diploma. Corequisites: None			
REFR2208	Commercial Electrical Lab	3	0/3/0
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. Prerequisites: Completion of HVAC/R diploma. Corequisites: None			
REFR2212	Advanced Refrigeration Lab	3	0/3/0
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. Prerequisites: Completion of HVAC/R diploma. Corequisites: None			
REFR2215	Advanced Electrical Applications	3	0/3/0
This course covers the application of electrical principles used in commercial, industrial, hospital and supermarket refrigeration systems. Safety is emphasized. Prerequisites: Completion of HVAC/R diploma. Corequisites: None			
REFR2217	Commercial Grocery Store Refrigeration	3	3/0/0
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. Prerequisites: Completion of HVAC/R diploma. Corequisites: None			

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SOC1113	Social Problems	3	3/0/0
Meets MnTC Goal Areas 5 and 9. This course stresses acquiring an enriched understanding of social issues and prospects for improving them. Students will investigate social trends and factors affecting social problems, contrast sociological perspectives of social problems, deal constructively with information and ideas associated with social issues, examine the ethical dimensions inherent in problem definition and intervention design, and define personal and public responsibilities in relation to select social issues. Social issues covered may include parenting and family issues; crime, delinquency and violence; aging, health and health care issues; poverty and inequality; cultural pluralism; urban growth and population; environmental issues; sexual issues; and global issues.			
Prerequisites: None			
Corequisites: None			
SOC2030	Community and Environmental Sociology	3	3/0/0
Meets MnTC Goal Areas 5 and 10. Students will use the sociological perspective to examine the relationship between the social and physical environment. The course evaluates the ways in which the environment, sustainability, resources, and conflict are embedded within broader cultural, social, health, economic, and political contexts. Students will seek to understand environmental stewardship and social justice while considering intersections of race, ethnicity, class, and gender.			
Prerequisites: None			
Corequisites: None			
SOC2213	Sociology of the Family	3	3/0/0
Meets MnTC Goal Areas 5 and 7. Families will be examined from the sociological perspective and will be compared across time and cultures. Family relationships, family structure and the effects of race, class, gender, age, social institutions and social policy will be explored in this course. Integral to this course are comprehensive discussions on topics such as dating, cohabitation, marriage/partnering, employment, domestic violence, parenting, divorce, remarriage/re-partnering and elder care. This course provides understanding of the family, family roles and the impact on the individual. Understanding public and private, platonic and intimate relationships can assist in the development of tolerance toward others.			
Prerequisites: None			
Corequisites: None			
SOC2216	Sociology of Race and Ethnicity	3	3/0/0
Meets MnTC Goal Areas 5 and 7a/b. This course examines the ambiguities and conflicts embedded within the broad and inclusive concept of diversity. The course endeavors to combine subjective interpretations of diversity with sociological perspectives to better prepare students to participate in, and appreciate, an increasingly diverse culture.			
Prerequisites: College-level reading and writing skills are recommended.			
Corequisites: None			
SOC2220	Food, Culture and Society	3	3/0/0
Meets MnTC Goal Areas 5 and 7. This course examines the social and cultural dimensions of the production, preparation and consumption of food. The course will include discussion of a wide variety of topics including food citizenry, sustainable food production, agroecology, hunger, food sovereignty, food choice and options, policy and legislation, social justice, and the interplay between food and gender, social class, race and ethnicity.			
Prerequisites: None			
Corequisites: None			

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COURSE DESCRIPTIONS

SOC2710	Epidemics and Society	3	3/0/0
This course meets MnTC Goal Areas 5 and 8. This course is intended to be a history of epidemics and their effects on western societies. It is a general education course for students interested in the history of epidemic diseases and concern for our preparedness as a society to meet new threats. The course begins with a brief history of medicine and the various interpretations of disease. It then focuses on plague pandemics and concludes with current epidemics and newly emerging and reemerging diseases. Epidemics and pandemics of focus include: Plague, Smallpox, Yellow Fever, Typhus, Cholera, Tuberculosis, Malaria, Polio, HIV/AIDS and hemorrhagic fevers. Prerequisites: None Corequisites: None			
SOMM1400	Social Media Visual Methods	3	2/1/0
In this course, students will learn introductory-level skills that will prepare them to create visual content relevant for today's most widespread social media platforms. Various visual methods and media will be taught, such as static graphic design layout, still photography and videography. Throughout this course, students will be instructed to create visual content that will focus on technical proficiency, core design principles, brand consistency, user experience and user engagement strategies. Prerequisites: MKTG1116, MKTG1200 Corequisites: None			
SOMM2300	Social Media Campaigns	3	2/1/0
In this course, students will apply their accumulated knowledge and skills to produce integrated social media campaigns. Campaign projects will involve activities that are designed to imitate industry practices and processes, allowing students to experiment with the tools they'll use on the job. Students will independently complete research and planning, produce original content and analyze the results of their campaign following its completion. Prerequisites: MKTG1116, MKTG1200 Corequisites: None			
SPAN1102	Beginning Spanish II	4	4/0/0
Meets MnTC Goal Area 8. 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. Students will develop reading, writing, listening and speaking skills through a focus on historical, political, cultural and artistic expressions of the Spanish-speaking world. Prerequisites: SPAN1101 Corequisites: None			
SPAN1112	Beginning Spanish II	4	4/0/0
This course provides continued basic instruction in the correct form and use of the Spanish language. Study concentrates on oral and written comprehension of simple Spanish, verbal expression of personal and extended themes, pronunciation and grammar. Prerequisites: SPAN1111 Corequisites: None			

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SPAN2212	Intermediate Spanish II	4	4/0/0
Meets MnTC Goal Area 8. This course is the second semester of Intermediate Spanish. Students continue to hone their reading, writing, listening and speaking through a focus on historical, political, cultural and artistic expressions of the Spanish-speaking world. Grammar from Intermediate Spanish is further developed to include the simple and perfect tenses of the indicative and subjunctive moods. Students investigate the development of science and technology on various aspects of the Spanish-speaking world. Prerequisites: Instructor approval Corequisites: None			
SUPL1110	Budget and Financial Management	3	3/0/0
This course is designed for non-financial personnel who need to understand the basic theories of finance and apply them to practical business decisions. Key topics include learning the generally accepted accounting and budgeting principles, financial statement analysis, analysis of return on investment and cost/benefit ratios analysis of annual reports. Prerequisites: None Corequisites: None			
SURT1200	Introduction to Surgical Technology	3	3/0/0
This course explores the role of surgical technologists. Fundamental principles of asepsis, professionalism, communication, universal precautions, the surgical team, operating room environment and patient care concepts are introduced. Prerequisites: none. Corequisites: None			
SURT1210	Surgical Technology I	6	3/3/0
This course introduces the student to the role of the surgical technologist in the operating room and introduces the foundation for patient care in the operating room. Prerequisites: None Corequisites: SURT1200			
SURT1222	Surgical Technology II	6	3/3/0
This course expands students' knowledge of the role of the surgical technologist in an operating room. The course considers procedures in the orthopedic, oral maxillofacial and ophthalmic systems, building on a foundation of patient care related to these body systems. Concepts of surgical hemostasis, wound healing and wound closure in the perioperative phases are introduced. The laboratory portion of this course presents foundational skills necessary for clinical practice in a surgical environment in the role of the surgical technologist. Prerequisites: None Corequisites: SURT1215, SURT1225			
SURT1230	Surgical Technology III	4	4/0/0
This course continues to expand the student's knowledge of the role of the surgical technologist in the operating room. The course considers procedures of the lymphatic, circulatory, vascular and nervous systems, building on the foundation of patient care relating to these body systems in the different perioperative phases. Prerequisites: None Corequisites: SURT1240			

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SURT1255	Surgical Clinical II	6	0/0/6
This course, Surgical Clinical II, introduces the student to patient care in an operating room in the role of surgical technologist.			
Prerequisites: None			
Corequisites: SURT1240			
THPY1101	Nutrition and Wellness	2	2/0/0
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.			
Prerequisites: None			
Corequisites: None			
THPY1118	Kinesiology	3	2/1/0
This course teaches students to identify the location and movements of skeletal muscles. Students will identify bones and boney landmarks. They will learn muscle origin and insertion using specific boney landmarks as points of anatomical reference. They will learn directional terms and terms of movement. Students will learn to identify and describe the movement of each muscle.			
Prerequisites: None			
Corequisites: None			
THPY1130	Advanced Massage	2	1/1/0
This course prepares massage students to execute advance massage techniques. Students will learn optional techniques available to clients including abdominal massage, facial massage and massage of the gluteals. Massage for special populations will be discussed, including massage for the elderly and chair massage.			
Prerequisites: THPY1110			
Corequisites: None			
THPY1142	Practical Skills Clinic	3	0/3/0
This course provides students with an opportunity to develop the practical skills necessary to administer professional massage therapy treatments. In addition to performing massage treatments on the general public, students will also perform seated chair massage at scheduled on-site events as arranged by the instructor. This course provides students with an opportunity to develop the practical learned skills needed to work as a professional massage therapist.			
Prerequisites: Current certified CPR/First Aid card holder, THPY1110			
Corequisites: None			
THPY1148	Sports Massage and Hydrotherapy	2	1/1/0
This course covers the fundamentals of hydrotherapy and sports massage. Students will be taught to perform massage treatments specific to individual sports. The course addresses pre-, post- and event-sports massage techniques, as well as rehabilitative massage for injuries and maintenance massage. Students will also be instructed on the use of hydrotherapy techniques. Hydrotherapy will address the application of water as treatment in each of its three forms, hot and cold treatments, hydrocollators, body wraps and salt glows. These green techniques can be implemented into Swedish massage treatments and sports massage.			
Prerequisites: None			
Corequisites: None			

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THPY1156	Massage Pathophysiology	3	3/0/0
This course discusses common pathologies that massage therapists are likely to encounter in their professional practices. It also discusses whether these conditions are indicated or contraindicated for massage and describes how they may be treated. Prerequisites: None Corequisites: None			
THPY2106	Neuromuscular Therapy	2	0/2/0
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. Prerequisites: Diploma or Certificate in Massage Therapy, THPY1118 Corequisites: None			
THTR1105	Acting I	3	3/0/0
Meets MnTC Goal Area 6. Students will gain performance skills and techniques through vocal and physical activities; improvisation; and by practicing, memorizing and performing various theatre pieces in front of the class audience. Students will also use imagination and apply analysis to build characters and scenes. Coursework will require showing respect and working collaboratively. No prior acting experience necessary. Prerequisites: None Corequisites: None			
THTR1120	Theatre Performance Practicum	2	0/2/0
Meets MnTC Goal Area 6. Students will audition, accept a role and participate as performers in a main stage or approved theatrical production. Students may enroll after audition dates, and the course may be repeated twice. Prerequisites: None Corequisites: None			
THTR1126	Theatre Lab	2	0/2/0
Meets MnTC Goal Area 6. Students participate in an M State theatre production as a crew member or actor. Students exhibit essential skills of communication, cooperation, respect and responsibility. Students arrange a tech lab hour schedule with the director after enrolling or attend required performance rehearsal times after auditions and casting. The course may be repeated twice. Prerequisites: None Corequisites: None			

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THTR1142	Stagecraft	3	2/1/0
Meets MnTC Goal Areas 6 and 10. In this hands-on course, students will learn how to safely use materials, tools and theatrical equipment to complete a variety of projects and will be required to complete lab hours working with the tools and techniques learned in class. Students do not need prior experience, but skills with tools or an interest in building would be beneficial. Students will also explore traditional theatre production practices and more environmentally sustainable practices, including benefits and challenges. Prerequisites: None Corequisites: None			
THTR2130	Design for the Stage	3	3/0/0
Meets MnTC Goal 6. Students will study the concepts, processes and practices common to theatrical design: stage scenery, lighting, sound, props and costumes. Students will analyze scripts, research design, practice creative and mechanical drawing, build set design models and present design concepts. Production hours may be used to enhance students' understanding of theatrical construction. Each student will be required to learn and observe safety rules in the scene shop, lighting and sound booth, and in other relevant technical areas. Prerequisites: THTR1100 Corequisites: None			
TRNS1112	Heating Ventilation A/C	3	1/2/0
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. Prerequisites: TRNS1102 Corequisites: None			
WEBD2040	Web Applications I	3	1/2/0
Web applications are comprehensive websites that utilize multiple client and server-side tools and technologies. Students will use the knowledge learned in previous classes to develop client-side code used to create and manipulate Web applications. Students will utilize project-planning skills and problem-solving techniques to design and develop effective applications. The use of new technologies used to create rich Internet applications and frameworks will also be discussed. Prerequisites: WEBD1140 Corequisites: None			
WEBD2110	Web Portfolio	3	1/2/0
In this course, students will plan, design and create a professional portfolio using Web technologies. The purpose of the portfolio is to showcase the student's accomplishments in the student's major field and provide the student with a concrete representation of his or her skills and abilities. Other topics include resume creation, job interview preparation, job search strategies and the ability to explain and articulate portfolio samples. Prerequisites: WEBD2000, WEBD2020 Corequisites: None			

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WEBD2140	Web Applications II	3	1/2/0
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Web applications are comprehensive websites that utilize multiple client and server-side tools and technologies. Students will use the knowledge learned in previous classes to develop server-side programs used to create and manipulate Web applications, files, email, and databases. Students will utilize project-planning skills and problem-solving techniques to design and develop effective applications.

Prerequisites: WEBD1150

Corequisites: None

WMST1136	Global Perspectives of Women	3	3/0/0
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Meets MNTC Goal Areas 6 and 8. This course examines the present-day realities of women's lives around the world.

Prerequisites: None

Corequisites: ENGL1101





Minnesota State

Community and Technical College

DETROIT LAKES CAMPUS
900 Highway 34 East
Detroit Lakes, MN 56501
218.846.3700
Fax: 218.846.3794

FERGUS FALLS CAMPUS
1414 College Way
Fergus Falls, MN 56537
218.736.1500
Fax: 218.736.1510

MOORHEAD CAMPUS
1900 28th Avenue South
Moorhead, MN 56560
218.299.6500
Fax: 218.299.6810

WADENA CAMPUS
405 SW Colfax Avenue
Wadena, MN 56482
218.631.7800
Fax: 218.631.7904

minnesota.edu • 877.450.3322



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