



COLLEGE CATALOG

2024-2025

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

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



WADENA

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

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

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2024-2025 M STATE ACADEMIC CALENDAR

AUGUST 2024

- 26 | M State Welcome Days begins
- 26 | Fall semester begins
- 30 | Last day to drop or add full-term fall semester courses

SEPTEMBER 2024

- 2 | Labor Day **COLLEGE CLOSED**
- 17 | Constitution Day

OCTOBER 2024

- 17-18 | Fall break No Classes/College open

NOVEMBER 2024

- 11 | Veterans Day **COLLEGE CLOSED**
- 27 | Last day to withdraw from full-term fall semester courses
- 28-29 | Thanksgiving break **COLLEGE CLOSED**

DECEMBER 2024

- 16-20 | Final exams
- 20 | Fall semester ends
- 23-31 | Semester break No Classes/College Open
- 25 | Christmas Day **COLLEGE CLOSED**

JANUARY 2025

- 1 | New Year's Day **COLLEGE CLOSED**
- 1-10 | Semester break No Classes/College Open
- 13 | Spring semester begins
- 17 | Last day to drop or add full-term spring semester courses
- 20 | Martin Luther King Jr. Day **COLLEGE CLOSED**

FEBRUARY 2025

- 7 | Application deadline for spring or summer graduates planning to attend the spring commencement ceremony
- 17 | Presidents Day **COLLEGE CLOSED**

MARCH 2025

- 10-14 | Spring break No Classes/College Open
- 24 | Registration opens for Fall 2025, Spring 2026 and Summer 2026

APRIL 2025

- 11 | No Classes/College Open
- 16 | Last day to withdraw from full-term spring semester courses

MAY 2025

- 5-9 | Final exams
- 9 | Spring semester ends
- 12 | Summer term begins
- 26 | Memorial Day **COLLEGE CLOSED**

JUNE 2025

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

JULY 2025

- 4 | Independence Day **COLLEGE CLOSED**
- 25 | Summer term ends

AUGUST 2025

- 25 | Fall semester begins (2025-2026 School Year)



● No classes
 ● Final exams
 ● Registration
 BOLD Important Dates

minnesota.edu | 877.450.3322

D F M W O



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
2024-2025

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

Administrative Support Diploma - 32 credits Online

The Administrative Support diploma program prepares students for the workforce by focusing on the administrative and technical skills needed to meet the demands of the current and emerging office environment. The program provides both the theory and practice needed to succeed in an office environment. After successful completion of the program, students will be knowledgeable in business office software, administrative procedures, communication, teamwork and problem solving. Students who pursue the Health Track will learn to work in a variety of medical settings, handling administrative duties for private practices, hospitals and clinics. Students will be prepared to accept responsibility for the coordination of medical office functions and patient billing processes. Students who pursue the General Administrative Track will learn additional office skills, including software applications and business processes.

Track: General Administrative

Requirement	Title	Credits
ACCT1124	Spreadsheet Applications.....	3
ADMS1110	Word Processing	3
ADMS1116	Business Communications I	3
ADMS1240	Presentations and Desktop Publishing	3
ADMS1410	Office Administration	3
ADMS2200	Office Administration Capstone	2
BUS1100	Business Computers.....	3
BUS2150	Legal Environment of Business.....	3
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		
COMM1130 Small Group Communication		
COMM1140 Interpersonal Communication		
COMM2200 Intercultural Communication		
ENGL1101 College Writing		
3 credits from the following		3
ACCT2211 Financial Accounting I		
BUS1300 Financial Statement Analysis		

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Administrative Support Diploma - 32 credits Online

Track: Health

Requirement	Title	Credits
ADMM1122	Medical Office Procedures.....	4
ADMM1150	Medical Billing/Insurance.....	4
ADMS1116	Business Communications I.....	3
ADMS1410	Office Administration.....	3
BUS1100	Business Computers.....	3
BUS2150	Legal Environment of Business.....	3
HLTH1116	Medical Terminology.....	3
HITM1151	Introduction to Health Information Management.....	3
3 credits from the following		3
COMM1120 Introduction to Public Speaking		
COMM1130 Small Group Communication		
COMM1140 Interpersonal Communication		
COMM2200 Intercultural Communication		
ENGL1101 College Writing		
3 credits from the following		3
ACCT2211 Financial Accounting I		
BUS1300 Financial Statement Analysis		

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.

Track: Esthetician/AP Esthetician

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
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
COMM2200	Intercultural Communication	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.

Track: Diploma

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.

Track: AAS

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

Architectural Drafting and Design Associate of Applied Science (AAS) - 72 credits Detroit Lakes

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

Track: Architectural Drafting and Design

Requirement	Title	Credits
ARCH1122	Computer Aided Drafting for Architecture.....	4
ARCH1126	Residential Project I.....	3
ARCH2218	Architectural Internship.....	3
ARCH2222	Architectural Drafting Service Learning.....	4
ARCH2226	Residential Project II.....	4
ARCH2232	Civil and Structural Integration.....	3
ARCH2236	Architectural Presentation.....	2
ARCH2242	Mechanical and Electrical Integration.....	3
ARCH2244	Commercial Projects.....	4
ARCH2248	CADD Alternatives.....	3
ARCH2250	Project Administration.....	2
CADD1000	AutoCAD Basics.....	3
CONM1101	Construction Documents and Codes.....	3
CONM1108	Principles of Estimating.....	4
CONM1124	Building Systems.....	3
ENGL1101	College Writing.....	3
ENGT1118	Construction and Manufacturing Math.....	3
ENGT1126	Engineering Graphics.....	3
ENGT1134	Office Systems and Equipment.....	3
3 credits from the following.....		3
COMM1120 Introduction to Public Speaking		
COMM1140 Interpersonal Communication		
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.

Track: Visual Arts - Associate of Fine 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		

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

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

Autism Spectrum Disorder Certificate - 16 credits Online

This certificate provides the learner with basic knowledge for understanding the characteristics associated with autism spectrum disorder (ASD). Coursework centers on current research and applied theory relevant to the specific communication and developmental needs of individuals with ASD, as well as behavior and intervention strategies for serving this population. These opportunities are appropriate for entry-level workers and others caring for individuals with ASD, as well as students interested in learning about ASD. This certificate does not lead to teacher licensure.

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

Requirement	Title	Credits
CPTR1103	Introduction to Assistive Technology	3
PSYC1202	Introduction to Autism Spectrum Disorders	3
PSYC2226	Behavior and Environmental Management	3
PSYC2236	Special Topics for Autism Spectrum Disorder	3
4 credits from the following		4
ED2233	Strategies for Working With Individuals With Autism Spectrum Disorder	
PSYC2233	Strategies for Working With Individuals With Autism Spectrum Disorder	

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Automotive Service Technology Associate of Applied Science (AAS) - 72 credits Moorhead

The automotive service technician works in an exciting and rapidly changing industry. Students in this program will receive training in the many service and diagnostic procedures necessary to maintain our nation on wheels. Students are trained in modern laboratories equipped with current service and testing equipment. Students in Automotive Service Technology have the option of choosing between diploma and AAS degree programs. Students entering this program should have good mechanical aptitude, good communication skills and the ability to read and comprehend service literature. Graduates of this program will have a variety of opportunities including drive line technician, drivability technician, alignment and suspension specialist, transmission specialist, service adviser and manager. A student with an AAS degree will be better prepared for advancement, including positions as factory and dealer representatives, management and self-employment.

Requirement	Title	Credits
AMST1101	Automotive Equipment Fundamentals	2
AMST1102	Alignment and Suspension I.....	3
AMST1105	Brakes I.....	3
AMST1110	Batteries, Starting and Charging Systems	2
AMST1111	Automotive Electronics.....	3
AMST1122	Engines I.....	3
AMST1126	Engines II.....	3
AMST1132	Drivetrains I	3
AMST1136	Drivetrains II	3
AMST2201	Alignment and Suspension II.....	3
AMST2206	Body Electrical and Mechanical I	3
AMST2210	Body Electrical and Mechanical II	2
AMST2211	Exhaust Analysis and Fuel Systems.....	3
AMST2214	Electronic Powertrain Control I.....	3
AMST2218	Electronic Powertrain Control II.....	3
AMST2220	Ignition Systems	3
AMST2225	Brakes II.....	3
AMST2233	Automatic Transmissions I	3
AMST2237	Automatic Transmissions II	3
AMST2240	Heating, Ventilation and Air Conditioning	3
3 credits COMM Electives.....		3
3 credits HUM Electives.....		3
3 credits ECON 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

Automotive Service Technology Diploma - 66 credits Moorhead

Automotive service technicians work in an exciting and rapidly changing industry. Students in this program will receive training in the many service and diagnostic procedures necessary to maintain our nation on wheels. Students are trained in modern laboratories equipped with current service and testing equipment. Students entering this program should have good mechanical aptitude, good communication skills and the ability to read and comprehend service literature. Graduates of this program will have a variety of opportunities including driveline technician, drivability technician, alignment and suspension specialist, transmission specialist and service writer.

Requirement	Title	Credits
AMST1101	Automotive Equipment Fundamentals	2
AMST1102	Alignment and Suspension I	3
AMST1105	Brakes I	3
AMST1110	Batteries, Starting and Charging Systems	2
AMST1111	Automotive Electronics	3
AMST1122	Engines I	3
AMST1126	Engines II	3
AMST1132	Drivetrains I	3
AMST1136	Drivetrains II	3
AMST2201	Alignment and Suspension II	3
AMST2206	Body Electrical and Mechanical I	3
AMST2210	Body Electrical and Mechanical II	2
AMST2211	Exhaust Analysis and Fuel Systems	3
AMST2214	Electronic Powertrain Control I	3
AMST2218	Electronic Powertrain Control II	3
AMST2220	Ignition Systems	3
AMST2225	Brakes II	3
AMST2233	Automatic Transmissions I	3
AMST2237	Automatic Transmissions II	3
AMST2240	Heating, Ventilation and Air Conditioning	3
9 credits MnTC Electives		9

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 either of the Business AAS or Management and Marketing AAS degree programs.

Track: General, Full-time

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		3
BUS2209 Business Research		
BUS2700 Technology Research and Presentation		
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 (MHBAll). 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

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

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
CPTR1106	Microcomputer Databases	3
CPTR1115	COBOL Programming	4
CPTR1129	RPG Programming	4
CPTR2001	Scripting for Automation.....	3
CPTR2224	Linux I	3
CPTR2230	Structured Query Language.....	3
CPTR2238	Database Integration.....	3
CPTR2242	Java Programming	3
CPTR2255	Software Security and Testing	3
CSCI1110	Informatics.....	3
CSCI1121	Computer Science I.....	4
ENGL1101	College Writing	3
3 credits from the following		3
	COMM1120 Introduction to Public Speaking	
	COMM1130 Small Group Communication	
	COMM1140 Interpersonal Communication	
6 credits from the following		6
	CPTR*, CSCI, CSEC	
3 credits MnTC Goal Area 4 Electives.....		3
6 credits MnTC Electives**		6

*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 construction including management, supervision, estimating, testing and safety. The program focuses on the flow of labor, material, equipment, time and finances from the conception of a project through completion. Students are trained in a combination of skills in construction, business and management. 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
MCDD2220	Mechanical Engineering Drawing IV.....	3
3 credits from the following		3
BUS2150	Legal Environment of Business	
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
CPTR1104	Introduction to Computer Technology	
CSCI1110	Informatics	
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

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

Dental Hygiene Associate of Applied Science (AAS) - 88 credits 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.

Track: Drafting and 3D Technologies - AAS

Requirement	Title	Credits
ARCH2248	CADD Alternatives.....	3
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
DET2200	Advanced Modeling with SolidWorks.....	3
DET2210	Advanced Modeling with Inventor.....	3
DET2230	3D Printing and Prototyping.....	2
DET2250	Reverse Engineering Applications.....	4
DET2246	Tool Design.....	3
DET2248	CNC Applications.....	3
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
ECE1105	Introduction to Early Childhood Education	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

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
COMM1120	Introduction to Public Speaking	3
ECE1105	Introduction to Early Childhood Education	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
ENGL1101	College Writing.....	3
ENGL2239	Nature Writers	3
ENGL2372	Children's Literature	3
MATH1100	World of Math.....	3
PSYC1101	Human Interaction.....	3
PSYC1202	Introduction to Autism Spectrum Disorders.....	3
PSYC2222	Lifespan Development	3
SOC2213	Sociology of the Family	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

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
ELEC2225	Transformers.....	2
ELEC2230	Electrical Building Information Modeling.....	2
ELEC2238	Low Voltage Wiring	2
ELEC2248	Code Applications	2
HLTH1122	CPR-First Aid	1
MATH1000	Technical Mathematics	3
PDEV1102	Contemporary Career Search.....	1
5 credits ELEC Electives.....		5

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
ED2204	Introduction to Education.....	3
ED2208	Drug Education.....	2
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
3 credits MnTC Electives		3

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
ENTR1301	Entrepreneurship III: Running and Growing Your Business.....	3
6 credits from the following		6
ACCT2211 Financial Accounting I		
BUS1100 Business Computers		
BUS1141 Introduction to Business		
BUS1300 Financial Statement Analysis		
BUS2150 Legal Environment of Business		
BUS2204 Principles of Management		
BUS2206 Principles of Marketing		
DMKT2200 Introduction to Digital 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

Fire Service Preparation Certificate - 16 credits Moorhead

The Fire Service Preparation program provides individuals interested in a career in fire service with the basic knowledge and skills to meet International Fire Service Accreditation Congress (IFSAC) or Proboard certifications and EMT registry requirements. Participants in the Fire Service Preparation program will be actively involved with technical hands-on training to ensure familiarity with all entry-level aspects of fire service. Upon completion of the certificate, students will be eligible for the State of Minnesota firefighter license after employment with a career fire department.

Requirement	Title	Credits
HLTH2215	EMT Basic.....	6
FIRE1110	Firefighter I.....	1
FIRE1111	Firefighter Skills I.....	2
FIRE1114	Firefighter II.....	2
FIRE1115	Firefighter Skills II.....	2
FIRE1150	HazMat Operational.....	3

Gas Utility Construction and Service Certificate - 19 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 located in the Minneapolis-St. Paul metro area.

Track: Gas Utility Construction and Service

Requirement	Title	Credits
GAS1000	Gas Utility Field Training I.....	4
GAS1001	Underground Utility Locating.....	2
GAS1003	Gas Utility Equipment Training.....	5
GAS1004	Gas Utility Field Training II.....	4
GAS2600	Electric and Gas Appliances.....	4

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 the 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 MN 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.....	6
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
HITM1220	Foundations of Medical Coding	3
HITM2218	Intermediate Procedure Coding	3
HITM2230	Medical Science for Health Information Professionals	3
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		
Career or MnTC Electives.....		8

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

History Transfer Pathway Associate of Arts (AA) - 60 credits Detroit Lakes, 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	
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	
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

*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
CPTR1001	Introduction to Programming and Scripting	3
CPTR1106	Microcomputer Databases	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
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.

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

Requirement	Title	Credits
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>		4
<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
<u>Goal Area 10</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
MLT1110	Phlebotomy Skills.....	2
MLT1115	Basic Laboratory Techniques	2
MLT1124	Immunohematology	3
MLT1125	Immunohematology Lab	1
MLT1130	Laboratory Calculations	2
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
MLT2267	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

Medical Office Assistant Diploma - 44 credits Online

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

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
ADMM2130	Medical Office Career Insight	2
ADMM2500	Human Disease Applications for Administrative Health Professionals	3
HLTH1110	Introduction to Anatomy and Physiology	3
3 credits MnTC Electives		3
6 credits from the following		6
COMM1120	Introduction to Public Speaking	
COMM1130	Small Group Communication	
COMM1140	Interpersonal Communication	

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

PROGRAMS AND MAJORS

Medical Receptionist Diploma - 34 credits Online

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

Requirement	Title	Credits
ADMM1104	Medical Language Applications I	3
ADMM1110	Medical Documentation I	4
ADMM1122	Medical Office Procedures.....	4
ADMM1150	Medical Billing/Insurance	4
ADMM1200	Medical Office Technology Tools.....	2
ADMM2104	Medical Language Applications II	3
ADMM2130	Medical Office Career Insight	2
ADMM2500	Human Disease Applications for Administrative Health Professionals	3
HLTH1110	Introduction to Anatomy and Physiology	3
6 credits from the following		6
	COMM1120 Introduction to Public Speaking	
	COMM1130 Small Group Communication	
	COMM1140 Interpersonal Communication	

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
ACCT1124	Spreadsheet Applications	3
ACCT1101	Payroll	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 MnTC.

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
PWST2017	Marine Drive Systems.....	3
PWST2016	Outboard Engine 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
PNSG1509	Foundations of Adult Nursing Care I.....	6
PNSG1512	Practical Nursing Pharmacology.....	2
PNSG1514	Clinical I Practical Nurse Foundations	4
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

Pre-Professional Health Associate of Science (AS) - 60 credits Fergus Falls, Moorhead

The Pre-Professional Health AS offers students the opportunity to complete an Associate of Science degree that aligns with the course requirements for most professional health degree programs at medical, pharmacy, veterinary, dentistry and chiropractic schools. This degree also works well for students interested in chemistry or biochemistry. Students should consult with an advisor and science faculty member and review the degree requirements of their intended transfer institution when choosing their electives for this degree.

Requirement	Title	Credits
BIOL1122	General Biology I.....	4
BIOL1123	General Biology II.....	4
CHEM1111	General Chemistry I.....	5
CHEM1112	General Chemistry II.....	5
CHEM2224	Organic Chemistry I.....	5
CHEM2225	Organic Chemistry II.....	5
COMM1120	Introduction to Public Speaking.....	3
ENGL1101	College Writing.....	3
4 credits from the following.....		4
	BIOL2220 General Microbiology	
	BIOL2240 Genetics	
4 credits from the following.....		4
	MATH1114 College Algebra	
	MATH1115 Functions/Trigonometry	
	MATH1134 Calculus I	
3 credits from the following.....		3
	MATH1207 Elementary Statistics	
	MATH1213 Introduction to Statistics	
3 credits from the following.....		3
	PSYC1200 General Psychology	
	PSYC2222 Lifespan Development	
	SOC1111 Introduction to Sociology	
3 credits MnTC Goal Area 6 Electives.....		3
9 credits MnTC Electives*.....		9

*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

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	
3 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 following3
 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
HLTH1116	Medical Terminology	3
PHIL1200	Applied and Professional Ethics	3
PSYC222	Lifespan Development	3
SURT1210	Surgical Technology I	6
SURT1200	Introduction to Surgical Technology	3
SURT1215	Surgical Pharmacology	3
SURT1220	Surgical Technology II	5
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

2024-2025

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.			
ACCT1124	Spreadsheet Applications	3	3/0/0
This course provides students with in-depth coverage of a spreadsheet application as used in a business setting. Students should be familiar with Windows and word processing.			
Prerequisites: BUS1100			
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			
ACCT2211	Financial Accounting I	3	3/0/0
This course introduces students to the content and concepts underlying financial statements. Course content includes study of the accounting model, financial statements, merchandise accounting, internal controls and accounting for assets. The course will focus on using accounting information for decision making.			
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.			
ACCT2218	QuickBooks	2	2/0/0
This course is an introduction to computerized accounting applications and software used in the business environment. Topics may include general ledger accounting, payroll procedures, accounts receivable, accounts payable, inventory and depreciation.			
Prerequisites: ACCT2211, BUS1100			
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: MATH 0055 or placement by assessment			
ACCT2256	Income Tax-Business	3	3/0/0
This course provides an explanation and interpretation of the Internal Revenue Code as applied to sole proprietorships, partnerships and corporations. Topics include business income, expenses, business tax credits, withholding and payment of established estate and trust tax issues.			
Prerequisites: ACCT2255			
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			
ACCT2618	Intermediate Accounting II	3	3/0/0
This course is the continuation of a comprehensive study of accounting theory and concepts with an analysis of the influence on financial accounting by various boards, associations and governmental agencies. Topics include the income statement, balance sheet, statement of cash flows, and various asset, liability and equity sections.			
Prerequisites: ACCT2616			
ACCT2640	Accounting Internship	1-4	
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.			

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COURSE DESCRIPTIONS

ADMM1122	Medical Office Procedures	4	3/1/0
<p>This course offers hands-on training in the tasks performed by medical administrative personnel in medical office settings. Topics include the role of the medical administrative professional, exploration of health care careers, legal and ethical responsibilities, medical appointments and calendars, professional communication including telephone techniques, reception and registration of patients, electronic health record responsibilities, introduction to billing and insurance procedures, and an introduction to medical office management.</p> <p>Corequisites: ADMM1104 Medical Language Applications I OR HLTH1116 Medical Terminology</p>			
ADMM1150	Medical Billing/Insurance	4	3/1/0
<p>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.</p> <p>Corequisites: ADMM1104 Medical Language Applications I OR HLTH1116 Medical Terminology</p>			
ADMM1152	Outpatient Coding	4	3/1/0
<p>Medical codes are used to identify procedures and diagnoses that pertain to a patient's health care encounter. This course is an introduction to medical coding and emphasizes coding in medical offices and other outpatient care facilities. Course topics include ICD-10 (International Classification of Disease 10th revision), CPT (Current Procedural Terminology) and HCPCS (Healthcare Common Procedural Coding System), and legal and ethical issues related to outpatient coding practices.</p> <p>Prerequisites: ADMM1104 Medical Language Applications I OR HLTH1110 Introduction to Anatomy & Physiology</p>			
ADMM1160	Medical Documentation II	3	1/2/0
<p>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.</p> <p>Prerequisites: ADMM1104, ADMM1110</p>			
ADMM1200	Medical Office Technology Tools	2	1/1/0
<p>Students will utilize technology that is commonly used in a medical office setting and develop 10-key skills necessary for billing and insurance practices.</p>			
ADMM2104	Medical Language Applications II	3	2/1/0
<p>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.</p> <p>Prerequisites: ADMM1104</p>			
ADMM2122	Medical Office Management	3	3/0/0
<p>This course examines the many responsibilities of a medical office manager. Whether in a small private practice or a large group practice, a medical office manager must be aware of current regulations in the health care industry and how these regulations affect the operations of a health care organization. Office management, business operations, human resources, financial management and marketing for health care organizations are also explored.</p> <p>Prerequisites: ADMM1122</p>			
ADMM2130	Medical Office Career Insight	2	2/0/0
<p>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.</p> <p>Prerequisites: ADMM1122</p>			
ADMM2150	Medicare Coding and Billing Applications	3	2/1/0
<p>This course will teach the principles of Medicare coverage, billing, coding and payment for both inpatient and outpatient services. It will provide students with the knowledge and tools for developing the skills needed to submit accurate claims to Medicare, maintain compliance, prevent potential missed revenue and avoid unnecessary claim and coding denials.</p> <p>Corequisites: ADMM1152</p>			

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COURSE DESCRIPTIONS

ADMM2152	Advanced Coding	4	2/2/O
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			
ADMM2154	Hospital Billing	2	1/1/O
This course covers billing processes related to the hospital claim form. Billing for inpatient, ambulatory surgery and hospital-based outpatient services is covered.			
Prerequisites: ADMM1152			
ADMM2255	Evaluation and Management Coding Practices	1	0.5/0.5/O
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			
ADMM2258	Certified Professional Coder Examination Review	1	1/0/O
This course prepares students to take the Certified Professional Coder (CPC) examination offered by the American Academy of Professional Coders (AAPC). Review of Current Procedural Terminology (CPT), International Classification of Diseases (ICD) and Healthcare Common Procedure Coding System (HCPCS) Level II coding is 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. This course also prepares students to take other nationally recognized coding examinations.			
Prerequisites: ADMM1152			
ADMM2320	Medical Office Capstone	1	0/1/O
This course is a capstone experience for students enrolled in a medical administrative program. Medical office responsibilities such as appointment scheduling, registration, health information management, and billing and financial operations are included in this project-based course. It is recommended that students take this course near the end of their program.			
Prerequisites: ADMM1122			
ADMS1110	Word Processing	3	2/1/O
This course introduces students to the word processing techniques needed to facilitate the creating, producing, editing and storing of documents. The course stresses increased proficiency in the computer production of business documents.			
ADMS1116	Business Communications I	3	2/1/O
This course prepares students for oral, written and non-verbal business communication skills and competencies required within the workplace. Students will apply proper business formats in memos, letters and other business documents using the direct, indirect and persuasive approaches in both formal business and social business style formats. The principles of grammar, punctuation, spelling and word usage will be applied and developed to gain a greater mastery to impart information professionally while matching style and tone in business writing. Other topics may include strategies for internal and external communication situations, audience analysis and communication through technology individually or within teams.			
Prerequisites: Placement by assessment into ENGL1101			
ADMS1410	Office Administration	3	3/1/O
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, project management and safety in the workplace. Topics will focus on professional practices occurring in the modern work environment using technology applications.			
ADMS1240	Presentations and Desktop Publishing	3	2/1/O
This course introduces the concepts, terminology, techniques and applications of presentations and desktop publishing and incorporates advanced document processing skills. Students will create a slide show to present information. Students will enter text, add and delete slides, format and design themes, and present information in a variety of methods. Students develop skills in critical thinking, decision making and creativity while planning, designing and evaluating business presentations and documents.			

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COURSE DESCRIPTIONS

ADMS2200	Office Administration Capstone	2	1/1/0
This course is a capstone experience designed to advance, enhance and reinforce software skills for the office professional with extensive integration of applications using word processing, spreadsheets, databases, presentations and basic office operations. This course will improve the office professional's confidence in software applications by cultivating analytical, critical-thinking and problem-solving skills required in the office setting.			
AGRI1100	Principles of Agronomy	3	3/0/0
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.			
AGRI1170	Introduction to Agribusiness	3	3/0/0
This course is an introduction to the economic environment of the agribusiness sectors of our economy. The course examines the role agriculture plays in the U.S. and global economies. Concepts to be examined include but are not limited to management of agribusiness, marketing of agribusiness, finance of agribusiness and government involvement in agriculture and agribusiness.			
AGRI1200	Introduction to Animal Science	3	3/0/0
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.			
AGRI1300	Introduction to Precision Agriculture	3	3/0/0
In this course, students study the theory and principles of precision agriculture equipment, become familiar with the Global Positioning System (GPS) and develop a working knowledge of variable rate systems. Students gain a general overview of current and emerging technologies in precision agriculture as they relate to farm operations and production agriculture.			
AGRI2100	Agricultural Commodity Marketing	3	3/0/0
This course acquaints students with an understanding of market forces and their relationship to price establishment of agricultural crops, organization of markets, marketing policy and price trends of agricultural commodities.			
Prerequisites: BUS2206			
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			
AGRI2300	Farm Records and Business Analysis	3	3/0/0
This course introduces the business of agriculture and computerized record keeping. This is an applied course of record keeping and financial statements. Students will utilize computerized records (cash and accrual accounting), manage inventories and generate financial documents. Topics include calculation of earnings, efficiency factors, total business and enterprise analysis.			
Prerequisites: ACCT2211			
AMST1101	Automotive Equipment Fundamentals	2	1/1/0
This course is designed to give the student 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.			
AMST1102	Alignment and Suspension I	3	1/2/0
This course focuses on the varied suspension systems currently in use, including McPherson strut, leaf spring, coil spring and torsion bar. Also covered will be caster, camber and toe, and other alignment angles; wheel balance using the latest road force technology; and operation, diagnosis and repair of manual and power steering systems.			
Corequisites: AMST1101			
AMST1105	Brakes I	3	1/2/0
This course teaches the basic principles of disc and drum brakes, hydraulic systems, parking brakes and power assist units. Emphasis is placed on operation, diagnosis and repair of various types of brake systems. Basic operation of anti-lock brake systems will be covered.			
Corequisites: AMST1101			

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COURSE DESCRIPTIONS

AMST1110	Batteries, Starting and Charging Systems	2	1/1/0
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This course involves the understanding and servicing of batteries, charging systems and starting systems. The student will perform tests on these items using bench testing and vehicle testing. Students also will disassemble and reassemble components so they understand how those items operate. Students will determine cost of replacement versus repair.

Corequisites: AMST1101, AMST1111

AMST1111	Automotive Electronics	3	2/1/0
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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.

Corequisites: AMST1101

AMST1114	Basic Maintenance Service	1	1/0/0
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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.

AMST1122	Engines I	3	2/1/0
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This course covers the fundamentals of internal combustion engine operation, repair and maintenance. The procedures for removal, replacement, diagnosing, rebuilding and assembly are presented. Proper tool and equipment application and failure diagnosis are emphasized.

Corequisites: AMST1101

AMST1126	Engines II	3	1/2/0
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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.

Corequisites: AMST1101, AMST1122

AMST1132	Drivetrains I	3	1/2/0
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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.

Corequisites: AMST1101

AMST1136	Drivetrains II	3	1/2/0
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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.

AMST2201	Alignment and Suspension II	3	2/1/0
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This is a continuation of Alignment and Suspension I. The student will perform repairs and adjustments pertaining to wheel alignments and work with electrical sensors and controls affecting a vehicle's stability control. Diagnostics and repair of steering columns and supplemental restraints also will be covered.

Corequisites: AMST1101, AMST1102 AMST1111

AMST2206	Body Electrical and Mechanical I	3	1/2/0
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This course teaches diagnosis and repair of interior and exterior lighting, safety devices, comfort systems, and door, window and seat control systems. The student will use wiring diagrams to pinpoint body electrical concerns. Window, door and seat control service will be performed, and common vehicle accessories will be addressed.

Corequisites: AMST1101, AMST1111

AMST2210	Body Electrical and Mechanical II	2	1/1/0
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This course focuses on computer-controlled body components and safety systems. Diagnostics will involve the use of scan tools, multimeters and lab scopes applied to a variety of body controlled devices. Students will learn how controllers communicate with each other through bussed circuits.

Prerequisites: AMST1101, AMST1111, AMST2206

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COURSE DESCRIPTIONS

AMST2211	Exhaust Analysis and Fuel Systems	3	2/1/0
<p>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.</p> <p>Corequisites: AMST1101, AMST1111</p>			
AMST2214	Electronic Powertrain Control I	3	2/1/0
<p>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.</p> <p>Corequisites: AMST1101, AMST1111</p>			
AMST2218	Electronic Powertrain Control II	3	1/2/0
<p>Students in this course will study the many electronic control systems used on today's passenger cars and light trucks. Second-generation on-board diagnostic strategies will be covered for ignition, fuel and emissions systems. The course will also incorporate hybrid technology, high-pressure gas fuel injection and diesel injection operation and testing.</p> <p>Prerequisites: AMST1101, AMST1111, AMST2214</p>			
AMST2220	Ignition Systems	3	2/1/0
<p>This course will cover the operation of ignition systems. Students will learn how various ignition systems work so they will have the understanding to diagnose and repair ignition problems.</p> <p>Corequisites: AMST1101, AMST1111</p>			
AMST2225	Brakes II	3	2/1/0
<p>This class is a continuation of AMST 1105 Brakes I. Students will look at a progression of anti-lock brake, traction control and electronic stability control systems and manufacturer variations of these systems. Students will perform scan tool diagnostics, circuit analysis, circuit repair and bleeding procedures involving anti-lock brake systems. Student will perform on-car operations with brake part replacement, machining of drums and rotors, and hydraulics.</p> <p>Corequisites: AMST1101, AMST1105, AMST1111</p>			
AMST2233	Automatic Transmissions I	3	2/1/0
<p>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.</p> <p>Corequisites: AMST1101, AMST1111</p>			
AMST2237	Automatic Transmissions II	3	1/2/0
<p>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.</p> <p>Corequisites: AMST1101, AMST1111, AMST2233</p>			
AMST2240	Heating, Ventilation and Air Conditioning	3	1/2/0
<p>This course teaches the principles of heating, air conditioning and ventilation systems. Types and designs, component variations, diagnosis, testing and repair are studied and practiced on functioning units. System performance, recovery, evacuation and recharging are also covered in depth.</p> <p>Corequisites: AMST1101, AMST1111</p>			
ANTH1100	Introduction to Anthropology	3	3/0/0
<p>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.</p>			
ANTH2101	Health, Culture and Diversity	3	3/0/0
<p>This course meets MnTC Goal Areas 5 and 8. This course is designed to provide students with an introduction to the relationship between culture and health, fundamental principles and topics in global health, determinants of health, the identification of critical global health challenges, measures of the global burden of disease, health systems, international public health organizations, and the application of cultural diversity concepts to health promotion.</p>			

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COURSE DESCRIPTIONS

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.			
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			
ARCH2218	Architectural Internship	3	0/0/3
This course provides the student with an occupational experience in the architectural technology field. Each internship is an individualized experience.			
Prerequisites: ARCH1126			
ARCH2222	Architectural Drafting Service Learning	4	2/2/0
This course provides the opportunity for students in the Architectural Drafting & Design program to work on real-life projects. These projects combine learning objectives with community service in order to provide a pragmatic, progressive learning experience while meeting societal needs.			
Prerequisites: ARCH1122, ARCH1126			
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: ARCH1122, ARCH1126			
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: ARCH1122, ARCH1126			
ARCH2236	Architectural Presentation	2	0/2/0
Students in this course will develop design schematics and a set of presentation drawings for a commercial project. Emphasis is on verbal and visual presentation techniques.			
Prerequisites: ARCH1122, ARCH1126			
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			
ARCH2244	Commercial Projects	4	1/3/0
This course covers the construction document process for commercial building design while having the student complete a self-guided capstone project. Content will include final detailing, scheduling and sheet set layout from a given design developed project.			
Prerequisites: ARCH2226, ARCH2240			
ARCH2250	Project Administration	2	1/1/0
This course provides an understanding of architectural firm structures and legal issues as well as project management procedures used throughout documentation, bidding and construction administration.			
Prerequisites: ARCH2226			
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.			

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COURSE DESCRIPTIONS

ART1107	Foundations of Art, 2-D	3	2/1/0
Meets MnTC Goal Areas 2 and 6. This course is an introduction to creative thinking, interpretation and self-expression. Students will explore basic two-dimensional elements and principles through the use of various media, tools, materials and processes. Color theory will be introduced.			
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.			
ART1110	Introduction to Art	3	2/1/0
Meets MnTC Goal Area 6F. This course provides an introduction to the elements and principals of visual arts and to the creative process. Students are encouraged to use a variety of media in drawing, painting and sculpture.			
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.			
ART1127	Art History: Prehistory to the Middle Ages	3	3/0/0
Meets MnTC Goal Areas 2, 6 and 8. This course is a survey of architecture, painting and sculpture and their historical and social contexts. Specific periods from prehistoric through the Middle Ages will be introduced.			
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.			
ART1129	Art History: African, Asian, Islamic and Mesoamerican	3	3/0/0
Meets MnTC Goal Areas 2, 6 and 8. Students will explore the influences and philosophies that have impacted art in regions outside of the Western world. Topics vary but will include the origins and historic development of art in African, Asian, Islamic and Mesoamerican cultures.			
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.			
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.			
ART1985	Introduction to Screen Printing	3	2/1/0
Meets MnTC Goal Areas 2 and 6. Students will explore screen printing processes, techniques and materials, including image-making, stencil production, editioning and mixing ink.			
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.			
ART2001	Art and the Environment	3	3/0/0
Meets MnTC Goal Areas 6 and 10. Students will explore works of land or earth art and architecture from historical, contemporary, and environmental contexts. Topics vary but will include the origins and development of land and earth art and architecture in the Americas and their interrelationships with and effects on ecosystems, landscapes, and cultures.			
ART2115	Introduction to Digital Photography	3	3/0/0
Meets MnTC Goal Areas 2 and 6F. This course introduces students to digital photographic equipment, materials, programs, processes and philosophies while examining photography and its role in historic and contemporary cultures, with a focus on artistic content. Digital photographic and presentation processes are explored, and artistic rationale and execution are examined. Students will acquire, identify and demonstrate the use of terminology, technical abilities, basic visual elements and principles of design common to digital photographic artwork.			

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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.			
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			
ASL1100	Introduction to Deaf Studies	3	3/0/0
This course introduces the language and culture of the Deaf and provides a general introduction to the lives of Deaf people. It covers key concepts within Deaf Studies, the diversity of Deaf community members, technology used by the Deaf and professions involving American Sign Language (ASL) and Deaf people. Students will analyze existing stereotypes related to Deaf and hard-of-hearing people and the cultural impacts of being Deaf.			
Prerequisites: Assessment into ENGL1101			
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			
ASL1102	American Sign Language and Deaf Culture II	3	3/0/0
This is the second in a series of courses designed to develop the skills and knowledge needed to communicate in American Sign Language (ASL). ASL 1102 will focus on vocabulary development, fingerspelling, numbers and grammatical structure. This course includes further practice with both expressive and receptive ASL, along with additional information about the Deaf Community and Deaf Culture.			
Prerequisites: ASL1101, Grade of B or better in ASL1101.			
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			
ASL1104	American Sign Language and Deaf Culture IV	3	3/0/0
This course, the fourth in a series of American Sign Language (ASL) and Deaf culture courses, focuses upon the grammatical features of ASL and vocabulary expansion. Content of this course will focus on sentence construction, inflecting verbs and classifiers. Fluency and accuracy of fingerspelling will continue to be developed, along with the use of lexicalized signs and numbering.			
Prerequisites: Grade of B or better in ASL1103			
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			
BIOL1104	Biology of Human Concerns	3	2/1/0
Meets MnTC Goal Areas 2 and 3. This course explores issues related to human biology with reference to genetics, nutrition, health, disease or other contemporary issues. Elements of molecular, cell and organismal biology are introduced as needed to understand the topics studied. This course is intended for non-science majors and consists of lecture and laboratory components.			
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.			

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BIOL1108	Environmental Science Issues Lab	1	0/1/0
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Meets MnTC Goal Areas 2, 3 and 10. This course includes laboratory work completed in conjunction with BIOL 1107 Environmental Science Issues. Laboratory experiences may include lab and field exercises, computer simulations and collection and analysis of data related to current environmental issues and their possible solutions. This optional lab must be taken concurrently with BIOL 1107.

BIOL1122	General Biology I	4	3/1/0
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Meets MnTC Goal Areas 2 and 3. This course is an introduction to the structure and function of living systems with an emphasis on cellular and molecular biology. Fundamental concepts include the chemical basis of life, cell structure and function, cell division, metabolism, classical and molecular genetics, and biotechnology. This course includes a laboratory component incorporating experimental design, microscopic work, and cellular and molecular biology techniques. Along with BIOL1123, this course is part of a two-semester sequence of general biology that can be taken in any order.

Prerequisites: Assessment into ENGL 1101 or college level writing equivalent.

BIOL1123	General Biology II	4	3/1/0
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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.

BIOL1170	Essentials of Human Anatomy and Physiology	4	4/0/0
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Meets MnTC Goal Area 3. This course introduces students to the structure and function of the human body using an organ system approach. Beginning with the levels of biological organization, study will proceed through the following organ systems: integumentary, skeletal, muscular, nervous, sensory, endocrine, cardiovascular, lymphatic and immune, respiratory, digestive, urinary, and reproductive systems. This course is open to all students desiring a greater understanding of human anatomy and physiology; however, it is specifically designed for students pursuing health care-related programs such as Pharmacy Technology and Massage Therapy. This course contains a lab-like component.

Prerequisites: Successful completion of or assessment into ENGL 1101

BIOL2010	General Ecology	4	3/1/0
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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

BIOL2202	Principles of Nutrition	3	3/0/0
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Meets MnTC Goal Areas 2 and 3. This course is a study of the fundamental principles of nutrition. This course will cover food composition, diet planning, utilization of food nutrients in the body and the requirements for nutrients in infancy, childhood, teen years, athletes, adults and the elderly. Also included are discussions about current trends in nutrition, the relationship of diet and disease, and cultural differences in dietary practices. Using the basic principles of nutrition, students will have a lab-like experience tracking, measuring, calculating and analyzing their diet and presenting the results in a written analytical report.

Prerequisites: CHEM1100 or CHEM 1111 or BIOL1122 or BIOL2260 or Instructor Permission

BIOL2220	General Microbiology	4	3/1/0
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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

BIOL2240	Genetics	4	3/1/0
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Meets MnTC Goal Area 3. This course is a study of the basis of heredity with emphasis on modern molecular and classical Mendelian genetics. It is open to all students but is recommended for students majoring in biology and health-related areas. This course includes a laboratory which explores molecular and classical genetic techniques.

Prerequisites: BIOL1122

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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.			
BIOL2261	Human Anatomy and Physiology I Lab	1	0/1/0
Meets MnTC Goal Area 3 when taken with BIOL 2260. This course is the laboratory component of a comprehensive introductory overview of human anatomy and physiology that includes basic fundamental concepts of cell biology, tissues and organs making up the integumentary, skeletal, muscular and nervous systems. This course is the first of a two-semester sequence in which anatomy and physiology are studied with an emphasis on structure and functions of systems.			
Prerequisites: Assessment into ENGL 1101 or college level writing equivalent.			
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			
BIOL2263	Human Anatomy and Physiology II Lab	1	0/1/0
Meets MnTC Goal Area 3 when taken with BIOL 2262. This course is the laboratory component of a comprehensive introductory overview of human anatomy and physiology that includes basic fundamental concepts of cells, tissues and organs making up the endocrine, cardiovascular, respiratory, digestive, urinary and reproductive systems. This course is the second of a two-semester sequence in which anatomy and physiology are studied with an emphasis on structure and functions of systems.			
Prerequisites: Assessment into ENGL 1101 or college level writing equivalent, BIOL2260, BIOL2261			
Corequisites: BIOL2262			
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.			
BIOL2268	Medical Microbiology Lab	1	0/1/0
Meets MnTC Goal Area 3. This laboratory course includes the fundamental techniques of cultivation, staining, biochemical analysis and identification of known and unknown bacterial isolates, and antimicrobial susceptibility testing. Morphological examination and pathogenesis of fungi, protozoans and helminths are also addressed.			
Prerequisites: Assessment into ENGL 1101 or college level writing equivalent.			
Corequisites: BIOL2267			
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			
BDLG1114	Blueprint Reading I	2	2/0/0
This course provides the student with a working knowledge of blueprints and specifications. The student gains an understanding of blueprints, then interprets and applies this knowledge to job situations.			

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BUS1100	Business Computers	3	2/1/0
Students will utilize business computer software applications including word processing, spreadsheets, databases and presentation software to solve business problems, emphasizing professional design and organization. Additional topics include basic computer hardware, computer security and ethics, privacy concerns and professional communication standards.			
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.			
BUS1146	Personal Finance	3	3/0/0
This course is an introduction to personal financial management and planning. Topics covered include key factors that affect personal income, budgeting, cash-flow management, use of credit and credit cards, planned borrowing, managing taxes and major expenditures including housing, automobiles, insurance and investments.			
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.			
BUS2150	Legal Environment of Business	3	3/0/0
This course offers an overview of the American legal system and provides an introduction to what a business person should know about the law and the American legal system. Major content areas include the court system, trial process, alternative dispute resolution, business and the Constitution, the administrative process, torts and product liability, common law of contracts, employment law, employment discrimination, anti-trust law, international business and ethics.			
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.			
BUS2206	Principles of Marketing	3	3/0/0
This course examines the business function of marketing and will enhance students' decision-making skills in a global market. The course focuses on how marketers create value by satisfying customer needs and wants by analyzing which target markets the organization can best serve, and the appropriate strategies to serve these markets. This course will also discuss the implications of environmental factors (including the digital environment) that can impact the marketing strategies of a business. Topics include business and consumer markets, branding and product strategies, marketing research, digital marketing concepts, pricing, promotion and supply chain management.			
BUS2500	Business Internship	3	0/0/3
This internship course is designed to provide the student with a purposeful occupational experience in a business environment related to his or her program of study. A learning plan is created for each student in conjunction with the business site to provide experience related to the skills and knowledge acquired in the program. Each internship is an individualized experience; therefore, this course offers a flexible, variable credit experience: The student may choose from 1, 2 or 3 credits, depending on the number of hours pre-arranged with the internship site supervisor. Each credit will require 45 hours of on-the-job learning.			
Prerequisites: Advisor consent			
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, ENGL101			
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			

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CADD1400	Introduction to SolidWorks	3	2/1/0
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This course will introduce students to the part modeling and drawing layout tools in Dassault's SolidWorks design software. Students will 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

CADD1410	Introduction to Autodesk Inventor	3	2/1/0
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This course will introduce students to the part modeling and drawing layout tools in Autodesk's Inventor software. Students will 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

CADD2120	Visual Communications for Engineers	3	3/0/0
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This course covers the basic visualization, design and detailing concepts needed for engineers in modern industry. The course will teach students basic sketching, part modeling and assembly modeling techniques, as well as standard view layouts, auxiliary and section views, and standard dimensioning and tolerancing practices using an industry-recognized 3D solid modeling program.

Prerequisites: ENGR2210

CHEM1100	Fundamental Concepts of Chemistry	3	2/1/0
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Meets MnTC Goal Areas 2 and 3. Course deals with substances, their structures and properties, the changes they undergo and the laws that govern those changes. Intended for prospective elementary teachers, non-science majors and those who need background for General Chemistry. This course includes a lab.

Prerequisites: MATH0095

CHEM1111	General Inorganic Chemistry I	5	4/1/0
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Meets MnTC Goal Areas 2 and 3. This course is the first of a two-course series (CHEM1111 and CHEM1112). Students will learn the general chemistry principles: atomic structure, stoichiometry, solutions, bonding, thermochemistry, electronic structure, periodic properties of the elements, intermolecular forces and properties of solids, liquids and gases. The course includes a lab.

Prerequisites: Instructor permission for students who do not score high enough on the placement exam for placement into Chem1111 but wish to enroll in Chem1111. Students with this permission must co-register for Chem 0095.

CHEM1112	General Chemistry II	5	4/1/0
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Meets MnTC Goal Areas 2 and 3. This course is the second of a two-course series (CHEM1111 and CHEM1112) intended for science majors. Students will learn the general chemistry principles: intermolecular forces, properties of solids and liquids, solution chemistry, kinetics, chemical equilibrium, acid-base equilibrium, solubility equilibrium, thermodynamics, electrochemistry, nuclear chemistry, and possibly coordination chemistry and an introduction to environmental chemistry. The course includes a lab. Students completing the two-semester sequence will be competent in all the areas listed in General Chemistry I & II of the Minnesota State Chemistry Transfer Pathway.

Prerequisites: CHEM1111, MATH1114

CHEM2224	Organic Chemistry I	5	4/1/0
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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

CHEM2225	Organic Chemistry II	5	4/1/0
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Meets MnTC Goal Areas 2 and 3. This course is the second of a two-course series (CHEM2224 and CHEM2225). Students will learn the reactions and characteristics of various organic chemistry groups. The following topics will be included: functional groups, nomenclature and preparation, structure and reactivity, reaction representation and interpretation, reaction considerations and spectroscopy. The course includes a lab which will include purification, synthesis and characterization of organic compounds and the study of organic reactions. Green chemistry techniques will be practiced whenever possible.

Prerequisites: CHEM2224

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COMM1120	Introduction to Public Speaking	3	3/0/0
Meets MnTC Goal Area 1. This course clarifies the process of oral communication, clarifies the basic principles of public speaking and allows the student to increase the application of these principles while both speaking and listening.			
Prerequisites: Assessment into ENGL 1101			
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			
COMM1140	Interpersonal Communication	3	3/0/0
Meets MnTC Goal Area 1. This course will focus on improving students' abilities to communicate effectively in one-to-one dyadic encounters by providing experience-based instruction. Extensive in-class and out-of-class analyses allow the student to examine his/her own and others' informal social interactions. The long-term goal is for the student to apply interpersonal communication theories to daily interactions and draw his/her own conclusions about the effectiveness of interpersonal communication.			
Prerequisites: Assessment into ENGL 1101			
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 worldviews. 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			
CONM1101	Construction Documents and Codes	3	2/1/0
This course provides an introduction to understanding construction drawings, specifications, processes and building codes.			
CONM1102	Site/Building Layout	2	1/1/0
This course provides the student with the basic knowledge and hands-on skills necessary to lay out a building site and establish elevations for construction.			
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.			
CONM1108	Principles of Estimating	4	2/2/0
This course focuses on the basics of material, labor and equipment estimating. Students will learn to calculate the quantities of material comprising a project. These quantities will determine the primary portion of the direct costs used in a construction bid. This process will be the first step in completing accurate bids for construction projects of all sizes.			
Prerequisites: CONM1101			
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.			
CONM2204	Materials Testing	3	1/2/0
This course covers inspection techniques, methods of material measurement, documentation, material sampling and testing methods for soils and concrete.			
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.			
Corequisites: CONM2217			

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CONM2212	Site Management	3	3/0/0
This course covers construction site management from the standpoint of best utilization of site, facilities and services in a safe and efficient manner to complete construction projects.			
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.			
CONM2217	Computer Estimating and Bidding	3	2/1/0
This course is designed to utilize computer estimating software such as spreadsheets, databases and industry-leading software to produce competitive, timely and complete construction bids.			
Corequisites: CONM2210			
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.			
COSM1000	Principles and Practices	3	3/0/0
This course is intended for manicurists, estheticians and some transfer students. In a condensed form, this course will include the topics of chemistry, electricity, salon business, professional image, anatomy and infection control.			
COSM1002	Client Consultations	1	1/0/0
This course is for cosmetology and esthology students. Students will develop the skills necessary for a successful client consultation to achieve the client's desired outcome.			
COSM1003	License Preparation	1	1/0/0
This course prepares students to take the general theory, state and written practical exams issued by the Minnesota State Board of Cosmetology. Students will review safety and infection control; client consultation and professional conduct; hair, skin and nail anatomy; shampooing; conditioning; scalp care; hairstyling; haircutting; hair coloring; chemical texture services; esthetics; and nails. Students will be taught to identify the areas where they need the most review and use outside texts to help them maximize their learning potential. A study guide and sample test questions will be used to exemplify the Minnesota state license exams. Students will be encouraged to apply to take their Minnesota state boards after they receive their diploma/certificate. This course can be repeated for credit up to three times for students licensing in more than one field.			
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.			
COSM1005	Hair Reformation	1	1/0/0
In this course, students will learn how to permanently or semi-permanently straighten overly curly hair. Students will learn the various types of sodium hydroxide relaxers, thio relaxers including Japanese straightening systems, and keratin treatments including Brazilian blowouts.			
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.			
COSM1007	Gel Nail Applications	1	1/0/0
This course provides an introduction to gel applications for cosmetology and nail technology students. Students will understand the procedures for tips with overlays, natural nails and sculpted nails using various types of gel enhancement products.			
COSM1010	Eyelash Extensions	1	1/0/0
This course is for cosmetology students, esthology 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.			
COSM1100	Salon Safety	1	1/0/0
This course is for students pursuing a cosmetology, esthology, nail technology and eyelash technology career. Students will learn the necessary precautions and safety measures to ensure a safe working environment. Students must pass all applicable sections of the Infection Control Practical Skills test prior to providing services on live models during preclinical training and prior to providing services on the client clinic floor.			

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COSM1109	Skin Analysis	1	1/0/0
This course is for cosmetology and estheology students. Students will learn how to perform a skin analysis and determine skin types. Client skin analysis is an important part of an esthetician's or cosmetologist's skills, since recommending the appropriate skin care products and regime must be individualized for each person.			
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.			
COSM1119	Haircutting	1	1/0/0
This course will help students develop a strong foundation in haircutting. Students will learn basic sectioning and cutting techniques, along with correct use of scissors, razors and clippers to achieve a strong foundation in haircutting.			
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.			
COSM1130	Properties of the Hair and Scalp	1	1/0/0
In this course students will learn the different layers of the hair and how it can be damaged. It is essential for students to be able to analyze a client's hair, determine what type of damage the hair has experienced and prescribe corrective treatment.			
COSM1157	Histology of the Skin	1	1/0/0
In this course students will learn the basic structure of the skin and its function. Students will learn how to conduct services in a safe environment and how to take measures to prevent spreading infectious and contagious diseases.			
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.			
COSM1161	Nail Structure and Growth	1	1/0/0
In this course students will learn the structure of the nail, how to recognize various disorders and which disorders can be serviced in the salon.			
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.			
COSM1171	Principles of Hair Design	1	1/0/0
This course will give students an understanding of design and how to incorporate design into creating a pleasing hairstyle for each client's facial features.			
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.			
COSM1200	Salon Practicum	1-18	
In this course, students will work in a licensed salon in order to meet the required 1,550 hours of salon experience stipulated by the State Board of Cosmetology. Students will use this course to supplement their existing salon experience. Credits will be awarded to reflect the number of additional hours the student works in order to meet the state requirements.			
COSM1202	Salon Practicum Nail Technician	1--6	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 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.			
COSM1203	Salon Practicum Esthetician	1--11	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 the procedures of cosmetic care of the skin, client consultation and skin analysis, applications of facials and makeup, waxing, and eyelash extensions. 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.			
Pre/Corequisites: COSM1100, COSM1179			

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COSM1204	Salon Practicum Hair Technician	1--16	N/A
In this course, students will work in a licensed school salon to meet requirements stipulated by the State Board of Cosmetology. The hair technician course must include 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.			
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.			
COSM2000	Artistry in Hairstyling	1	1/0/0
This course focuses on the various types of non-surgical hair additions. Students will learn about the care and styling of wigs and basic braiding procedures to create hairstyles that are pleasing to clients.			
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.			
COSM2004	License Preparation Esthetician	1	1/0/0
This course will prepare the esthetician 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. Esthetician 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.			
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.			
COSM2100	Chemical Texture Services	1	1/0/0
Students will learn about hair relaxation and wave formation techniques in accordance with manufacturers' directions. Other topics in the course include consulting with clients to determine their needs and preferences and the importance of conducting chemical services in a safe environment.			
COSM2200	Manicuring/Pedicuring	1	1/0/0
In this course students will learn basic manicuring and pedicuring procedures. Students will understand the importance of providing services in a safe environment.			
COSM2300	Cosmetology Anatomy	1	1/0/0
Cosmetology is primarily limited to the skin, muscles, nerves, circulatory system and bones of the head, face, neck, shoulders, arms, hands, lower legs and feet. In this course students will understand the anatomy of these areas to help develop the necessary techniques to be used during scalp massages, facials, manicures, pedicures and shampoo services.			
COSM2400	Advanced Nail Techniques	1	1/0/0
In this course students will learn how to conduct a client consultation to determine client needs and preferences. Students will learn about a variety of salon products that will enable them to provide nail services to clients.			
COSM2500	Salon Business	1	1/0/0
In this course students will learn how to manage their time to provide efficient client services. Students will learn the necessary steps to retain clients and how to market salon products and maintain business records.			
COSM2800	Alexandria Body Sugaring	1	1/0/0
In this course students will learn how to remove hair using the Alexandria Professional Body Sugaring advanced system. The course includes theory and thorough knowledge of the correct techniques employed in the practice of body sugaring.			
CPTR1001	Introduction To Programming and Scripting	3	1/2/0
This course is an introduction to computer programming. Emphasis will be on programming concepts, program design methodology, program debugging, problem solving and writing clear code.			

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COURSE DESCRIPTIONS

CPTR1040	Introduction to Programming Logic	3	2/1/0
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.			
CPTR1103	Introduction to Assistive Technology	3	3/0/0
This course explores the design, development and use of technology that benefits people with disabilities. Students will gain a general understanding of the various assistive and adaptive technologies utilized to improve or develop functional communication and daily living skills for individuals with disabilities. Throughout this course, case studies will be used to illustrate application of principles and theories in assistive technology.			
CPTR1104	Introduction to Computer Technology	3	2/1/0
This course covers the operation of personal computer hardware and software. It provides an overview of a personal computer operating system and word processing, spreadsheet, presentation, email, scheduling, Internet and database management software.			
CPTR1106	Microcomputer Databases	3	2/1/0
This course covers database concepts, design and construction using the latest database software. Topics include database normalization and table relationships, database objects, file creation, file manipulation, queries, macros, form development and report generation. Database programming concepts will also be introduced.			
CPTR1108	CISCO 1	3	1/2/0
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.			
CPTR1115	COBOL Programming	4	3/1/0
This course provides an overview of the COBOL programming language. Students will gain a solid foundation in the fundamentals of COBOL coding including knowledge of COBOL syntax, program structure, program design, execution and debugging. Maintenance and modification of typical business applications will also be coded throughout the course.			
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			
CPTR1121	Information Technology Service Desk	3	2/1/0
This course is an introduction to the IT service desk and user support. Students will be introduced to all aspects of the service desk including the roles, responsibilities, skills needed and role of certifications for the service desk support professional. This course places an emphasis on customer service skills, techniques to develop the necessary skills and application of the skills to difficult customer situations.			
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.			
CPTR1125	IT Essentials I	3	1/2/0
This course is designed for students seeking entry-level computer hardware and software skills. Target students include those who want to prepare for careers in information and communication technology (ICT) and students who want to gain skills and working knowledge of how computers work, how to assemble computers and how to troubleshoot hardware and software issues.			
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.			
CPTR1130	IT Essentials II	3	1/2/0
This is an advanced course for computer hardware, including desktop and laptop personal computers, operating systems, basic IT security and basic networking fundamentals. Topics covered include computer hardware and operating system configurations, building a basic network, networking technologies and protocols, and preventive maintenance and troubleshooting of information technology hardware, software, security and networked devices.			
Prerequisites: CPTR1125			

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COURSE DESCRIPTIONS

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.			
CPTR1148	Microcomputer Operating System	3	1/2/0
This course covers basic information about computer hardware and software and the use of the Windows operating system. Topics include file management techniques, utilizing common screen elements, multitasking, object linking and customizing the desktop.			
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			
CPTR2100	Supporting End-User Applications	3	2/1/0
This course emphasizes the knowledge, skills and abilities necessary to improve the productivity of the computer user. Students will learn about providing support for the user's computer including the operating system and the software applications installed on the computer.			
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			
CPTR2210	Database Report Generation	3	2/1/0
This course is an introduction to database reporting using commonly used tools. Examples include Microsoft Structured Query Language (SQL) Reporting Services, Comma-Separated Values (CSV), Microsoft Access and Excel, and Crystal Reports. Ethical and security concerns and challenges of database reporting are covered, along with best practices and business requirements used in database reporting.			
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.			
CPTR2234	Linux II	3	2/1/0
The primary focus of this course is Linux networking, security, ethics and privacy.			
Prerequisites: CPTR2224			
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.			
CPTR2238	Database Integration	3	2/1/0
This course covers the integration of data from multiple databases with strategies for development of integrated database applications. Development of new databases and maintenance of existing databases is covered, in addition to the storage, organization and analysis of data.			
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.			
CPTR2242	Java Programming	3	2/1/0
In this course the student utilizes the Java programming language to create both Internet applets and applications.			
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: CPTR1108			

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COURSE DESCRIPTIONS

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: CPTR2001, CPTR2230			
CPTR2260	Advanced Structured Query Language	3	2/1/0
Students will build upon the skills learned in the Structured Query Language (SQL) class. This course takes on more advanced but common operations such as joins and sub-queries, unions and intersections. Additional topics will include the use of stored procedures and views and appropriate use of these features, proper indexing of data, altering table definitions and use of the CASE statement.			
Prerequisites: CPTR2230			
CPTR2272	Network Operating Systems	3	2/1/0
This course teaches the functions of a network operating system so the student can effectively maintain and manage a network. The student learns how to establish and oversee the operations of a network, create logins, design and establish directory structures and implement security.			
Prerequisites: CPTR1001 or CPTR1122 or CPTR1125 or CPTR1148			
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.			
CPTR2294	Internship	3	0/0/3
This course provides students with the opportunity to apply knowledge and skill sets learned in concurrent coursework. Students will perform activities in an employer-supervised industry setting that is consistent with program outcomes. Students also will utilize interpersonal communication skills within the context of applying knowledge and skill sets.			
Prerequisites: Instructor Approval			
CRJU1101	Introduction to Criminal Justice	3	3/0/0
This course serves as an introduction to the American criminal justice system including police, courts and correctional systems. Minnesota Police Officer Standards and Training Board objectives are also covered in this course.			
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 peacekeeping, law enforcement, community policing and customer service. Minnesota Peace Officer Standards and Training Board learning objectives are also covered.			
CRJU1104	Juvenile Justice and Delinquency	3	3/0/0
This course covers the study of juvenile delinquency, the theories of causation and the methods of corrections. It also examines the juvenile court and correctional systems. Minnesota juvenile law will be explored as it relates to the Minnesota Police Officer Standards and Training objectives.			
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.			
CRJU1108	Physical Control Tactics for Corrections	3	2/1/0
This course will deal with use of force issues relating to correctional officers, defensive tactics and control techniques, proper restraint techniques and less-than-lethal weapons training. Lecture and practical applications are included in the course. Minnesota Police Officer Standards and Training Board learning objectives relating to physical control and less-than-lethal weapons are also covered.			
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.			
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.			
CRJU2201	Criminal Law	3	3/0/0
This is a course in substantive law, including the elements of major crimes and possible legal defenses. This course also familiarizes students with the Minnesota criminal statutes focusing on Minnesota Peace Officer Standards and Training Board objectives.			

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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.			
CPTR2206	Police Report Writing	3	3/0/0
This course provides the technical understanding and practical application in basic police report writing, field note taking and standardized report forms commonly used by law enforcement. Emphasis is placed on developing a clear, concise style in expressing factual, relevant information in an acceptable format relevant to criminal case procedures. Minnesota Police Officer Standards and Training Board learning objectives for police report writing are also covered.			
Prerequisites: ENGL1101 or GSCO1102			
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.			
CPTR2210	Introduction to Criminalistics	3	2/1/0
This is an introduction to the principles involved in the application of scientific and technical methods used in the discovery, review and evaluation of physical evidence. The interpretation of evidence and the linkage to suspects is also covered. Minnesota Police Officer Standards and Training Board learning objectives for collection and preservation of evidence are also covered.			
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.			
CSCI1110	Informatics	3	3/0/0
This course explores how data is gathered and analyzed and how it can be applied to information technology solutions to maximize the benefits of data analysis, including increases in the efficiency and productivity of information systems. Students will explore the social, ethical and personal implications of implementing information technologies and how information processes can impact business on a local and global level.			
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.			
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.			
CSEC2204	Managing Directory Services	3	2/1/0
Directory services provide a central repository for information available on a network. In this course, students will learn that the purpose of a directory is to provide information about people and other resources, which supports the increasingly important function of identity management. Students will learn to automate directory service management functions.			
Prerequisites: CPTR1001 or CPTR1040 or CPTR1122 or CPTR1148			
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			
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			

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COURSE DESCRIPTIONS

DCNH1116	CNH (Case New Holland) Supervised Occupational Experience (SOE) I	3	0/0/3
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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.

DCNH2210	Mobile Hydraulics	4	1/3/0
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This course covers the hydraulic components specific to Case New Holland farm and heavy equipment. This will include hydrostatic transmission, electric over hydraulic control valves and electronic control components. It will also include troubleshooting of live units with proper testing equipment used in up-to-date service centers.

Prerequisites: DSET1100, DSET1112

DCNH1118	CNH (Case New Holland) Supervised Occupational Experience (SOE) II	7	0/0/7
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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.

DCNH2218	CNH (Case New Holland) Supervised Occupational Experience (SOE) III	3	0/0/3
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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.

DCNH2238	Transmissions & Drive Systems	4	1/3/0
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This course covers procedures to test, troubleshoot and rebuild power shift and other specialized transmissions used on agricultural equipment and industrial powered equipment as related to Case New Holland equipment. This course also includes final drives and related components including removal, repair, installation and adjustment of major units and components.

Prerequisites: DSET1110

DCNH2242	Advanced Engines and Fuel Systems	6	2/4/0
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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

DENT1100	Biomaterials	3	2/1/0
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This is a foundation course that provides in-depth instruction and practice in identifying the materials and their purposes and properties as they are used during chairside and laboratory procedures. Material manipulation is a critical requirement of the lab component of this course. Laboratory safety measures and infection control are emphasized.

DENT1102	Dental Anatomy	2	2/0/0
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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.

DENT1103	Introduction for Dental Health Care Providers	2	1/1/0
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The student will be introduced to fundamental knowledge required in the practice of dentistry. Topics to be covered include blood-borne pathogens, concepts and procedures of infection control, medical emergencies, first aid in the dental setting and patient privacy rights.

DENT1104	Dental Health Care Providers II	1	1/0/0
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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.

DENT1106	Dental Radiology Lecture	3	3/0/0
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This course includes an overview of the history of x-ray development and a review of basic mathematics and radiation physics as they apply to x-ray production. Radiographic film and digital image quality are explored. Explanation of darkroom chemistry, radiation asepsis and safety are covered. Other topics include interpretation of normal anatomy, dental film and digital image analysis, radiographic interpretation and evaluation, and quality assurance issues.

DENT1122	Dental Ethics and Jurisprudence	1	1/0/0
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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.

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COURSE DESCRIPTIONS

DET1104	Mechanical Drawing I	4	2/2/0
The objective of this course is to develop students' knowledge and use of machine and mechanical drafting, lettering practices, line identity and application, orthographic projection, dimensioning practices, and detail, section and auxiliary drawings.			
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			
DET1114	Manufacturing Processes	2	2/0/0
This course develops students' understanding of the manufacturing processes utilized for casting, molding, forming, separating and assembling a variety of manufacturing materials.			
DMKT2200	Introduction to Digital Marketing	3	3/0/0
This course provides a broad overview of the digital marketing techniques needed for successful marketing campaigns in a digital economy. Students will gain a fundamental understanding of the digital marketing core principles needed for the 21st century consumer. Topics will include webpage design, analytics, search engine optimization (SEO), pay-per-click, email marketing, social media marketing and mobile marketing. This class prepares students for more advanced digital marketing courses.			
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.			
Pre/Corequisites: BUS2206, DMKT2200			
DMKT2300	Content Marketing	3	3/0/0
Content marketing involves planning, creating and distributing relevant and consistent content to a target audience using digital media. Emphasis will be placed on creating visual content to capture and engage an audience for both consumer and business markets.			
Prerequisites: DMKT2200			
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			
DMKT2320	Search Engine Marketing	3	3/0/0
This course provides information on both the technical and creative elements to improve search engine optimization (SEO) within a digital marketing strategy. Course content will include search engine techniques to improve performance in search queries through organic and paid web page optimization. Emphasis will be placed on web page design, quality content, keyword search and targeting, link building, local search, data measurement and pay-per-click advertising.			
Prerequisites: DMKT2200			
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.			
Pre/Corequisites: BUS2206, DMKT2200			
DMKT2400	Digital Marketing Analytics	3	3/0/0
Marketing analytics is the collection and measurement of data to make better marketing decisions. In this advanced course, students will take an in-depth look at how to collect, measure and analyze the marketing performance of a digital marketing strategy. Students will develop a hands-on understanding of website, social and digital media analytic software and reporting tools.			
Prerequisites: DMKT2200			

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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: DMKT2310, DMKT2320			
Pre/Corequisites: DMKT2300			
DNAS1103	Clinical Assisting I	6	3/3/0
This course includes an orientation to the history of dentistry, educational requirements, credentialing opportunities and professional associations for dental and allied dental careers. The student is provided with instruction in the use of dental equipment, instruments and supplies; principles of four-handed dentistry; concepts of infection control and instrument recirculation; management of medical and dental emergencies; and procedures related to oral diagnosis, preventive dentistry and restorative dentistry.			
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			
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 also is designed to give the student a basic concept of microbiology and disease transmission and a survey of oral pathology and pharmacology. The student will be introduced to the basic concepts of nutrition in the dental profession.			
DNAS1114	Dental Practice Management	2	2/0/0
This course provides the student with instruction in the principles and applications that are related to the management of a dental office. Emphasis is placed on managing patient records through computer-generated charting, financial records, third-party payments, appointment scheduling, inventory and recall systems.			
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			
DNAS1144	Dental Assisting Clinical Affiliations	6	0/0/6
This is a faculty-supervised course at extramural sites with dentists and dental auxiliaries providing ancillary supervision. The student will be provided with clinical experiences by affiliations in general dentistry and/or specialized practices. Emphasis is on professionalism in performing general chairside and advanced intraoral procedures.			
Prerequisites: Acceptance into the dental assisting program.			
DNAS1210	Dental Assisting Radiology Lab I	1	1/1/0
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.			
Corequisites: DENT1106			
DNAS1212	Dental Assisting Radiology Lab II	1	0/1/0
Dental Assisting students will expose digital full mouth series and extra-oral digital radiographs on patients. Lab sessions will allow students to further develop radiographic skills and enhance proficiency in radiographic techniques and evaluation.			
Prerequisites: DNAS1210			

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COURSE DESCRIPTIONS

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.			
DNHY1104	Dental Anatomy Lab	1	0/1/0
This is a lab course which provides opportunities for the student to work with tooth identification and charting systems, intraoral imagery and occlusion assessment. Special topics include survey of dental anomalies and cavity classifications.			
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			
DNHY1108	Oral Histology and Embryology	2	2/0/0
This course covers the study of the microscopic anatomy of the oral tissues and the embryonic development of the face and oral cavity with emphasis on the masticatory system.			
DNHY1110	Principles I	2	2/0/0
This course introduces the student to dental hygiene with emphasis on theory of preventative dentistry, OSHA standards, disinfectant/sterilants, formation of plaque and calculus, patient assessment and an introduction to the caries process and periodontal assessment.			
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.			
DNHY1113	Radiology Lab I	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 and manikins. 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.			
Corequisites: DENT1106			
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			
DNHY1118	Oral Pathology	2	2/0/0
This course covers the study of general processes as well as oral disease processes. Special emphasis is placed on clinical and radiographic recognition of pathology of the oral cavity.			
Prerequisites: Accepted into the dental hygiene program and successful completion of Principles I, II, III; Head and Neck Anatomy; and Oral Histology and Embryology			
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.			
Pre/Corequisites: DNHY1110			
DNHY1123	Dental Hygiene Practice II	5	0/5/0
This course is a continuation of DNHY 1112, Dental Hygiene Practice I, and introduces the student to further instrumentation theory, instrumentation techniques and procedures, clinical protocol, evaluation of medical/dental histories and radiographic surveys as prescribed by a dentist. This course provides opportunity for the student to develop competence in clinical procedures.			
Prerequisites: DNHY1112			

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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			
DNHY1130	Dental Hygiene Principles III	1	1/0/0
In this course, students will study the Minnesota Board of Dentistry delegated procedures for dental hygienists. Topics include intra-oral/extra-oral photography, enamel sealants, periodontal dressing placement, bleaching agents, suture removal and gingival displacement.			
Corequisites: DNHY1132			
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			
DNHY1136	Dental Pharmacology	2	2/0/0
This course introduces dental hygiene students to basic drug categories, pharmacological pain control principles and various anesthesia techniques, with special emphasis on a succinct accounting of drugs as they relate to dentistry.			
DNHY2213	Dental Hygiene Practice IV	6	0/6/0
This course is a continuation of DNHY1132 with emphasis on the treatment of moderate to advanced periodontal disease, the development of speed and an introduction to several advanced dental hygiene techniques.			
Corequisites: DNHY2240			
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.			
DNHY2220	Dental Hygiene Principle V	1	1/0/0
This course is a continuation of DNHY2210 and dental hygiene patient oral risk assessments. Special focus includes topics of interest to the graduating hygienist including smoking cessation, extraoral/ intraoral self exam, resume writing, interview skills, professional development, service to the community and involvement in the professional association.			
Prerequisites: DNHY2210			
DNHY2223	Dental Hygiene Practices 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.			
The student must be accepted into the dental hygiene program and comply with the Dental Program Student/Faculty Handbook.			
Prerequisites: DNHY2213,			
Corequisite: DNHY2246			
DNHY2226	Community Dental Hygiene	4	3/1/0
The lecture portion of this course introduces the student to the disciplines and basic principles of dental public health, epidemiological methods and biostatistical measurement and analysis. The lab portion of this course enables the student to plan, implement and evaluate a community dental hygiene research project and participate in a community dental service project and screening.			
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			
DNHY2240	Clinical Affiliation I	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.			
Corequisites: DNHY2213			

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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.			
Corequisites: DNHY2223			
DSET1100	Diesel Equipment Fundamentals	2	1/1/0
This course is designed to give the student an understanding of a diesel shop environment. Personal and shop safety will be emphasized. Hand tool, pneumatic tool, precision measuring tool and hardware identification, usage and safety will also be areas of study.			
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.			
DSET1106	Fuel Systems	2	1/1/0
This course covers the fundamentals of diesel engine fuel systems identification, minor repair, testing and troubleshooting. Mechanical governor operation, fuel system operation, fuel system/governor adjustments and related engine operation are studied.			
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: TRNS1102 or DSET1100			
DSET1112	Hydraulics I	4	2/2/0
This course covers the fundamentals of hydraulic systems. It is an introduction to hydraulic component operation, maintenance, repair and testing. These systems may be used in agricultural, industrial heavy equipment and trucks.			
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.			
DSET1124	Desiel 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.			
DSET1130	Trans Elec/Start/Charge	4	2/2/0
This course is an introduction to electrical systems. Students will learn how to use DVOMs and their applications. Students will study electrical theory including Ohm's law and its application to electrical systems. The course also introduces service procedures necessary to repair charging and starting system components. Electrical principles are applied to test and troubleshoot complete circuits as well as components of each. Fundamental rebuilding principles and system analysis are emphasized. Safe battery testing and service are performed.			
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.			
DSET1136	Introduction to Diesel Engines	2	0/2/0
This course introduces students to the four-cycle diesel engine. Coursework includes disassembly, inspection, measurement, assembly and adjustment of diesel engines and their components.			
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.			
DSET1144	Electrical Troubleshooting	3	1/2/0
This course is a hands-on troubleshooting course that allows students to apply knowledge of DSET 1130. Students will be required to troubleshoot and repair a variety of equipment and vehicles.			
Prerequisites: DSET1130			

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COURSE DESCRIPTIONS

DSET2200	Introduction to Electronic Control	3	1/2/0
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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

DSET2204	Advanced Electrical and Emission Systems	3	1/2/0
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This course covers failure analysis of electrical systems, the recognition of causes of failures and how to interpret a wiring diagram. Lab activities include the troubleshooting of heavy-duty electrical and emission components, testing, inspecting and repair. Electrical meters will be used to diagnose, locate and repair failures. Lab work may include diagnosis, disassembly, inspection, repair, assembly and testing of program and customer-owned equipment.

Prerequisites: DSET1100, DSET1130

DSET2206	Electronic Controls	3	1/2/0
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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: DSET1130, TRNS1102 or DSET1100, DSET1130

DSET2210	Mobile Hydraulics	4	1/3/0
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This course covers the hydraulic components used in farm and heavy equipment and trucks. This will include hydrostatic transmission, electric over hydraulic control valves and electronic control components. It will also include troubleshooting of live units with proper testing equipment used in up-to-date service centers.

Prerequisites: DSET1100, DSET1112

DSET2238	Transmissions & Drive Systems	4	1/3/0
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This course covers procedures to test, troubleshoot and rebuild power shift and other specialized transmissions used on agricultural, industrial and diesel trucks. This course also includes final drives and related components including removal, repair, installation and adjustment of major units and components.

Prerequisites: DSET1110

DSET2240	Supervised Occupational Experience II	3	0/0/3
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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.

DSET2242	Advanced Engines and Fuel Systems	6	2/4/0
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This course is designed to give students an understanding of medium- and heavy-duty diesel engines manufactured by, but not limited to, Caterpillar, Cummins, Detroit Diesel, Navistar, Volvo and Mercedes Benz. Areas of study include base engine components, intake and exhaust systems, emission control devices, lubrication systems, cooling systems and fuel systems.

Prerequisites: DSET1132, DSET1136

DTRK2238	Transmissions and Drive Systems	4	1/3/0
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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

DTRK2240	Supervised Occupational Experience II	4	0/0/4
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Students will apply skill sets previously learned related to medium- and heavy-duty trucks at a sponsoring dealer or fleet shop. Skill sets will be identified in a training plan developed by industry and instructor.

DTRK2242	Advanced Engine and Fuel Systems	6	2/4/0
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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

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COURSE DESCRIPTIONS

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 will observe children and analyze characteristics of development at various stages. Attention will be focused on theory, developmentally appropriate, best practice and environmental factors that may affect development.			
ECE1109	Health, Wellness and Nutrition	3	3/0/0
This course will guide students in understanding the teacher strategies and skills needed to establish and maintain a physically and psychologically safe, healthy learning environment for young children ages birth through 8. Topics include preventing illness and accidents, handling emergencies, providing health, safety and nutrition educational experiences within the daily routine, meeting children's basic nutritional needs, child abuse and neglect, childhood stress, trauma and current health, safety and nutrition-related issues.			
ECE1111	Diverse Child and Family Relations	3	3/0/0
This course covers the relationship between the caregiver/teacher, child, family and community. Students will explore teaching and environmental strategies that promote understanding and support diverse cultural and family structures. Students will 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: ECE1105, ECE1107, ECE1109			
ECE1113	Behavior Guidance	3	2/1/0
This course provides an examination of the physical and social environments that promote learning and development for young children. It includes an introduction to basic child guidance techniques for individual and group situations. Emphasis is on exploring, observing and practicing problem prevention and positive child guidance strategies through coursework and a lab experience. This course contains an off-site lab experience that will assist in guiding students to obtain the skills necessary to become successful professionals within early childhood settings. All students will be required to obtain and pass a Minnesota background check prior to completing 30 hours at an approved lab site.			
Prerequisites: ECE1105, ECE1107, ECE1109			
ECE1115	Creative Act 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: ECE1105, ECE1107, ECE1109			
ECE2101	Observation and Assessment	3	2/1/0
This course provides the student with an opportunity to observe, assess, record, interpret and develop plans to strengthen the development of children. Students will study then carry out numerous informal and formal methods of observing and assessing children and will construct a child study based on assessments gathered throughout the semester.			
Prerequisites: ECE1111, ECE1113, ECE1115			
ECE2103	Introduction to Special Education	3	3/0/0
Students will examine strategies that support inclusive programs for children and families along with legal and ethical requirements, eligibility and qualification for services, including but not limited to American Disabilities Act and Individuals with Disabilities Education Act, typical and atypical development. Strategies to adapt curriculum to meet the needs of children with developmental differences and cultivate partnerships with families will also be explored.			
Prerequisites: ECE1111, ECE1113, ECE1115			
ECE2105	Internship	3	0/0/3
This course provides an opportunity to apply knowledge and skills in an actual child development setting. Students will observe and assess children's behavior, facilitate free choice play, implement adult-directed learning experiences and maintain professional relationships. This course can be taken only after students have completed the first three semesters of the program or with instructor approval.			
Prerequisites: ECE2101, ECE2103			
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 will research, evaluate, plan and design developmentally appropriate language and literacy-rich experiences for children. Students also will learn teaching strategies utilized to promote literacy development within the program/school setting and home.			
Prerequisites: ECE2101, ECE2103			

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COURSE DESCRIPTIONS

ECHO1050	Intro to Echocardiographic Anatomy and Physiology	1	1/0/0
This course will provide an introduction to anatomy of the cardiovascular system. Students will be introduced to the cardiac cycle, heart and vascular pressures, and the basics of electrophysiology. Students will also learn the medical terminology associated with the cardiovascular system and anatomical locations.			
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.			
ECHO2100	Adult Echocardiography III	3	3/0/0
This course includes an in-depth review of the pathophysiology of heart disease, including congenital heart defects. The role of ultrasound enhancement agents and exercise echocardiography is discussed. Quantitative echocardiography is addressed, including regurgitation assessment, 3D imaging and transesophageal echocardiography.			
Prerequisites: ECHO1110, ECHO1115, ECHO1125			
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: ECHO1100, ECHO1110, ECHO1115, ECHO1120, ECHO1125			
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.			
Corequisites: ECHO2210			
ECHO2225	Adult Echocardiography Clinical II	11	0/0/11
This course provides a continued supervised clinical practicum, increasing proficiency in diagnosing advanced cardiovascular disease. The final goal of this course is to achieve the competency level required to work as an entry-level cardiac sonographer.			
Prerequisites: ECHO2200			
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.			
ECON2210	Macroeconomics	3	3/0/0
This course provides the student with a means to study economic principles as they relate to determinants of national income, national income accounting, business cycles, unemployment, inflation and aggregate expenditures. The course also examines macroeconomic policy and provides information to gain further understanding in the areas of fiscal policy, financial markets, money and banking, monetary policy, international policy and the varying viewpoints that have evolved throughout history, including the Keynesian and Monetarist schools of thought.			
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.			
ED2204	Introduction to Education	3	3/0/0

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COURSE DESCRIPTIONS

This course explores education in America, from early childhood through high school graduation. This course will introduce the historical and philosophical foundations, program types, career opportunities, or developmentally appropriate learning environments, social contexts, curriculum and instruction, standards and assessment, and contemporary issues related to the field. The roles, responsibilities, personal, and ethical characteristics and daily life of teachers, schools and students will be examined. This course includes 32 hours of experience in the field.

ED2208	Drug Education	2	2/0/0
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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

ED2233	Strategies for Working With Individuals With Autism Spectrum Disorder	4	4/0/0
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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.

ELEC1100	Electrical Safety	1	1/0/0
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This course provides students with an understanding of occupational safety practices and requirements associated with working in the electrical industry. It also covers the purpose and enforcement of general safety rules.

ELEC1102	Introduction to Electric Circuit Theory	4	2/2/0
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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.

ELEC1104	Introduction to National Electrical Code	2	2/0/0
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This course provides the student with an introduction to the National Electrical Code. The student develops basic skills and understanding of the National Electrical Code and how it applies to electrical applications in the field.

ELEC1107	Introduction to Residential Wiring	3	1/2/0
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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.

ELEC1108	Electrical Circuit Theory	4	2/2/0
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This course provides the student with an understanding of complex AC circuits, single-phase and three-phase circuit connections, transformer principles and calculations.

Prerequisites: ELEC1102

ELEC1110	Electric Motors and Generators	4	2/2/0
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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

ELEC1112	Residential Wiring	3	1/2/0
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This course provides students with expanded technical understanding and skills necessary for residential wiring. Students will be provided with experience for installations common to residential structures including general receptacles, lighting and designated circuit layout and installation.

Prerequisites: ELEC1107

ELEC1114	National Electrical Code	2	2/0/0
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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

ELEC1116	Conduit/Tool Applications	2	0/2/0
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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

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COURSE DESCRIPTIONS

ELEC118	Electrical Services	3	2/1/0
This course covers requirements and installation of service entrance equipment. Topics include service materials, installation procedures, meters, service and conduit sizes, panel types, bonding, grounding and overcurrent protection.			
Prerequisites: ELEC1104			
ELEC122	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.			
ELEC124	Introduction to Electrical Blueprint Reading	2	1/1/0
This course provides the student with a working knowledge of residential blueprints and specifications. The student gains an understanding of blueprints, then interprets and applies this knowledge to the electrical industry.			
ELEC130	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: ELEC124			
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			
ELEC2205	Introduction to Commercial Wiring	3	1/2/0
This course examines the material and design aspects of commercial wiring. Topics include raceways, boxes, design requirements for conduit layouts, circuit overcurrent protection and lighting.			
Prerequisites: ELEC1104, ELEC1122			
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			
ELEC2208	Programmable Logic Controllers	2	1/1/0
This course covers the theory, operation, installation, hardware, software and practical applications of programmable logic controllers (PLC). Basic PLC programming techniques for counters, timers and sequencers will be presented.			
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			
ELEC2212	Commercial Wiring	3	1/2/0
This course covers materials and design aspects of commercial wiring, in particular lighting and fuse applications. Topics include lighting and lamp installation and selection, fuse selection, special outlets, load schedule, short circuit calculations and emergency illumination.			
Prerequisites: ELEC2205			
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			
ELEC2216	Motor Control Application	3	1/2/0
This course provides an advanced understanding of circuits controlling motors. Topics include jogging, braking, plugging, reduced voltage starting, phase loss protection, latching relays, time delay relays and safety requirements. Lab procedures demonstrate components, circuitry and operation learned in theory. Measured data is recorded and interpreted.			
Prerequisites: ELEC2206			

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COURSE DESCRIPTIONS

ELEC2222	Advanced Programmable Logic Controllers	3	1/2/0
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This course presents practical applications of Advanced Programmable Logic Controllers (APC) with emphasis on advanced programming techniques and analog modules, input devices and hands-on wiring of Programmable Logic Controller (PLC) circuits. PLC programs are created and installed for operation of actual electrical equipment.

Prerequisites: ELEC2208

ELEC2225	Transformers	2	0/2/0
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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

ELEC2230	Electrical Building Information Modeling	2	1/1/0
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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

ELEC2238	Low Voltage Wiring	2	1/1/0
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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.

ELEC2248	Code Applications	2	1/1/0
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This course applies the principles of the National Electrical Code to job-specific situations.

Prerequisites: ELEC1104, ELEC1114

ELEC2250	Special Topics/Projects	2	0/2/0
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The student works with an advisor and instructor to develop a contract with specific goals in areas deemed applicable to the construction electricity industry and the student's career plan. This opportunity may be limited by conditions such as instructor/lab/material availability.

ELL0050	English Language Learner Foundations	4	3/1/0
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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.

ELL0055	Academic Vocabulary	2	2/0/0
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This vocabulary course is for non-native learners of English. Students will learn the vocabulary most frequently used in college-level coursework, as well as the strategies necessary to acquire this vocabulary quickly and efficiently.

ELL0060	English Language Learner Reading	3	3/0/0
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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.

ELL0065	American English Idioms	2	2/0/0
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This vocabulary course is for non-native learners of English. Students will learn common idiomatic expressions used in North American English, with emphasis on expressions grouped by cultural themes. It is designed to develop both language and cultural fluency by exploring the idioms Americans use regularly and the cultural background of those expressions.

ELL0075	American English Pronunciation	2	2/0/0
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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.

ELL1020	English Language Learner Listening Comprehension and Speaking	3	3/0/0
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This course is for non-native learners of English. Students will develop the listening and speaking skills necessary for participating in college-level classroom discussion, incorporating oral presentation and fostering critical listening skills needed for taking notes and understanding lectures.

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COURSE DESCRIPTIONS

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.			
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.			
ELWT1100	Introduction to Lineworker Theory	4	2/2/0
This introductory course provides the student with knowledge of electrical theory including atomic structure, Ohms law, and series and parallel circuits. This course also includes some hands-on dealing with the terminating of underground wire and rigging of ropes used in the electrical lineworker industry.			
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.			
ELWT1104	Electrical Structure Installation	5	2/3/0
This course provides the student with the introductory knowledge and skills necessary to properly install electrical structures with hand tools and with mechanized structure installation machinery.			
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.			
ELWT1108	Construction of Overhead Structures	3	0/3/0
This course provides the student with the technical understanding and skill necessary to construct overhead high voltage structures. Topics include interpretation of industry specification manuals, identification of overhead hardware, construction techniques and tool use.			
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			
ELWT1112	Transformers	2	0/2/0
This course provides the student with the knowledge and skills necessary for mounting and connecting transformers to primary and secondary systems. The course will also cover paralleling of closed and open banks.			
Corequisites: ELWT1110			
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			
ELWT1116	Pole Top and Bucket Rescue	1	0/1/0
This course provides the student with an understanding of procedures necessary to complete a rescue of a line worker disabled while on a pole or in an aerial device.			
Prerequisites: ELWT1106			
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.			

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ELWT1120	Field Construction II	3	0/3/0
This course covers the installation of multi-phase high voltage systems under actual field conditions. The overhead section will cover structure assembly including grounding, structural guying, conductor installation including stringing and tying, multi-phase transformer installation, capacitor installation, regulator installation, and the use of protective cover-up material and hot sticks. The underground section will cover multiple cable installation, primary and secondary cable termination, three-phase pad mount transformer installation and multi-phase sectionalizing cabinet installation.			
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.			
ELWT1130	Electrical Line Worker Internship	2	0/0/2
This course will concentrate on the student receiving apprentice line work skills under the supervision of an appropriate industry representative.			
Prerequisites: Instructor approval			
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			
ELWT1134	Hydraulics for Lineworkers	2	0/2/0
This course provides knowledge and safe use of hydraulic and pneumatic tools used in the electrical lineworker industry.			
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			
ENGL0097	English Strategies	3	3/0/0
This course is designed to prepare students for college-level reading and writing tasks across the disciplines. Students will practice strategies in order to develop reading proficiency and writing skills. They also will engage in all stages of the writing process, from invention and drafting to revising and editing, as they respond to texts and specific writing situations.			
Prerequisites: Course placement is determined by assessment or completion of ENGL 0091 with a grade of C or higher.			
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.			
ENGL1101	College Writing	3	3/0/0
Meets MnTC Goal Area 1. This is an introductory writing course designed to prepare students for later college and career writing. The course focuses on developing fluency through a process approach, with particular emphasis on revision. Students will consider purpose and audience, read and discuss writing and further develop their own writing processes through successive revisions to produce polished drafts. Course work will include an introduction to argumentative writing, writing from academic sources and a short research project.			
Prerequisites: Course placement is determined by assessment or completion of ENGL 0091 with a grade of C or higher.			
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			

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ENGL1210	Writing About Current Issues	3	3/0/0
Meets MnTC Goal Area 1. This course builds on the foundations of College Writing and provides students with additional opportunities to develop and refine their writing through a process approach. Students will explore current issues by critically reading a variety of texts, conducting academic research and responding through discussion and writing.			
Prerequisites: ENGL1101			
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			
ENGL2200	Introduction to Creative Writing	3	3/0/0
This course meets MnTC Goal Area 6F. The creative writing course focuses on the writing of short fiction, poetry and plays. It is a course designed to offer students practice in the composition of these three modes, with room for exploration of each genre's sub-categories. Emphasis will be on writing original work and on learning the skills needed to revise this work in order to achieve a desired response from an audience. This course will emphasize helping students learn to develop their creative voice and incorporate study of published works to aid students in this goal. This course counts as a fine arts course; it places emphasis on the creation of fine arts as opposed to the formal, critical analysis of them. Course delivery will include a traditional class format as well as workshop settings, where students' work will be read, analyzed and critiqued by others in the class. The course may include the following: presenting and submitting manuscripts, analyzing the motivation for writers, editing and criticism, techniques for reading work aloud and analyzing masterpiece models. Evaluation of course competencies may be based on writing journals, portfolios, presentations, large and small group discussions, collaborative tasks, manuscripts (completed or works in progress) and/or public readings of student works.			
Prerequisites: ENGL 1101			
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			
ENGL2236	Introduction to Literature: Novel	3	3/0/0
Meets MnTC Goal Areas 2, 6 and 7. This literature course will involve students in a close reading of selected novels that focus on individual and group differences in both the U.S. and abroad. Attention will be paid to the traditions and values of the writers and as portrayed in the literature. Basic concepts and elements of the novel also will be studied.			
Prerequisites: ENGL1101			
ENGL2239	Nature Writers	3	3/0/0
This course meets MnTC Goal Areas 2, 6 and 10. This course will focus on texts written by great nature writers. While special emphasis will be placed on those works that stress conservation and ecology, others will enable students to see the human struggle with the environment as protagonist. Material may also include travel writing, as well as the more recent directions toward urban nature and nontraditional/multicultural perspectives. Texts may include nonfiction, novels, poetry and plays. Students will gain experience in reading critically and writing logical, sound papers that deal with environmental issues and text analysis.			
Prerequisites: ENGL1101			
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			
ENGL2310	Introduction to Mythology	3	3/0/0
Meets MnTC Goal Area 6. This course introduces students to the major myths of Greece and Rome. The course will cover myths, mythological and heroic figures, and how mythology influences culture and literature. The course may also include an introduction to other world mythologies (Norse, Celtic, Native American or others).			
Pre/Corequisites: ENGL1101			

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COURSE DESCRIPTIONS

ENGL2322	Banned Literature	3	3/0/0
Meets MnTC Goal Area 2, 6 and 7. This course is an in-depth study of literature that has been banned or challenged. The course focuses primarily on the study of literature, but part of the lectures, discussions and student responses will address the topic of censorship. Students will read from a variety of genres.			
Prerequisites: ENGL1101			
ENGL2324	Travel Literature	3	3/0/0
This course meets Goal Areas 2, 6 and 10. The course is an in-depth study of travel literature. It focuses primarily on modern travel literature, but some readings of early explorers will establish context for changes within the genre; for example, from medieval pilgrimages and the Victorian Grand Tour to travelogues and road narratives. The course will also address various purposes for travel, such as adventure, exploration and spirituality, as well as trends in modern travel writing including blogs and ecotourism.			
Prerequisites: ENGL1101			
ENGL2372	Children's Literature	3	3/0/0
Meets MnTC Goal Areas 2, 6 and 7. This course introduces students to children's literature. Students read and respond to diverse, traditional and contemporary texts. Emphasis is placed on reading, analyzing, interpreting and evaluating children's literature from various contextual frameworks, such as the development of the genre, cognitive development, censorship and depictions of family, race and gender.			
Prerequisites: ENGL1101			
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			
ENGL2473	The Poetics of Rock Lyrics	3	3/0/0
Meets MnTC Goal Areas 2 and 6. This course focuses on the study of poetry and poetic techniques through the lyrics of rock music. Specifically, the course will include studies of artists from the rock 'n' roll era (1950s through today).			
Prerequisites: ENGL1101 or concurrent enrollment			
ENGR1234	Introduction to Engineering	2	2/0/0
NO DESCRIPTION ON WEBSITE			
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			
ENGR2220	Engineering Mechanics II	3	3/0/0
This course introduces the theory and application of dynamics of particles and rigid bodies. Topics include the kinematics and kinetics of particles and rigid bodies (translational and rotational), principles of work and energy, and principles of impulse and momentum.			
Prerequisites: ENGR2210, MATH1135			
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			
ENGT1118	Construction and Manufacturing Math	3	3/0/0
This course covers the application of common geometric and trigonometric calculations related to the construction and manufacturing industries.			
Prerequisites: MATH0055			
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.			

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COURSE DESCRIPTIONS

ENGT1134	Office Systems and Equipment	3	1/2/0
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This course covers the application of Windows software systems in coordination with AutoCAD software as well as general office equipment set-up and use.

ENST2001	Fundamentals of Utilities	4	4/0/0
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This course provides a general overview of the electric, gas and telecommunications industries. The course will cover fossil fuel and renewable energy sources for electric power generation, its history and projected needs for the future. The course also covers the natural gas utility from the ground to the consumers, its history and projected needs for the future. Also covered are the telecommunications industry and how the land phone and cell phone systems operate.

ENST2002	Energy Safety Principles	1	1/0/0
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This course is designed to explore the principles and practices of health and safety in an energy services-related construction environment. Topics covered in this course include personal protective equipment, safe work practices, hazardous materials, employee protection and regulations of the Environmental Protection Agency (EPA), Occupational Safety and Health Act (OSHA) and pertinent safety codes/standards.

ENST2222	Blueprint Reading for Energy Industry	2	2/0/0
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This course will introduce students to reading and interpreting system and strand maps for the gas, electric and communication industry. Students will also be introduced to reading building blueprints and staking and pole framing sheets.

ENST2223	GPS Mapping	2	1/1/0
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This course covers basic information to help the student understand GPS uses in the utility industries, data collection options, processing the collected data and field procedures used to plan a utility distribution route.

ENTR1101	Entrepreneurship I: Finding Your Opportunity	3	3/0/0
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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.

ENTR1101	Entrepreneurship II: Starting your Business	3	3/0/0
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In this course, students experience real-world and hands-on activities needed to start a business venture. Students develop strategies, including talking with customers, partners, competitors and advisors that provide valuable input, as they explore the various facets of a business idea and how those facets interact to produce a working business model. Students who complete this course will be well-positioned to write a business plan and will be able to answer the question, "Will anyone other than you want your product or service?"

Prerequisites: ENTR1101

ENTR1301	Entrepreneurship III: Running and Growing Your Business	3	3/0/0
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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

ESTH1003	License Preparation AP Esthetician	1	1/0/0
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This course will prepare the advanced practice esthetician 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. Advanced practice esthetician 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.

ESTH1201	Salon Practicum AP Esthetician	1--12	N/A
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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

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COURSE DESCRIPTIONS

ESTH1901	Advanced Skin Treatments	3	3/0/0
In this course, students learn about advanced skin care and techniques, including lymphatic drainage, advanced facials, advanced extractions and body treatments. Students' knowledge of specific body systems, including the cardiovascular, lymphatic and muscular systems, will assist in executing these advanced treatments. Specific massage manipulations and specialty products will be discussed to enhance the effectiveness of the procedures.			
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.			
ESTH1904	Advanced Skin Care Techniques	3	3/0/0
This course will provide knowledge of and training in electrical energy machines and devices used in an advanced practice esthetics setting, including but not limited to radio frequency, galvanic current, high frequency, ultrasound, microcurrent, skin needling and LED light therapy. Students will receive training in electrical and light theory, and advanced histology of the skin.			
FIRE1110	Firefighter I	1	1/0/0
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 or above the minimum level of training for entry into a fire protection career field. Corequisites: FIRE1111			
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.			
FIRE1114	Firefighter II	2	2/0/0
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 will prepare the student to function at or above the minimum level of training for entry into a fire protection career field. Prerequisites: FIRE1110 Corequisites: FIRE1115			
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			
FIRE1150	HazMat Operational	3	2/1/0
This course is designed to teach the necessary skills to protect yourself, your fellow responder and the public from exposure in a hazardous materials incident. The course meets the requirements of the OSHA (Occupational Safety and Health Administration) 1910.120 for the First Responder Operation level. The student will learn how to recognize and identify the presence of hazardous materials, the proper protective clothing to use, how to decontaminate properly, how to establish an Incident Command System and the proper standard operating procedures to maintain safety at the incident scene. The course follows the NFPA (National Fire Protection Association) Standard 472 requirements for the First Responder Operational level.			
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.			
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.			

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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. Corequisites: GDTC1120			
GDTC1115	Design and Layout II	3	2/1/0
As the second of three layout courses in a series, students will expand upon their basic design knowledge by learning advanced methods of style, typography, layout grids, identity development and branding. Increasingly complex projects will require students to employ more sophisticated methods of research, concept development, design strategy and assessment. Students will create a variety of projects in Adobe software. Prerequisites: GDTC1113			
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. Corequisites: GDTC1113			
GDTC1124	Interactive Design I	3	2/1/0
This course focuses on design principles and technical specifications for interface design using digital imaging software, hypertext markup language and cascading style sheets to create and edit interactive and multimedia projects.			
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.			
GDTC1135	Adobe Illustrator I	3	2/1/0
The Adobe Illustrator I course covers fundamental functions of Adobe Illustrator to create basic illustrations and layouts.			
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.			
GDTC2120	Adobe InDesign II	3	2/1/0
This course builds upon the skills and knowledge acquired in the Adobe InDesign I course. More advanced tools and techniques will be taught, and students will again be designing a variety of industry-related graphic design projects to demonstrate their skills and design knowledge. Assignments will include both print and interactive projects, and students will be taught how to independently construct and output these projects to industry standards. Prerequisites: GDTC1120			
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			
GDTC2212	Design and Layout III	3	2/1/0
As the third of three layout courses in a series, this course focuses on brand and identity development. Each student develops his or her own fictitious company that will include a visual identity and supporting brand materials. Additional applications of these concepts are explored in the form of self-promotional projects. Special emphasis is placed on research, marketing techniques, rationale and presentation. Prerequisites: GDTC1113, GDTC1115			
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			
GDTC2231	Design Portfolio	3	2/1/0
This course focuses on planning, creating and assembling an industry-ready graphic design portfolio. Students will each develop a plan to work toward their individual portfolio goals. Branding oneself for the job search process will be covered, and students will be assigned self-promotional projects for this purpose. Multiple assignments will provide the opportunity for students to practice presenting their portfolios to large and small groups. Prerequisites: GDTC2120, GDTC2205, GDTC2212			

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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			
GDTC2249	Dimensional Design	3	2/1/0
Students will develop an understanding of design scaling techniques and design dielines in this course, applying that knowledge as they create a variety of two- and three-dimensional design solutions focused on large-scale products such as signage, packaging, product merchandising and display graphics.			
Prerequisites: GDTC1115			
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			
GDTC2258	Graphic Design Professional Practices	3	2/1/0
This course addresses the professional practice of graphic design technology and covers interviewing skills, presentation techniques, freelance business operation, proposals and management, resume and cover letter writing, job research/job offer and portfolio preparation.			
Prerequisites: GDTC2212			
GEOG1110	World Regional Geography	3	3/0/0
Meets MnTC Goal Areas 5 and 8. Students will gain an understanding and appreciation of the spatial relationship of the physical and human elements of our world with an emphasis on the interdependence of nations and peoples. Geography describes the earth's environments and gives character to places through words, maps and graphics, and this course will explore these elements and their contributions to the diversity of world geography. Students will become aware of how the world and the earth's people interact in local regions and in patterns around the globe.			
GLST1100	Introduction to Global Studies	3	3/0/0
Meets MnTC Goal Areas 6 and 8. This course will consider political, economic, cultural, environmental and social issues influencing Africa, the Americas, Asia, Europe and Oceania and the relationship among these regions. Students will explore the institutions that impact these relationships. Students also will consider how world views are altered when one's point of view shifts from national and regional perspectives to a global perspective. The course also examines the impact of world affairs on our understanding of human relationships, lifestyles and our political and personal philosophies.			
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.			
HIST1102	Western Civilization: 1600s to the Present	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 the Glorious, French and Industrial Revolutions, Napoleon and the Napoleon Wars, the two world wars, and the rise and collapse of communism.			
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.			
HIST1202	American History since 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 the Gilded Age, populism, progressivism, isolationism, American involvement in the two World Wars, the Cold War, Vietnam, the civil rights movement and the debate over American exceptionalism.			
HIST2220	Minnesota and Northern Plains History	3	3/0/0
Meets MnTC Goal Areas 5 and 10. This survey course explores the cultural, social, political and economic development of Minnesota and the northern Great Plains. Topics will include the significance of geography and natural resources, relations between Native American and European populations, and key events in the economic and political development of the region. Emphasis will be placed on the interaction between human development and the natural environment.			

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COURSE DESCRIPTIONS

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.			
HITM1151	Introduction to Health Information Management	3	3/0/0
This course is an introduction to the delivery of health care in the United States and the health information management profession.			
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			
HLTH1165	Information Systems in Health	3	2/1/0
This course provides an introduction to computer use in health care and health information management. It focuses on electronic health records and other computer systems used in health care.			
Prerequisites: BUS1100, HITM1151			
HITM1236	Essentials of Medical Coding	2	1/1/0
This course will introduce the student to coding and classification systems used in the delivery of healthcare, along with the basic rules and regulations of coding.			
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			
HITM2224	Inpatient Procedure Coding	2	1/1/0
This course is a continuation of coding guidelines using current procedural classification systems. Students will practice assigning procedure codes to clinical information found in an inpatient healthcare record while maintaining ethical coding standards.			
Prerequisites: BIOL1170, HITM1236, HLTH1116			
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			
HITM2237	Outpatient Procedure Coding	2	1/1/0
This course is a continuation of coding guidelines using current procedural classification systems. Students will practice assigning procedure codes to clinical information found in outpatient healthcare records while maintaining ethical coding standards.			
Prerequisites: BIOL1170, HITM1236, HLTH1116			
HITM2253	Quality Management Studies	3	2/1/0
This course covers the components of quality improvement systems in health care such as quality assessments, performance improvement and risk management.			
Prerequisites: BUS1100, HITM1151, MATH0095			
HITM2256	Management Practice in Health Information Management	3	3/0/0
This course provides instruction in management principles from a health information management (HIM) viewpoint, providing a foundation for management practice and decision making. In addition to theories of management, budgeting, staffing and performance management are studied.			
Prerequisites: HITM1151, MATH0095			

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COURSE DESCRIPTIONS

HITM2264	Revenue Cycle Management	3	2/1/0
This course covers the current revenue cycle systems that are used in the health care industry from initial patient encounter to receipt of payment.			
Prerequisites: HITM1151, HITM1220			
HITM2283	Intermediate Diagnosis Coding	3	1/2/0
This course is a continuation of coding guidelines using the current International Classification of Diseases. Students will practice assigning diagnosis codes to clinical information found in a health record while maintaining ethical coding standards.			
Prerequisites: BIOL1170, HITM1220			
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			
HITM2290	Health Care Data Management and Analysis	3	1/2/0
This course provides an in-depth look into the management of health care data and how this data is used for analysis, statistics and graphical representation.			
Prerequisites: HITM1165, MATH0095			
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			
HITM2310	Health Information Professional Practice	2	0/2/0
This course provides students with professional practice experience within the field of health information under the supervision of a qualified health information professional.			
Prerequisites: Pre-requisite: Instructor Approval			
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.			
HLTH1000	Introduction to Healthcare	3	3/0/0
This course provides a high-level, experiential overview of the basic aspects of various healthcare-related fields of study. Topics include communication, awareness and sensitivity, successful behaviors in a healthcare setting, healthcare ethics, safety and standard precautions, legal issues in healthcare, diversity in a healthcare setting, handling patient records, and career exploration.			
HLTH1010	Introduction to Sports Nutrition	3	3/0/0
This course studies the value of sports nutrition, with emphasis on nutrition as it applies to fitness, sport-specific training and peak athletic performance. It also studies nutrient requirements and dietary recommendations for multiple sports and levels of performance, energy metabolism and essential nutrient needs during training and competition. Students examine the importance of proper nutrition for a healthy mind and body to achieve peak athletic performance.			
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.			
HLTH1111	Personal and Community Health	3	3/0/0
This course studies the dimensions of wellness and how each dimension is affected by personal health choices. It also studies how the personal choices of society affect the community. This course is designed to help the student maintain good physical, mental and social well-being. Some of the topics covered include anatomy and physiology, emotional and mental health, drug use and abuse, and nutrition and fitness. We will examine the importance of communities in providing access to personal health choices and health care, and how as a society we restrict personal health choices socioeconomically, racially and by gender.			

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COURSE DESCRIPTIONS

HLTH1115	Introduction to Nursing in Long Term Care	3	1/2/0
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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.

HLTH1116	Medical Terminology	3	3/0/0
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This course covers prefixes, suffixes and root words used to compose medical terms. The student learns to spell, pronounce, define, analyze and formulate terminology related to body structure, disease, diagnosis and treatment. Medical abbreviations are also included.

HLTH1122	CPR-First Aid	1	0.5/0.5/0
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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.

HLTH2213	Emergency Responder	3	2.5/0.5/0
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The first responder-level course covers regular and more advanced first aid practices and procedures including extrication and transportation, professional-level CPR, oxygen administration, long bone splinting, blood pressure monitoring, emergency childbirth, patient assessment, backboarding and stress management.

HLTH2215	EMT Basic	6	4/2/0
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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.

HRES1122	Human Resource Management	3	3/0/0
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This course is an introduction to the basic principles of human resource functions and services. It provides a background and understanding for further human resource courses.

HRES1126	Talent Acquisition	3	3/0/0
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This course covers the basic knowledge of the factors to be considered and the strategies used in the employment process.

HRES1130	Benefits Administration	3	3/0/0
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This course covers basic knowledge and information about the various types of benefits that are typically offered by employers for their employees.

HRES2204	Policy Administration	3	3/0/0
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This course covers basic information and understanding of the need for human resources policies in an organization, types of policies, the process of policy formulation and how policies are used.

HRES2224	Employee/Labor Relations	3	3/0/0
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This course covers basic information about the history and current role of labor unions, current labor laws and the rights of employees.

HRES2245	Human Resources Internship	1-4	
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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.

HRES2252	Human Resource Systems	2	1/1/0
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This capstone course reviews and assesses the principles covered in the Human Resource program through simulated activities related to program outcomes.

Prerequisites: Advisor Approval

HRES2254	Human Resource Competency Evaluation	3	2/1/0
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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.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

COURSE DESCRIPTIONS

HUM1101	Introduction to the Humanities	3	3/0/0
Meets MnTC Goal Areas 2 and 6. This course serves as a general introduction to the role that humanities such as the arts, literature and philosophy play in shaping humanity's conception of itself and society. This course serves to expand the student's knowledge of the human condition and human cultures, especially the values expressed in works of human imagination and thought.			
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.			
HUM1110	Native American Culture	3	3/0/0
Meets MnTC Goal Areas 2, 6 and 7. This course is an interdisciplinary study of the social and cultural life of Native Americans, primarily the Plains Indians. Students consider traditional and contemporary expressions of Native peoples as well as the history from which these expressions spring, especially the impact that contact with European peoples had and continues to have on Native American ways of life.			
HUM2210	Introduction to Film	3	3/0/0
Meets MnTC Goal Areas 2 and 6. This course offers students an overview of the elements that comprise "telling stories on film." Students will study shot, angle, lighting, mise en scene, movement, editing, sound, etc. The course will also consider how film elements work to present various ideologies. Students will become familiar with open and closed forms and the distinctions between realism, classicism and formalism. Students will participate in film analysis using the concepts above.			
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.			
HUM2236	Technology in the Humanities	3	3/0/0
Meets MnTC Goal Areas 2, 6 and 8. Developments in the arts, architecture, science, philosophy and education and studies in human interaction are often provoked by changes in technology. Early changes in military technology made it possible for civilizations to take charge of various places on the world's stage. However, over time, changes in how the world was understood, motivated by general advances in global exploration, astronomy and other sciences as well as specific inventions such as movable type, proved even more instrumental in driving people to new and different understandings of what it means to be human. This course explores how technology impacts developments in a culture's world view and tries to anticipate how future changes in technology might alter the course of otherwise established ways of life.			
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.			
HVAC1102	Duct Fitting Construction	3	1/2/0
Standard sheet metal fittings will be constructed in this class. Familiarity with sheet metal shop equipment and various tools will be gained through the layout and construction of sheet metal projects. All fittings in this class will be found in standard duct applications.			
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.			

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COURSE DESCRIPTIONS

HVAC1104	Heating, Ventilating and Air Conditioning Electrical Controls	3	1/2/O
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This course covers the wiring of typical heating and cooling circuits, as well as the installation of heating and air conditioning systems.

Prerequisites: HVAC1103

HVAC1128	Heating, Ventilating, and Air Conditioning Design and Installation	5	2/3/O
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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.

HVAC1224	Gas and Oil Heating	3	1/2/O
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This course covers residential gas and oil heating units, primarily forced air furnaces. Emphasis is on understanding the sequence of operation, proper adjustment, efficiency measurement and safety. This course also includes the diagnosis and repair of malfunctioning furnaces.

Prerequisites: HVAC1128

HVAC2202	Air Handling	2	1/1/O
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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.

HVAC2214	Hot Water Heating	2	2/0/O
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This course covers both hot water baseboard and in-floor heating, with emphasis on calculations involved in hydronic heating.

Prerequisites: HVAC1128

HVAC2221	Heat Pump Theory and Operation	3	2/1/O
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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.

HVAC2290	Heating, Ventilating, and Air Conditioning Internship	1	0/0/1
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This course will add to the student's electrical knowledge regarding circuits and schematics.

IPP1111	Introduction to Interpreting	3	3/0/O
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This course introduces the field of interpreting and the role of a sign language interpreter. It covers interpreting as a field of professional practice, the current nature of the field, the variety of employment opportunities, interpreter training, interpreter certification and professional ethical standards.

IPP2213	Topics in Interpreting	3	3/0/O
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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.

Prerequisite: IPP1111

IPP2214	Intro to Ethics and Decision-Making for Interpreters	3	3/0/O
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The interpreting profession requires interpreters to respond to a wide range of difficult situations in an ethical manner. This course introduces ethical constructs within the field of interpreting and focuses on ethical dilemmas that require interpreters to use decision-making processes in a variety of settings. Students learn strategies for developing multiple approaches to ethical scenarios along with guiding principles and values of the interpreting field.

Prerequisites: IPP1111

LSR1100	Introduction to Limited Scope Radiography and Patient Care	3	2/1/O
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This course explores the role of limited scope radiographers. Foundational principles that address ethical and legal aspects, professionalism and interpersonal communication skills are presented. The course also includes patient care and monitoring techniques, medical emergencies, universal precautions and infection control processes.

Corequisites: LSR1120, LSR1140, LSR1160

LSR1120	Image Production I	4	3/1/O
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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: BIOL2260, COMM1140, HLTH1116

Corequisites: LSR1100, LSR1140, LSR1160

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COURSE DESCRIPTIONS

LSR1140	Radiation Protection	3	3/0/0
<p>This course presents an overview of the principles of radiation protection. Included are the radiation protection responsibilities of the limited scope radiographer for patients, self and other members of the interdisciplinary health care team; x-ray interactions with matter; the As Low As Reasonably Achievable (ALARA) concept; and the basic methods of radiation protection. Also incorporated are radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and health care organizations.</p> <p>Corequisites: LSR1100, LSR1120, LSR1160</p>			
LSR1160	Radiographic Procedures I	5	2/3/0
<p>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.</p> <p>Prerequisites: BIOL2260, COMM1140, HLTH1116</p> <p>Corequisites: LSR1100, LSR1120, LSR1140</p>			
LSR1220	Image Production II	3	2/1/0
<p>This course will build on and expand the student's knowledge of the factors that govern and influence the production and archival of radiographic images. A review of previously introduced technical factors will be covered with a specific focus on their impact on the digital image acquisition processes and image quality. Digital image characteristics, processing, display and image identification techniques will be covered.</p> <p>Corequisites: LSR1230, LSR1240, LSR1260, LSR1280</p>			
LSR1230	Imaging Equipment and Quality Control	3	2/1/0
<p>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.</p> <p>Prerequisites: LSR1120, LSR1140, LSR1160</p> <p>Corequisites: LSR1220, LSR1240, LSR1260, LSR1280</p>			
LSR1240	Radiobiology	2	2/0/0
<p>This course provides basic knowledge of cellular and molecular structures of the human body and explores the effects radiation can have on these structures and the body as a whole. Factors affecting biological response are presented, including acute and chronic effects of radiation exposure. The course also covers radiation quantities, units used to express radiation exposure, and dose limiting systems designed to protect patients, workers and the general public.</p> <p>Corequisites: LSR1220, LSR1230, LSR1260, LSR1280</p>			
LSR1260	Radiographic Procedures II	4	2/2/0
<p>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.</p> <p>Prerequisites: LSR1120, LSR1140, LSR1160</p> <p>Corequisites: LSR1220, LSR1230, LSR1240, LSR1280</p>			
LSR1280	Radiographic Clinical I	4	0/0/4
<p>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).</p> <p>Corequisites: LSR1220, LSR1230, LSR1240, LSR1260</p>			
LSR1380	Radiographic Clinical II	7	0/0/7
<p>This course will provide the student with additional 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 spine, skull, paranasal sinuses and facial bones.</p> <p>Corequisites: LSR1220, LSR1230, LSR1240, LSR1260, LSR1280</p>			

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COURSE DESCRIPTIONS

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.			
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 will work on developing self-assessment and goal-setting skills, utilizing resources and gaining an understanding of the level of commitment necessary to succeed in an academic or real-world setting.			
Prerequisites: Math 0055 or appropriate placement test score			
MATH0095	Elementary Algebra II	2	2/0/0
This course is the study of algebraic concepts including identifying linear and nonlinear functions, solving equations, manipulating and graphing linear equations and inequalities in two variables, utilizing rules for exponents, performing operations on polynomials, factoring polynomials and solving equations using factoring.			
Prerequisites: Math 0085 or appropriate placement test score			
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 will focus on algebra skills, basic set theory, math literacy and other topics needed for success in applied statistics.			
Prerequisites: Math 0095 or appropriate placement test score			
Corequisites: MATH1112			
MATH0098	Essentials for College Algebra	2	2/0/0
This course must be taken in conjunction with a linked section of College Algebra (MATH 1114) taught by the same instructor. It is comprised of skills such as graphing, interpreting the graphs of, evaluating and performing operations on different types of functions. It also includes skills for working with complex numbers and with rational and radical functions.			
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 that will be needed to be successful in World of Math. Topics may include evaluating, simplifying and translating algebraic expressions, solving equations, solving and interpreting percent problems, and calculating and describing rate of change.			
Corequisites: MATH1100			
MATH1000	Technical Mathematics	3	3/0/0
This course presents basic mathematical topics as they are applied in a technical program. The course includes a review of basic mathematical operations and continues with the development of algebraic and trigonometric skills in a technical setting. Most concepts will be applied through course-specific problems. This course is not an MnTC Goal Area 4 mathematics course, nor does it prepare students for taking an MnTC Goal Area 4 mathematics course.			
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			
MATH1100	World of Math	3	3/0/0
Meets MnTC Goal Areas 2 and 4. This course introduces 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.			

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COURSE DESCRIPTIONS

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.			
MATH1112	Applied Statistics	3	3/0/0
Meets MnTC Goal Areas 2 and 4. This course focuses on the principles and applications of statistics and data analysis with an emphasis on inference. Students will acquire a solid foundation in the basics of statistics and its application in solving practical problems. This course uses examples from various disciplines to illustrate the relevancy of statistics in real-world situations. Topics include frequency distributions, introduction to probability, normal distribution, central limit theorem, design of experiments, estimation, simple linear regression and hypothesis testing.			
Corequisites: MATH 0095 with a grade of C or higher, MATH0097			
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.			
MATH1115	Functions/Trigonometry	4	4/0/0
Meets MnTC Goal Areas 2 and 4. This course includes trigonometric functions, right triangle trigonometry, radian measure and circular functions, identities, equations, inverse functions, oblique triangles, complex numbers, vectors, polar coordinates and conic sections.			
Prerequisites: MATH1114			
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			
MATH1118	Precalculus	5	5/0/0
Meets MnTC goal areas 2 and 4. This course includes trigonometric identities and polynomial, exponential, logarithmic, rational and trigonometric functions, their inverses and their graphs. Optional topics may include matrices and determinants, conic sections, vector concepts and polar coordinates.			
Prerequisites: Math 1020 with a C or better or by placement score, MATH1020			
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			
MATH1134	Calculus I	5	5/0/0
Meets MnTC Goal Areas 2 and 4. This course includes limits and continuity, derivatives, definite and indefinite integrals of algebraic, trigonometric, exponential and logarithmic functions, and applications of the derivative and definite integral.			
Prerequisites: MATH1115, or by placement exam			
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			

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COURSE DESCRIPTIONS

MATH1213	Introduction to Statistics	4	4/0/0
Meets MnTC Goal Areas 2 and 4. Topics include data summary, frequency distributions, plots, graphs, measures of central tendency, variation, probabilities, probability distributions and confidence intervals. Hypothesis testing of means, proportions and variances will be conducted using the z-test, t-test, chi-square test, f-test and ANOVA. Optional topics may include nonparametric statistics, sampling and simulation.			
Prerequisites: MATH1118			
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			
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			
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			
MCDD2112	Geometric Dimensioning and Tolerancing	2	2/0/0
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.			
Corequisites: MCDD1106			
MCDD2200	Advanced Modeling with SolidWorks	3	2/1/0
This course covers advanced part modeling, assembly modeling, sheet metal, weldments and presentation files in the latest version of the SolidWorks drawing software package.			
Prerequisites: CADD1400, MCDD1106			
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			
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			
MCDD2220	Mechanical Engineering Drawing IV	3	2/1/0
This course introduces the student to multiple specialized computer programs to create working drawings for manufacturing and construction.			
Prerequisites: CADD1000			
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: CADD1400, CADD1410, CADD2120			
MCDD2246	Tool Design	3	2/1/0
The objective of this course is to develop an understand of jigs, fixtures, dies and their function in mass production, from the basic levels of component pieces through design and implementation.			
Corequisites: MCDD2200, MCDD2210			

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COURSE DESCRIPTIONS

MCDD2252	Mechanical Drafting Applications II	4	1/3/0
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The objective of this course is to develop the student's knowledge of the processes involved in design development and scheduling. Gearing, shafts, chains, and belts and bearings, along with part, sub-assembly and assembly representations are applied to the student's capstone project.

Prerequisites: MCDD2200, MCDD2210

MCDD2254	Computer Numerical Control	2	1/1/0
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This course develops the student's knowledge of computer numerical control components, machines, and basic programming codes and functions.

Prerequisites: CADD1000

MCS2230	Multicultural America	3	3/0/0
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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.

MGMT2225	Project Management	3	3/0/0
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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

MKTG1106	Professional Selling	3	3/0/0
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This course covers a fundamental sales approach that can be used as a foundation for future sales courses. The content covers steps used to plan a sales presentation and methods of determining and filling prospect needs or wants.

MKTG1200	Introduction to Social Media	3	3/0/0
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This course provides students with an introduction to several popular social media sites. Emphasis is on how to use social media platforms to successfully market your business and/or products. Special attention will be paid to when this type of marketing is most effective, how to select the most effective social media outlet for your particular target demographic and tracking results.

Corequisites: CPTR1104

MKTG2000	Integrated Marketing Communications	3	3/0/0
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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

MKTG2236	Small Business Management	3	3/0/0
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This course provides a summary of many of the major issues faced by anyone starting a small business. The course teaches the fundamentals of small business management by blending basic management principles with tested and proven real world techniques for planning, organizing and operating a small business successfully. The course utilizes a variety of learning tools including the textbook, PowerPoint, lectures, written assignments, cases, websites and hands-on activities.

Prerequisites: ACCT2211

MKTG2402	Management and Marketing Seminar	3	3/0/0
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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: BUS2204, BUS2206

Corequisites: MKTG2236

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COURSE DESCRIPTIONS

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.			
Corequisite: Must be taken with MLT1111 Phlebotomy Skills Lab			
MLT1112	Clinical Phlebotomy	3	0/3/0
This course provides clinical phlebotomy experience for phlebotomy technician students in an affiliate hospital/clinic laboratory under the supervision of qualified technicians and technologists. Training includes blood and body fluid collection, processing and storage.			
Corequisites: MLY1110			
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: ENGL1101			
Corequisites: Must be taken with Lab MLT1117			
MLT1117	Basic Lab Techniques Lab	1	0/1/0
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.			
Corequisites: MLT1116			
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.			
Corequisites: MLT1109 Phlebotomy Skills Lecture			
MLT1124	Immunohematology	3	3/0/0
This introductory course for Medical Laboratory Technology students covers the clinical areas of blood banking and transfusion medicine. The course discusses compatibility theory, principles of antigens on red blood cells and serum antibodies.			
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.			
MLT1131	Laboratory Calculations Lecture	1	1/0/0
This course is designed to present mathematical operations commonly utilized in the medical laboratory. Topics include use of basic math processes, systems of measurement, conversion factors, solutions, dilutions, statistics for laboratory medicine and quality control. Upon completion, students should be able to solve practical problems in the context of the medical laboratory.			
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.			
MLT1217	Hematology Lab	1	0/1/0
This course is the laboratory component for MLT1216, Hematology, and covers the analytical principles, techniques and correlation of results related to hematology and homeostasis. Learners will perform basic laboratory techniques related to hematological and coagulation analysis, including the preparation, analysis, interpretation and reporting of quality control material and patient sample results.			
Prerequisites: Admission into the MLT program			
Pre/Corequisites: MLT1216			

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COURSE DESCRIPTIONS

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.			
MLT1228	Biological Fluids Lab	1	0/1/0
This course is the laboratory component of the Biological Fluids course that includes basic fundamental concepts of analytical principles, techniques and correlation of results in the analysis of various biological fluids. Learners will practice the performance of basic laboratory techniques related to biological fluid analysis including the preparation, analysis, interpretation and reporting of quality control material and patient sample results.			
Prerequisites: Admission into the MLT program			
Pre/Corequisites: MLT1227			
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.			
MLT2132	Diagnostic Chemistry Lab	1	0/1/0
This course is the laboratory component of a comprehensive introductory overview of diagnostic chemistry that includes basic fundamental concepts of analytical principles, techniques and correlation of results in the science of body chemistry. Learners will practice performing basic laboratory techniques related to diagnostic chemistry analysis including the preparation, analysis, interpretation and reporting of quality control material and patient sample results.			
Prerequisites: Admission into the MLT program			
Pre/Corequisites: MLT2131			
MLT2151	Introduction to Molecular Diagnostics	1	1/0/0
This course is an introduction to specific molecular biology applications in the laboratory. This 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: MLT1115			
MLT2223	Clinical Urinalysis and Body Fluids	2	0/2/0
This course is a clinical experience related to the analysis of urine and body fluids under the supervision of laboratory personnel at an affiliate laboratory. This course provides further investigation and study of the methods and techniques related to urinalysis and body fluid tests.			
Prerequisites: MLT2350			
MLT2227	Clinical Chemistry and Immunology	3	0/3/0
This is a clinical experience course related to the performance of chemistry and immunology 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 chemistry and immunological testing.			
Prerequisites: MLT2350			
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			
MLT2232	Clinical Hematology and Coagulation	3	0/3/0
This is a clinical experience course related to the performance of hematology and coagulation 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 hematology and coagulation tests.			
Prerequisites: MLT2350			

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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: Admission into the MLT program			
Pre/Corequisites: MLT2268			
MLT2268	Diagnostic Microbiology Lab	1	0/1/0
This course is the laboratory component of Diagnostic Microbiology that includes basic fundamental concepts such as the analytical principles, techniques and correlation of results related to diagnostic microbiology. This course covers basic techniques including reasons for specimen rejection, identification of normal flora and pathogens, morphology, classification and culturing of bacteria, identification of bacterial unknowns, fungi and parasites.			
Corequisites: MLT2266			
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.			
MLT2317	Immunology Lab	1	0/1/0
This course is the laboratory component of the Immunology course that includes the fundamental techniques related to the science of immunology. Learners will practice performing basic laboratory techniques related to immunological methods including the preparation, analysis, interpretation and reporting of quality control material and patient sample results. The course emphasizes testing and disease diagnosis of disorders such as hepatitis, acquired immune deficiency syndrome, lupus, rheumatoid arthritis, Lyme disease, syphilis, infectious mononucleosis and streptococcal infections.			
Prerequisites: Admission into the MLT program			
Pre/Corequisites: MLT2316			
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: MLT1115, MLT1123, MLT1215, MLT1225, MLT2131, MLT2132, MLT2315			
MLT2350	Professional Issues in Medical Laboratory Technology	2	2/0/0
This course surveys professional issues in preparation for career entry. Emphasis is placed on professional issues, ethics, current topics in health care delivery, governmental regulations, state licensure, societal concerns, cultural diversity, disease prevention, research, public health and environmental testing.			
MUSC1114	Beginning Class Piano	2	2/0/0
Meets MnTC Goal Area 6F. Group piano lessons are designed for students with no piano experience. The course includes an emphasis on solo and ensemble playing as well as improvisation, technique and theory.			
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.			
MUSC1116	World Music	3	3/0/0
Meets MnTC Goal Areas 6 and 8. This survey course for the general college student introduces the elements, structural designs and historical styles of music. Emphasis is on expansion of listening skills and musical experiences with music of the Western notated tradition (classical music), Native America, Africa, India, Latin America, Asia and Eastern Europe.			
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.			

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MUSC1119	Intro to Hip-Hop	3	3/0/0
Meets MnTC Goal Areas 6 and 7. This survey course for the general college student introduces the elements, structural designs, culture and historical styles of hip-hop music. Students explore how the music is made and learn about the origins of hip-hop culture.			
MUSC1120	Introduction to Music Technology	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 will be used extensively to enhance understanding. This course will serve as a springboard to further study and exploration of hardware and software tools for music creation.			
MUSC1121	Basic Theory and Musicianship I	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 from the 17th century to the present day. It clarifies the fundamental musical elements of melody, harmony, rhythm and form, with emphasis in the tonic-dominant harmony. The course involves analysis and composition and must be taken concurrently with MUSC 1123.			
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.			
Corequisites: MUSC1124			
MUSC1123	Sight Singing and Ear Training I	1	1/0/0
Meets MnTC Goal Area 6F. This course is designed to improve skills in two areas: 1) to recognize and notate tonal melodies and rhythmic patterns, and 2) to reproduce "at sight" what is notated. It must be taken concurrently with MUSC 1121.			
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.			
MUSC1135	Voice Ensemble	1	1/0/0
Meets MnTC Goal Area 6F. The voice ensemble is an auditioned choir (from the M State Concert Choir) meeting two hours per week on a regularly scheduled basis. This group will study and prepare music from various musical periods and geographic regions and performs a minimum of one concert each semester. This group also participates in campus life venues as they arise, MCC Fine Arts Festival and occasional area tours. May be repeated for credit.			
Prerequisites: MUSC1141			
MUSC1145	Chamber Chorale	1	1/0/0
Meets MnTC Goal Area 6F. The M State Chamber Chorale is an auditioned community chorus that performs one concert of choral/orchestral music each semester. The group meets one evening per week on a regularly scheduled basis. May be repeated for credit.			
MUSC1151	Individual Voice Lessons	1	1/0/0
Meets MnTC Goal Area 6F. Students interested in individual voice lessons should contact the music department so that instruction can be arranged. There is an additional fee. May be repeated for credit.			
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.			
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.			
MUSC1185	Private Music Composition Lessons	1	1/0/0
Meets MnTC Goal 6. Individual music composition and advanced theory discussion and lessons are offered, subject to instructor availability. Students should contact the music department to arrange instruction. There is an additional fee, and the course may be repeated for credit.			

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COURSE DESCRIPTIONS

MUSC1191	Individual Piano Lessons	1	1/0/0
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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.

MUSC2221	Music Theory III	3	3/0/0
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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: MUSC1122, MUSC1124

Corequisites: MUSC2223

MUSC2222	Music Theory IV	3	3/0/0
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Meets MnTC Goal Area 6. This course provides 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.

Corequisites: MUSC2224

MUSC2223	Sight Singing and Ear Training III	1	1/0/0
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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

MUSC2224	Sight Singing and Ear Training IV	1	1/0/0
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Meets MnTC Goal Area 6F. This course is designed to improve skills in two areas: 1) to recognize and notate tonal melodies and rhythmic patterns, and 2) to reproduce "at sight" what is notated. It must be taken concurrently with MUSC 2232.

Prerequisites: MUSC2223

MUSC2251	Individual Voice Lessons	2	2/0/0
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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.

MUSC2281	Private Instrumental Lessons	2	2/0/0
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Meets MnTC Goal Areas 2 and 6. Individual woodwind, brass, percussion and guitar lessons of one hour per week are open to advanced students with instructor's consent. Course is required of instrumental performance or education majors and includes required performances. Students should contact the music department to arrange instruction. There is an additional fee. May be repeated for credit.

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

NURS1406	Nursing Fundamentals I	3	2/1/0
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This course prepares students to provide safe, therapeutic nursing care to diverse patient populations across the age span. Content includes asepsis and infection control, holistic assessment, basic pharmacologic principles and concepts, safe medication administration, pain management, complementary/alternative therapies and perioperative nursing care. This course also integrates the content and skills necessary to promote and maintain health and wellness of the neurological, integumentary, sensory and musculoskeletal systems.

Prerequisites: Acceptance into the Associate Degree Nursing Program, 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, Must be eligible to take English 1101 and Math 1114, Up-to-date immunizations and health form

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COURSE DESCRIPTIONS

NURS1415	Nursing Clinical I	2	0/2/0
<p>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.</p> <p>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</p>			
NURS1416	Nursing Fundamentals II	4	2/2/0
<p>This course prepares students to provide safe, therapeutic nursing care to diverse patient populations across the age span. The course also integrates the content and skills necessary to promote and maintain health and wellness of the gastrointestinal, metabolic, immune, hematologic, cardiovascular, respiratory and urinary systems as well as fluid and electrolyte balance.</p> <p>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</p>			
NURS1426	Reproductive Health	2	2/0/0
<p>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.</p> <p>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</p>			
NURS2410	Role Transition	2	2/0/0
<p>This course prepares the practical nurse to transition into the professional nursing role. Concepts of legal and ethical considerations in practice, holistic assessment, the nursing process and development of individualized plans of care will be explored while integrating informatics, evidence-based practice, patient-centered care, safety and quality improvement.</p> <p>Prerequisites: ENGL0096/97 or assess into ENGL1101, Graduate of an approved Practical Nursing program and admitted to the Associate Degree in Nursing-Advanced Standing Option program, MATH1020 or assess into a minimum of MATH1114</p>			
NURS2426	Reproductive Disorders	2	2/0/0
<p>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.</p> <p>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</p>			
NURS2437	Nursing Clinical II	4	0/4/0
<p>This clinical course provides the professional nursing student with opportunities to utilize the nursing process in providing individualized patient-centered care to diverse patient populations. An emphasis on evidence-based nursing care and clinical judgment skills, personal identity and behavior, teamwork and collaboration, holism, patient-centered care, safety and quality improvement will be incorporated.</p> <p>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</p>			
NURS2438	Restorative Nursing I	4	4/0/0
<p>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.</p> <p>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</p>			

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NURS2447	Nursing Clinical III	4	0/4/0
This clinical course provides the professional nursing student with opportunities to manage care for diverse patient populations including care planning delegation, supervision, prioritization and continuity of care. Concepts of evidence-based nursing care and clinical judgment skills, personal identity and behavior, teamwork and collaboration, holism, patient-centered care, safety and quality improvement will be interwoven into patient care.			
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			
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			
NURS2455	Advanced Intravenous Therapy	1	0/1/0
This lab course focuses on the skills and management of intravenous therapy by the professional nurse. Emphasis is placed on safety, nursing judgment, evidence-based practice, quality improvement and patient-centered care.			
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			
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			
NURS2466	Mental Health Nursing	2	2/0/0
This course focuses on the concepts and theories of mental health, mental illness and psycho-pharmacology. Emphasis is placed on relationship-centered care, teamwork, quality and safety for diverse patient populations with psychiatric disorders.			
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			
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 associated with a college academic experience, make social adaptations to a new environment and make connections with faculty, staff and resource offices. Topics include an understanding of individual risks and barriers, time management and personal responsibility. This class is also designed to develop student awareness of how to live a healthy holistic lifestyle. Students will be able to deepen their understanding with regards to social, emotional, intellectual, vocational and physical elements of self-development. Students will also participate in physical activities that promote a healthy, drug-free on-campus environment. Additional topics to be discussed may include but are not limited to goal setting, stress management, and drug and alcohol use.			
PDEV1102	Contemporary Career Search	1	0/1/0
This course covers such contemporary career topics as employer expectations, job market trends and networking, and various aspects of the employment search process including legal and ethical issues. To apply their knowledge of the employment process, students develop resumes, letters and applications, as well as identify and use effective interviewing techniques. This course emphasizes a comprehensive knowledge of career processes that will serve students throughout their working lives.			
PDEV1113	Career 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 major identification. Students will identify major/career possibilities.			

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PE1109	Wellness Skills	2	1/1/0
This course is designed to introduce wellness concepts and provide the knowledge and skills necessary to develop a healthy physical, mental and social lifestyle. Students will actively seek to develop and maintain a balance of these elements through increased knowledge of appropriate activities including positive and responsible belief systems and choices. Topics may include anatomy, physiology, kinesiology, emotional/mental health, nutrition, fitness, weight management, drug use/abuse, planning and commitment to change. Course includes physical activity participation by students.			
PE1141	Introduction to Strength Training	1	0/1/0
This course is an introduction to weight lifting, weight room safety, periodization, energy systems, nervous system, muscular system and how this information is used to formulate a weight training program as a means to achieve muscular strength, muscular endurance, tone or size. This class may be repeated once for credit.			
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.			
PE1192	Varsity Basketball	1	0/1/0
The course presents students with numerous opportunities in a variety of situations to learn about and develop their self-image, characteristics of high achievement and physical skills in a competitive basketball environment. This class may be repeated once for credit.			
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.			
PE1194	Varsity Golf	1	0/1/0
This course presents students with numerous opportunities in a variety of situations to learn about and develop their self-image, characteristics of high achievement and physical skills in a competitive golf environment. This class may be repeated once for credit.			
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.			
PE1199	Varsity Softball	1	0/1/0
This course is for students who want to compete in varsity softball at the collegiate level. The course presents students with numerous opportunities in a variety of situations to learn and develop characteristics of high achievement and physical skills in a competitive environment.			
Prerequisites: The participants of this course must be approved by the head coach.			
PE2100	Introduction to Sport Management	3	3/0/0
This course is designed to introduce the student to the dynamic nature of sports management. Topics may cover sports within our culture, sports enterprise, communication, public relations and use of social media. Sport event themes will be covered and include topics such as amateur sports participation, for-profit sports participation, tournament operations and sporting goods.			
PE2112	Applied Coaching: Football	1	1/0/0
This course provides the student with the knowledge to teach the fundamentals of football. Emphasis will be on rules, technique, strategy, game plan and practice planning. Other topics will include safety and proper equipment usage.			
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			

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COURSE DESCRIPTIONS

PE2240	Athletic Injury, Care and Prevention	2	2/0/0
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This course is offered to coaches interested in sports medicine and students interested in coaching and/or athletic training. It is designed to enhance the student's knowledge and performance in sports medicine. The course will cover athletic injury prevention measures, injury care and management, basic injury assessment, nutrition and specific athletic injuries and related problems.

PE2241	Principles of Coaching	3	3/0/0
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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.

PE2254	Sports in Society	3	3/0/0
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This course involves a discussion of the impact of sports in society and the values we place on sports. The course will explore the values, virtues, consequences, rights and responsibilities of sports in our culture. The course is designed to improve the understanding of legal, racial, academic and moral issues of sports and athletics.

PE2999	Athletic Leadership	1	0/1/0
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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.

PHIL1200	Applied and Professional Ethics	3	3/0/0
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Meets MnTC Goal Areas 2 and 9. In this course students will explore ethical issues that arise in professional settings including business, medical and technical settings. The course will also look at the philosophical underpinnings of current professional policies and how philosophy can offer insights that can enhance and deepen such policies.

PHIL1201	Ethics	3	3/0/0
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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.

PHIL1211	Introduction to Philosophy	3	3/0/0
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Meets MnTC Goal Areas 2 and 6. This course is an introduction to the basic branches of philosophy including metaphysics (the study of existence and what existence means), epistemology (the study of knowledge and how we come to understand), ethics (the study of what we should do), politics (the study of how societies should exercise force) and aesthetics (the study of beauty and art). Students can expect to explore their own understanding of the world and test it against the classical works of Western philosophy.

PHYS1105	Fundamental Concepts in Physics	3	3/0/0
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Meets MnTC Goal Area 3. This is a demonstration-based course that provides an introduction to selected topics in classical and modern physics. Topics will include measurement and significant digits, graphing, dimensional analysis, mechanics of motion, vibrations, waves, sound, electricity and magnetism, light and optics, atomic physics and atomic spectra, lasers and optical fibers, nuclear physics and radiation. The course uses active learning techniques with lab-like experiences. It uses many demonstrations and instructor-guided small group problem-solving activities. Simple algebra is used to ensure that students grasp the course concepts. This course is intended for all students but is especially designed for non-science majors who want an appreciation of and a limited working knowledge in some major areas of physics.

Prerequisites: MATH0095

PHYS1412	University Physics II	5	3/2/0
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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

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COURSE DESCRIPTIONS

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.			
PLBG1103	Plumbing Trade Tools	2	2/0/0
This course introduces common hand and power tools and product-specific tools used in the plumbing trade. Emphasis will be on the safe and proper use and maintenance of these tools.			
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.			
PLBG1119	Materials and Fittings	4	4/0/0
This course introduces the materials and fittings used in the plumbing trade, including copper, plastics, brass, polymers, cast iron, black iron and glass. The application of these material types will be covered, as well as fitting names and their uses.			
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.			
PLBG1125	Plumbing Lab I	2	0/2/0
In this course students will meet with the instructor for the purpose of applying, demonstrating and reinforcing content covered in lecture courses.			
Corequisites: PLBG1101, PLBG1103, PLBG1115, PLBG1119, PLBG1123			
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			
PLBG1133	Blueprint Reading	2	2/0/0
This course covers different types and sections of blueprints, including the different views and key points a plumber will need to understand. Interpreting isometrics also will be covered. Specification sheets will be introduced and their importance explained.			
Prerequisites: PLBG1123			
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			
PLBG1137	Water Distribution	3	3/0/0
This course will familiarize the learner with water supply and distribution and the rules for sizing a water supply system as applicable to the Minnesota Plumbing Code and the North Dakota Plumbing Code. Drawing isometrics will be introduced.			
Prerequisites: PLBG1123			
PLBG1141	Plumbing Code II	3	3/0/0
This course covers application of the plumbing code regulations of Minnesota and North Dakota for the installation of residential and commercial fixtures, material and fittings.			
Prerequisites: PLBG1123			
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			

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COURSE DESCRIPTIONS

PLBG1150	Plumbing Technology Internship	2	0/0/2
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This course will provide plumbing students with the opportunity to apply their knowledge, practice their skills, integrate behaviors and explore areas of employment within the plumbing industry. Students will perform activities consistent with program outcomes in an industry setting under the supervision of the site employer.

Prerequisites: PLBG1125

PNSG1509	Foundations of Adult Nursing Care I	6	4/2/0
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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 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 check

PNSG1512	Practical Nursing Pharmacology	2	2/0/0
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This course incorporates the concepts of pharmacokinetics, pharmacodynamics, common adverse/side effects and contraindications to medication administration. Emphasis is placed on drug classifications and the role of the practical nurse in providing nursing care related to the safe administration of medications to individual patients across the age span.

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 check

PNSG1514	Clinical I Practical Nurse Foundations	4	0/4/0
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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, 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 PN application packet, Up-to-date immunizations and health form

PNSG1518	Foundations of Adult Nursing Care II	5	3/2/0
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This course incorporates the nursing process, 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 into the care of adults and older adults with complex and comorbid health disorders. Principles of pathophysiology, nutrition and pharmacology are applied. A lab component includes focused assessments and advanced nursing skills that support course concepts.

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

PNSG1520	Nursing Care of Women, Newborns and Children	2	2/0/0
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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

PNSG1522	Transition to Practical Nursing Practice	1	1/0/0
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This course prepares the student for transition into practical nursing practice. Concepts related to career development options that enhance career mobility are explored. Standards of practice and the importance of practicing according to state regulations and statutes that are within the scope of practice for the practical nurse are reviewed. The role of the practical nurse in emergency preparedness is examined.

Prerequisites: BIOL2260, BIOL2261, 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 PN application packet, PNSG1509, PNSG1512, PNSG1514, PSYC2222, Up-to-date immunizations and health form

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PNSG1524	Practical Nursing Mental Health	2	2/0/0
<p>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.</p> <p>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</p>			
PNSG1528	Clinical II Practical Nursing	4	0/4/0
<p>This course provides the student an opportunity to apply nursing judgment using evidence-based care, critical thinking and clinical judgment to implement safe, patient-centered and relationship-centered care to individual patients across the lifespan. The clinical student reflects on the value of patient-centered care, teamwork and collaboration, informatics, quality improvement, safety, managing care of the individual patient, nursing judgment and evidence-based care.</p> <p>Prerequisites: BIOL2260, BIOL2261, 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 PN application packet, PNSG1509, PNSG1512, PNSG1514, PSYC2222, Up-to-date immunizations and health form</p>			
POLS1120	American National Government	3	3/0/0
<p>Meets MnTC Goal Areas 5 and 9. This course provides an analysis of the organization, institutions and functions of the United States government.</p>			
POLS1130	State and Local Government	3	3/0/0
<p>Meets MnTC Goal Areas 5 and 9. This course provides an analysis of the organization, procedure and functions of state and local governments and their relationship with the national government.</p>			
POLS2204	Comparative Government	3	3/0/0
<p>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.</p>			
POLS2206	Global Politics	3	3/0/0
<p>Meets MnTC Goal Areas 5 and 8. This course is an introduction to the field of global and international politics, with an emphasis on the history, structure and processes of global relations. Students will study the role of state and non-state actors such as nations, international conflict, war, global economic relations and international organizations.</p>			
PSYC1101	Human Interaction	3	3/0/0
<p>Meets MnTC Goal Areas 2 and 5. This is an introductory course emphasizing practical applications of psycho-social concepts, with specific emphasis on personality development, human relations and motivation. This course is applicable for students in occupational and health-related fields or general education.</p>			
PSYC1200	General Psychology	3	3/0/0
<p>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.</p>			
PSYC1201	Introduction to Mental Health Behavioral Aide	4	4/0/0
<p>This course will provide students with the knowledge and resources to enter practice as a Mental Health Behavioral Aide II. Students will achieve entry-level competencies in providing therapeutic and rehabilitative care for children and adolescents with emotional disturbances.</p> <p>This course is not an MnTC Goal Area 5 course and may not be used as a replacement for a Goal Area 5 course. This course is designed for students enrolled in the Mental Health Behavioral Aide II certificate program.</p>			
PSYC1202	Introduction to Autism Spectrum Disorders	3	3/0/0
<p>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.</p>			

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COURSE DESCRIPTIONS

PSYC1203	Introduction to Child and Adolescent Therapeutic Behavioral Health	4	4/0/0
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This course will provide students with an introduction to the etiology, assessment and treatment of common behavioral and emotional health disorders in children and adolescents. The framework of developmental psychopathology will be used to examine how childhood psychopathology arises in different contexts and developmental transitions within the self, family, school, community and culture. Students will achieve entry-level competencies in providing therapeutic and rehabilitative care for children and adolescents with behavioral and emotional disturbances. In addition, this course will provide students with the knowledge and resources to enter practice as a mental health worker (e.g., mental health behavioral aide).

PSYC2220	Abnormal Psychology	3	3/0/0
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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.

PSYC2222	Lifespan Development	3	3/0/0
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Meets MnTC Goal Areas 5 and 9. This course is a study of human development from the lifespan perspective, including theories, stages and influences of development. The course views the individual from conception to death through physical, cognitive, social and emotional development.

PSYC2224	Social Psychology	3	3/0/0
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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.

PSYC2226	Introduction to Applied Behavior Analysis	3	3/0/0
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Meets MnTC Goal Areas 2, 5 and 10. This course is an exploration of the scientific study of human behavior and its interrelatedness with the environment. This course describes and explains the acquisition, maintenance and change of behavior with an emphasis on human application within a variety of environmental contexts. This course uses critical thinking on the principles and procedures used to understand and change the environment and human behavior.

PSYC2230	Personality Psychology	3	3/0/0
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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.

PSYC2233	Strategies for Working With Individuals With Autism Spectrum Disorder	4	4/0/0
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This course will introduce students to evidence-based and research-focused intervention strategies commonly implemented when serving individuals with autism spectrum disorders. Team-based collaborative consultation for individuals diagnosed with ASD is also addressed. Topics include (but are not limited to) direct instruction, communication skills training, social and emotional skills training and general supportive strategies. This course is cross-listed with ED 2233.

PSYC2236	Special Topics for Autism Spectrum Disorder	3	3/0/0
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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.

PSYC2800	Psychology of Health and Resiliency	3	3/0/0
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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.

PSYC2900	Statistics for Behavioral and Social Sciences	4	3/1/0
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Meets MnTC Goal Area 5. Students will use basic mathematical and computerized procedures to analyze data in the behavioral sciences. The course will cover the use of statistical software to conduct descriptive and inferential data analyses. Students will choose and apply statistical procedures to help answer psychological and behavioral scientific research questions. Students will also learn to read, interpret and write reports based on American Psychological Association style guidelines.

Prerequisites: MATH 1114 or higher, PSYC 1200 with a grade of "C" or higher

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

COURSE DESCRIPTIONS

PWST1000	Introduction to PowerSports	3	1/2/0
This course is the study of powersports occupational safety, shop orientation procedures, and power and hand tool usage. The use of shop equipment applications, fasteners, measuring instruments and service literature will be addressed, along with appropriate service department etiquette. Two- and four-stroke engine theory along with their proper lubricants will be covered.			
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.			
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.			
PWST1017	Fuel Systems I	3	2/1/0
The Fuel Systems I course covers the theory and operation of basic fuel systems and the fuels that they deliver. This is the first of two fuel systems courses and will give students the solid foundation they will need to understand the more advanced systems in their future course work.			
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.			
PWST1115	Electrical Foundations	3	2/1/0
The Electrical Foundation course will cover the theory and practical operation of electricity. Multi-meters and test instruments will be used, giving students the solid foundation they will need to understand the more advanced electrical systems in their future course work.			
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. Hydro-static 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.			
PWST2016	Outboard Engine Systems	3	1/2/0
Outboard Engine Systems introduces the fuel and electrical systems used on outboard motors. Primary focus will be on fuel and oil injection systems along with ignition, starting and charging systems. Students will learn the theories of operation and proper use of test equipment and repair.			
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.			
PWST2115	All-Terrain Vehicles Systems	3	1/2/0
All-Terrain Vehicles Systems focuses on various types of four-cycle ATV engine fuel and electrical systems. Students will also examine chassis and drive train components.			
PWST2206	Chainsaws and Generators	3	1/2/0
This course offers a comprehensive view of maintenance, diagnostics and post-repair inspections of chainsaws. This course also covers generator components and testing procedures. Students will test generator voltages and learn how to diagnose and repair generators. Students must have an understanding of electricity and electrical meter usage prior to taking this class.			
PWST2210	Snowmobile Clutch and Drive Systems	3	1/2/0
Snowmobile Clutch and Drive Systems identifies major components of the complete drive system and discusses maintenance, routine adjustment and tuning of the continuous variable transmission (CVT).			
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.			
PWST2308	Advanced Snowmobiles	3	1/2/0
Students will demonstrate troubleshooting skills. Students will perform electrical tests used in diagnosing electrical failures on snowmobiles. Students will learn and demonstrate a systematic approach to troubleshooting snowmobiles.			

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COURSE DESCRIPTIONS

PWST2312	Advanced Motorcycle Systems	3	1/2/O
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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.

RADT1102	Fundamental Concepts of Radiologic Technology	2	2/0/O
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This course will introduce the student to foundations of the radiologic technology profession. The content will include: an examination of the organization of health care facilities and radiology departments, the radiologic technologist's role in the health care setting, professional obligations and behaviors, employment opportunities, historical significance of the profession, accreditation of educational programs, educational requirements, certification, registration, and licensure processes, and human diversity in the health care setting.

RADT1112	Introduction to Radiologic Technology and Patient Care	4	3/1/O
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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.

Corequisites: RADT1116, RADT1124

RADT1116	Radiographic Procedures I	5	3/2/O
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This course will provide the student with the knowledge necessary to perform routine and mobile radiographic procedures relative to the thoracic and abdominal organs (including gastrointestinal studies), bony thorax, upper extremity and shoulder girdle. Emphasis will be on radiographic terms, anatomy, pathology, positioning, manipulation of radiographic equipment and accessories, and related patient care considerations.

Corequisites: RADT1112, RADT1124

RADT1124	Radiographic Procedures II	4	2/2/O
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This course will provide the student with the knowledge necessary to perform routine and mobile radiographic procedures relative to the urinary system, lower extremity, pelvis, vertebral column and arthology. Emphasis will be on radiographic terms, anatomy, pathology, positioning, manipulation of radiographic equipment and accessories, and patient care considerations. Basic techniques in venipuncture, contrast media types, intravenous medication and emergency response will also be included.

Corequisites: RADT1112, RADT1116

RADT1133	Principles of Radiobiology	4	4/0/O
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This course is designed to establish a basic knowledge of atomic structure and terminology and provide an overview of the principles of radiation protection and interaction with living systems. Also presented are the nature and characteristics of radiation (i.e., its effects on molecules, cells, tissues and the body as a whole, x-ray production and the fundamentals of photon interactions with matter). Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies, health care organizations and the responsibilities of the radiographer for patients, personnel and the public are also incorporated. Factors affecting biological response are presented, including acute and chronic effects of radiation.

Corequisites: RADT1140, RADT1146

RADT1140	Radiographic Imaging	4	2/2/O
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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.

Corequisites: RADT1132, RADT1146

RADT1146	Radiographic Procedures III	4	2/2/O
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This course will provide the student with the knowledge necessary to perform routine and mobile radiographic procedures relative to skull (including sensory organs), traumatic injury, and surgical radiography. Pathological conditions of these anatomical structures will be discussed as well. In addition the student will be introduced to highly specialized studies of the central nervous system, cardiovascular, lymphatic system and cross-sectional imaging. Special imaging equipment, physical settings and techniques used in these highly specialized studies will also be included.

Corequisites: RADT1132, RADT1140

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

COURSE DESCRIPTIONS

RADT1180	Radiographic Clinical I	5	0/0/5
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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.

Corequisites: RADT1190

RADT1190	Radiographic Clinical II	5	0/0/5
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This clinical course emphasizes the basic radiographic procedures and positioning related to the upper and lower gastrointestinal tract and the biliary system. The student also will continue to acquire and build skills in performing radiographic procedures and positioning related to the thoracic and abdominal cavities and the upper and lower extremities, including the shoulder girdle and the pelvis.

Corequisites: RADT1180

RADT1270	Radiographic Procedures Bridge	4	2/2/0
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This course will provide the student with the knowledge necessary to perform routine and mobile radiographic procedures relative to facial bones, bony thorax, urinary system, gastrointestinal system, arthrology, traumatic injury and surgical radiography. Emphasis will be on radiographic terms, anatomy, pathology, positioning, manipulation of radiographic equipment and accessories, and patient care considerations. Basic techniques in venipuncture, contrast media types, intravenous medication and emergency response will also be included. Additionally, the student will be 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 will also be included.

Prerequisites: Graduation from the M State Limited Scope Radiography program.

RADT1274	Radiation Safety and Equipment Bridge	2	2/0/0
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This course is designed to establish a knowledge base in fluoroscopic, mobile and tomographic equipment (including computed tomography) requirements and design. Radiation safety procedures unique to these specialized equipment types will also be covered.

Prerequisites: Graduation from the M State LSR program

RADT2101	Radiographic Clinical III	4-5	
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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.

Corequisites: RADT2110, RADT2224

RADT2110	Radiographic Clinical IV	5	0/0/5
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This clinical course emphasizes the basic radiographic procedures and positioning related to the skull, facial bones, paranasal sinuses and detailed areas of the skull. This clinical experience provides an opportunity to work with increased independence.

Corequisites: RADT2101, RADT2224

RADT2120	Radiographic Clinical V	5	0/0/5
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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.

Corequisites: RADT2130, RADT2280

RADT2224	Imaging Equipment	4	2/2/0
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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.

Corequisites: RADT2101, RADT2110

RADT2130	Radiographic Clinical VI	5	0/0/5
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This clinical course emphasizes the development of independence, discretion and judgment while performing basic radiographic procedures. It provides the student with the opportunity to function as a nearly registry-eligible radiographer. The student is expected to correlate all clinical and didactic experiences while demonstrating a high degree of proficiency and efficiency.

Corequisites: RADT2120, RADT2280

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

COURSE DESCRIPTIONS

RADT2280	Radiologic Technology Registry Review	2	2/0/0
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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: Acceptance into RT Bridge Program, graduation from the LSR program, LSR1230, RADT1274 OR RADT2101, RADT2110, RADT2224

Corequisites: RADT2120, RADT2130

REFR1110	Refrigeration, Air Conditioning and Heating Principles	3	3/0/0
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This course covers refrigeration theory of domestic refrigeration and introduction theory to commercial refrigeration and residential heating and air conditioning equipment including controls and accessories.

Prerequisites: HVAC1128

REFR1112	Refrigeration, Air Conditioning and Heating Lab	3	0/3/0
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This course covers the operation and service procedures of domestic refrigeration and an introduction to residential heating and air conditioning and commercial refrigeration equipment.

REFR2202	Commercial Refrigeration and Air Conditioning Principles	4	4/0/0
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This course covers the principles of basic heat theory and gas laws as they apply to refrigeration systems. The operation of commercial walk-in coolers and freezers, commercial ice machines, air conditioners and heat pumps will be discussed, along with accessory components and piping methods used to install and maintain these systems. Safety is emphasized.

Prerequisites: Completion of HVAC/R diploma.

REFR2204	Commercial Refrigeration and Air Conditioning Lab	3	0/3/0
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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.

REFR2206	Commercial Electrical Principles	3	3/0/0
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This course covers the fundamentals of electrical components used in commercial refrigeration and air conditioning equipment. Reading and understanding electrical schematics will be employed to comprehend the sequence of operation and aid in troubleshooting. Students also will develop their own wiring diagrams by applying Ohm's law and how it relates to series and parallel circuits. Safety is emphasized.

Prerequisites: Completion of HVAC/R diploma.

REFR2208	Commercial Electrical Lab	3	0/3/0
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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.

REFR2211	Advanced Refrigeration Principles	4	4/0/0
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This course prepares students for more advanced lab sessions on commercial refrigeration systems. Students need to have a very good understanding of commercial refrigeration and electrical systems. Safety is emphasized.

Prerequisites: Completion of HVAC/R diploma.

REFR2212	Advanced Refrigeration Lab	3	0/3/0
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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.

REFR2213	Advanced Electrical Theory	3	3/0/0
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This course covers the electrical principles and schematics used in commercial, industrial, hospital and supermarket refrigeration systems. Safety is emphasized.

Prerequisites: Completion of HVAC/R diploma.

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COURSE DESCRIPTIONS

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.			
REFR2216	Refrigeration Internship	3	0/0/3
In this course, projects, reports and discussions are coordinated to relate to the student's employment situation, which must be in an approved refrigeration or air conditioning occupation. A training agreement and an evaluation are required of each student.			
Prerequisites: Completion of HVAC/R diploma.			
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.			
SOC1111	Introduction to Sociology	3	3/0/0
Meets MnTC Goal Areas 2, 5 and 7. This course is an introduction to the study of societies and the social factors that influence individual and group behavior. The course incorporates sociological and other critical thinking models for the investigation of various components of social life: culture, socialization, social organization, social stratification, social institutions, populations dynamics and social change.			
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.			
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.			
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.			
SOC2215	Criminology	3	3/0/0
Meets MnTC Goal Areas 2 and 5. This course will provide a thorough overview of the field of criminology: the study of the theories which attempt to define and explain crime, criminal behavior and society's reactions to crime, including a focus on juvenile delinquency, the judicatory process and penology.			
SOC2216	Sociology of Race and Ethnicity	3	3/0/0
Meets MnTC Goal Areas 5 and 7. This course examines the ambiguities and conflicts embedded within the broad and inclusive concept of diversity and 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.			
SOC2950	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 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			

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COURSE DESCRIPTIONS

SPAN2211	Intermediate Spanish I	4	4/0/0
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Meets MnTC Goal Area 8. This course is the first semester of Intermediate Spanish. Students will develop reading, writing, listening and speaking through a focus on historical, political, cultural and artistic expressions of the Spanish-speaking world. Grammar from beginning Spanish courses is lightly reviewed. Students will learn new grammatical skills including the perfect tense of the indicative mood and simple tenses of the subjunctive mood.

Prerequisites: SPAN1112

SPAN2212	Intermediate Spanish II	4	4/0/0
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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

SUPL1118	Lead and Facilitate Teams	3	3/0/0
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This course will address the role of supervisor, manager and leader as a leader and facilitator of work teams. Topics will include planning work teams, creating effective team interaction, identifying characteristics of successful teams and demonstrating skills and behaviors of both team leader and team member.

SURT1200	Introduction to Surgical Technology	3	3/0/0
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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.

SURT1210	Surgical Technology I	6	3/3/0
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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.

Corequisites: SURT1200

SURT1215	Surgical Pharmacology	3	2/1/0
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This course introduces basic surgical pharmacology. Topics include drug classification, therapeutic effects, side effects, interactions and dosage calculations.

Corequisites: SURT1220

SURT1220	Surgical Technology II	5	2/3/0
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This course expands the student's knowledge of the role of the surgical technologist in the operating room. The course considers procedures of the musculoskeletal, digestive, respiratory, reproductive, otic and ophthalmic systems, building on the foundation of patient care relating to these body systems in the different perioperative phases.

Corequisites: SURT1215

SURT1225	Surgical Pathophysiology	3	3/0/0
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This course introduces the learner to human disease processes that prompt surgical intervention. Relationships between cell pathology and disease will be examined. Disorders that disrupt homeostasis and surgical considerations will be presented. Surgical pathologies of the human body will be illustrated.

Corequisites: SURT1215, SURT1220

SURT1230	Surgical Technology III	4	4/0/0
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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.

Corequisites: SURT1240

SURT1250	Surgical Clinical I	6	0/0/6
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This course allows the student to practice the role of the surgical technologist under supervision in an active surgical setting.

Corequisites: SURT1230

SURT1255	Surgical Clinical II	6	0/0/6
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This course, Surgical Clinical II, introduces the student to patient care in an operating room in the role of surgical technologist.

Corequisites: SURT1240

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COURSE DESCRIPTIONS

SW2250	Introduction to Social Work/Social Welfare	3	3/0/0
This course introduces students to social welfare and social work, including fields of practice, institutions, populations served, special issues and an introduction to some social work methods and theories. A general historical and contemporary overview of the profession is provided, including its values, ethics, methods, multiple settings and a beginning use of system theory.			
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.			
THPY1110	Massage Techniques and Ethics	3	2/1/0
This course provides students with an in-depth knowledge of massage techniques. Emphasis will be on the application of the basic massage strokes and their variations. Students will learn proper draping and positioning techniques and recommended client protocol. In regards to ethics, a variety of topics will be discussed and explored in order to help the students form their own written code of ethics.			
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.			
THPY1123	Integrative Massage	2	1/1/0
This course introduces students to a variety of specialized modalities of massage. Specialization in the massage industry increases the marketability of therapists and is strongly recommended. Students will be familiar with the basic principles of each modality presented. In addition to lectures presented by the instructor, students will be responsible for researching modalities of particular interest to them.			
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			
THPY1135	Deep Tissue Massage	2	1/1/0
This course prepares the massage student to apply deep muscular therapy techniques. Emphasis will be placed on the use of proper body mechanics and the use of proper techniques to deliver deep tissue massage safely. Trigger point therapy will be used extensively in this course. Students will learn the use of massage tools. Individual muscles will be isolated and massaged with parallel and cross fiber techniques.			
Prerequisites: THPY1110			
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			
THPY1146	Certification Preparation	2	2/0/0
This course is designated to prepare the students to take the National Certification Examination (NEC) issued by the National Certification Board of Therapeutic Massage & Bodywork (NCBTMB). Students will review anatomy, physiology, kinesiology, clinical pathology, massage theory, massage assessment and practice, adjunct techniques and business practices. Students will be taught to identify the areas where they need the most review and use outside texts to help them maximize their learning potential. A study guide and sample test questions will be used to exemplify the National Certification Examination. Students will be encouraged to apply to take the National Certification Examination after they receive their diploma.			
Prerequisites: THPY1110			
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.			

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COURSE DESCRIPTIONS

THPY1151	Business Development	3	2/1/0
This course will introduce the massage therapist to the business aspects of operating a massage practice. Topics include client scheduling, budgeting, bookkeeping, marketing and massage-related business issues. The course will detail client/therapist business concerns and help prepare students to identify and solve these concerns in a professional manner. Students will learn to write and execute a detailed workable massage business plan.			
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.			
THTR1101	Introduction to Theatre	3	3/0/0
Meets MnTC Goal Areas 6 and 7. Students will explore the technical and artistic elements of theatre, examine theatre spaces and the roles of theatre artists and technicians, and study the history of theatre. Students will critically analyze a variety of works of theatre through reading scripts and viewing productions. Discussions will include how works of theatre express historical and social values which change over time, including power inequalities, identities, and contributions by diverse groups. No prior theatre background necessary.			
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.			
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.			
THTR1130	Stage Make-up	3	2/1/0
Meets MnTC Goal Area 6. Students will explore the fundamental design principles, materials and application techniques of stage make-up. Students will conduct research, plan and design face plots and apply stage make-up. Beginning with make-up fundamentals, students will progress to more advanced projects including aging, special effects, Kabuki, animal and fantasy. Student work will culminate with a final project and a final portfolio.			
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.			
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			
WMST1130	Introduction to Women's Studies	3	3/0/0
Meets MnTC Goal Areas 5 and 7. This course is an interdisciplinary study designed to enhance the student's understanding of women's cultural, social, historical, political and econ achievements based on historical and diverse societal settings.			
WMST1136	Global Perspectives of Women	3	3/0/0
Meets MNTC Goal Areas 6 and 8. This course examines the present-day realities of women's lives around the world.			
Corequisites: ENGL1101			



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