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Disclaimer
Minnesota West reserves the right to cancel, postpone and re-schedule course offerings as necessary. This catalog is produced from materials available at the time of publication. The College also reserves the right to make changes in catalog information when necessary to correct errors. This document can be made available in alternative formats such as large print, Braille, or audio tape. For the most recent information see www.mnwest.edu

For student rights, conduct policies, and appeals see the Current Student page on our web site.
Look under Student Information and Policies.
Web Site:  www.mnwest.edu
Toll Free:  800-658-2330

Campus Addresses and Phone Numbers

Canby Campus
1011 First Street West
Canby, MN 56220
FAX 507-223-5291

Granite Falls Campus
1593 11th Avenue
Granite Falls, MN 56241
FAX 320-564-4582

Jackson Campus
P.O. Box 269
401 West Street
Jackson, MN 56143
FAX 507-847-5389

Luverne Educational Center for Health Careers
305 E. Luverne Street
Luverne, MN 56156
FAX 507-449-0254

Marshall Center
1001 West Erie Road
PO Box 359
Marshall, MN 56258
FAX 507-537-7081

Pipestone Campus
P.O. Box 250
1314 North Hiawatha Ave.
Pipestone, MN 56164
FAX 507-825-4656

Worthington Campus
1450 Collegeway
Worthington, MN 56187
FAX 507-372-5803

Minnesota West Community & Technical College is a member institution of the Minnesota State colleges and universities. Minnesota State is the largest single provider of higher education in the state of Minnesota with 30 community and technical colleges and seven state universities located on 54 campuses.

“Minnesota West Community & Technical College is an open enrollment institution committed to equal opportunity. Students with limited English proficiency will have equal opportunity in the admissions process.”

Minnesota State
Wells Fargo Place
30 7th St. E., Suite 350
St. Paul, MN 55101-7804
651-296-8012
History
Minnesota West Community & Technical College is a comprehensive community and technical college with five southwestern Minnesota campuses, located in Canby, Granite Falls, Jackson, Pipestone, and Worthington and two learning centers located in Marshall and Luverne. Minnesota West provides students with the opportunity to earn an Associate Degree, Diploma, or Certificate.

Minnesota West has a long-standing tradition of providing quality liberal arts/transfer and technical education. On January 1, 1997, Worthington Community College and Southwestern Technical College merged as Minnesota West Community & Technical College.

The four campuses that comprised Southwestern Technical College began as local area vocational schools. The individual campuses have a history dating back more than 50 years. The campuses were originally under the jurisdiction of the local high school board of education and offered programs that served the local and regional economy. On July 1, 1985, the four area technical institutes at Canby, Granite Falls, Jackson, and Pipestone were officially merged to form Southwestern Technical Institute. The Minnesota State Legislature renamed all technical institutes as technical colleges on July 1, 1989. Southwestern Technical College was a member institution of the former Minnesota Technical College System and on July 1, 1995, became a member institution of Minnesota State.

The former Worthington Community College was established in 1936 as an institution of higher education by and under the jurisdiction of the local school district to meet the post-secondary education needs of the community and surrounding area. The first campus was located in the Worthington High School, and in 1966 the College moved to its current 76 acre campus located to the north of Lake Okabena. In 1964 Worthington Junior College was transferred to the State Junior College Board and was named Worthington State Junior College. In 1973 the name was changed to Worthington Community College and the College was placed under the jurisdiction of the Minnesota Community College System. On July 1, 1995, Worthington Community College became a member institution of Minnesota State.

Two centers in Marshall and Luverne have been added to Minnesota West Community & Technical College to serve the students of those areas.

Mission Statement
Minnesota West Community & Technical College prepares learners for a lifetime of success.

Vision Statement
Minnesota West is the regional college of choice.

Values
- Community Engagement
- Courage
- Diversity & Inclusion
- Innovation
- Integrity
- Student Success

To view 2017-2023 Strategic Plan
General Information

Affirmative Action/Nondiscrimination
It is the policy of Minnesota West Community & Technical College to undertake and maintain a program of equal opportunity and of non-discrimination as determined by Minnesota State policy 1B.1 in educational opportunities and employment. No person shall be discriminated against in the terms and conditions of employment, personnel practices or access to and participation in, programs, services, and activities with regard to race, sex, color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, gender identity, gender expression or membership or activity in a local commission as defined by law. Contact Karen Miller, Affirmative Action Officer; 1011 First Street West; Canby, MN 56220. Phone 507-223-1335 or email karen.miller@mnwest.edu.

Individuals with Disabilities
It is the policy of the College to provide access to and encourage participation in programs, services, and activities to qualified individuals with known disabilities as required by Federal and State statutes.

Students with certain types of disabilities should be aware that some programs and courses require specific physical abilities. Please consult with the instructor and/or advisor for possible accommodations prior to enrollment.

College ADA Coordinator for employees is Karen Miller who can be reached at: karen.miller@mnwest.edu

College ADA Coordinator for students is Salome Chonko who can be reached at: salome.chonko@mnwest.edu

Consumer Information/Student Right to Know
Minnesota West Community & Technical College, in compliance with the Title VI of the Educational Amendments of 1976 to the Higher Education Act and subsequent Federal Legislation, will provide and disseminate consumer information to all prospective and enrolled students. This information shall include, but not be limited to the following: admission requirements, financial aid programs, costs, job placement, probation policy, campus crime statistics, student retention, refund policy, and transfer. Students who do not have a high school diploma or GED can obtain one while attending Minnesota West. The College Deans, Registrar, or the Student Services staff on each campus are designated as the persons available to all enrolled students and prospective students regarding consumer information. This information is made available upon request through publications and mailings.

Data Privacy
All actions concerned with data collected and filed or stored at the College shall be administered in compliance with the provisions of Minnesota Statutes, Section 13.01 to 13.87. The President or designee shall be the responsible authority concerning Directory Information or Public Data, Private Data, and Confidential Data. Requests to obtain data should be made under the Minnesota Government Data Practices Act and the College may require a fee to retrieve Public Data.

Under Section 13.04 of the MGDPA, individuals who are the subjects of government data have the right to access private data about themselves or to release this information to other individuals. The subject must make a request in writing and sign the required Minnesota West form for release of this data. There is no fee charged to the individual for accessing or releasing this data.

Accreditation and Approvals
Minnesota West Community & Technical College is a member of Minnesota State, which consists of 37 public colleges and universities on 54 campuses.

The College is accredited by the Higher Learning Commission, a Commission of the North Central Association of Colleges and Secondary Schools (NCA). View the institutional Self Study and the Request for Institutional Change for the Higher Learning Commission on our website in the “About Us” section.

NCA may be contacted at the following address:

The Higher Learning Commission
30 North LaSalle Street, Suite 2400
Chicago, IL 60602-2504
800-621-7440
Additional Accrediting and Approval Organizations

**Accreditation Commission for Education in Nursing (ACEN), Inc.**
3390 Peachtree Road NE, # 1400
Atlanta, GA 30326
404-975-5000
https://www.acenursing.org/

**American Dental Association**
Commission of Dental Accreditation
211 East Chicago Avenue
Chicago, Illinois 60601-2678
312-440-2500
https://www.ada.org/en/coda

**Automotive Service Excellence Education Foundation**
1503 Edwards Ferry Rd. NE
Suite 401
Leesburg, VA 20176
703-669-6650
https://www.aseeducationfoundation.org

**Commission on Accreditation of Allied Health Education Programs**
25400 U.S. Highway 19 North, Suite 158
Clearwater, FL 33756
Phone: 727-210-2350
https://www.caahep.org
The Minnesota West Community & Technical College Medical Assisting Program is accredited by the Commission on Accreditation of Allied Health Education (www.caahep.org) upon the recommendation of the Medical Assisting Education Review Board (MAERB).

**Commission on Accreditation of Allied Health Education Programs (CAAHEP)**
25400 U.S. Highway 19 North, Suite 158
Clearwater, FL 33763
Phone: 727-210-2350
https://www.caahep.org
The Minnesota West Community & Technical College Surgical Technology Program is accredited by the Commission on Accreditation of Allied Health Education (www.caahep.org) upon recommendation of the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC/STSA)

**Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM)**
200 East Randolph Street, Suite 5100
Chicago, IL 60601
651-643-3060
https://www.cahiim.org/

**Emergency Medical Services Regulatory Board**
2829 University Ave SE, Suite 310
Minneapolis, MN 55414-3222
651-201-2800
www.emsrb.state.mn.us

**Joint Review Committee on Education in Radiologic Technology (JRCERT)**
20 North Wacker Drive, Suite 2850
Chicago, IL 60606-3182
312-704-5300
https://www.jrcert.org/

**Minnesota Board of Nursing**
8229 University Ave SE, #500
Minneapolis, MN 55414-3253
612-317-3000

**Minnesota Board of Peace Officer Standards and Training**
1600 University Avenue, Suite 200
St. Paul, Minnesota 55104-3825
651-643-3060

**Minnesota Board of Barber and Cosmetologist Examiners**
2829 University Ave SE, Minneapolis, MN 55414
651-201-2742
https://mn.gov/boards/cosmetology

**Minnesota Department of Agriculture**
90 West Plato Boulevard
Saint Paul, Minnesota 55107
651-297-2200

**Minnesota Department of Labor and Industry**
Board of Electricity
443 Lafayette Road N
St Paul, MN 55155
651-284-5315

**Minnesota Department of Rehabilitation Services**
390 North Robert Street, 1st Floor
St. Paul, MN 55101
651-296-5616

**Minnesota State Approving Agency for Veterans Education**
MDVA-MN SAA
206 Veteran’s Service Bldg
20 West 12th Street
St. Paul, MN 55155-2079
651-296-2562
The Minnesota Transfer Curriculum (MnTC) is a collaborative effort among all two-year and four-year public colleges and universities in Minnesota to help students transfer their coursework in general education between institutions. Students who complete the Minnesota Transfer Curriculum (MnTC) and then transfer to any other Minnesota public baccalaureate degree-granting university will have fulfilled all lower division general education requirements.

There are ten goals within the 40 required credits. One course may fulfill a maximum of two goals; however, credits will only be counted once in the total. A cumulative grade point average of 2.00 is required to complete the entire Minnesota Transfer Curriculum. The MnTC grade point average will be calculated using grades of A-D (passing grades) earned in all MnTC courses, including both Minnesota West and transfer grades.

Minnesota West Community & Technical College adheres to the General Education definition embedded in the Minnesota Transfer Curriculum guide. Its mission and goals resonate to those ideals.

### Area 1. Communication

Goal: To develop writers and speakers who use the English language effectively and who read, write, speak, and listen critically. As a base, all students should complete introductory communication requirements early in their collegiate studies. Writing competency is an ongoing process to be reinforced through writing-intensive courses and writing across the curriculum. Speaking and listening skills need reinforcement through multiple opportunities for interpersonal communication, public speaking, and discussion.

Student Competencies: Students will be able to:
1. understand/demonstrate the writing and speaking processes through invention, organization, drafting, revision, editing, and presentation.
2. participate effectively in groups with emphasis on listening, critical and reflective thinking, and responding.
3. locate, evaluate, and synthesize in a responsible manner material from diverse sources and points of view.
4. select appropriate communication choices for specific audiences.
5. construct logical and coherent arguments.
6. use authority, point-of-view, and individual voice and style in their writing and speaking.
7. employ syntax and usage appropriate to academic disciplines and the professional world.

Student Requirements: Students will fulfill this area by completing:
1. ENGL 1101 Composition I (3)

### Area 2. Critical Thinking

Goal: To develop thinkers who are able to unify factual, creative, rational, and value-sensitive modes of thought. Critical thinking skills will be taught and used throughout the general education curriculum in order to develop students’ awareness of their own thinking and problem-solving procedures. To integrate new skills into their customary ways of thinking, students must be actively engaged in practicing thinking skills and applying them to open-ended problems.

Student Competencies: Students will be able to:
1. gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected.
2. imagine and seek out a variety of possible goals, assumptions, interpretations, or perspectives which can give alternate meanings or solutions to given situations or problems.
3. analyze the logical connections among the facts, goals, and implicit assumptions relevant to a problem or claim; generate and evaluate implications that follow from them.
4. recognize and articulate the value assumptions which underlie and affect decisions, interpretations, analyses, and evaluations made by ourselves and others.

Student Requirements: Students will fulfill this area by completing:
- ENGL 1102 Composition II (3), ENGL 1105 Introduction to Literature (3), ENGL 1120 Introduction to Women’s Literature (3), ENGL 2243 Composition: Creative Writing (3)
- 40 or more credits of general education. Most courses teach one or more of the critical thinking student competency areas.

### Area 3. Natural Sciences

Goal: To improve students’ understanding of natural science principles and of the methods of scientific inquiry, i.e., the ways in which scientists investigate natural science phenomena. As a basis for lifelong
learning, students need to know the vocabulary of science and to realize that while a set of principles has been developed through the work of previous scientists, ongoing scientific inquiry and new knowledge will bring changes in some of the ways scientists view the world. By studying the problems that engage today’s scientists, students learn to appreciate the importance of science in their lives and to understand the value of a scientific perspective. Students should be encouraged to study both the biological and physical sciences.

Student Competencies: Students will be able to:
1. demonstrate understanding of scientific theories.
2. formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students’ laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
3. communicate their experimental findings, analyses, and interpretations both orally and in writing.
4. evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

Student Requirements: Students will fulfill this area by completing a minimum of two science courses:
1. One course must be from Biology:
   - BIOL 1100 Survey of Biological Science (3)
   - BIOL 1110 Principles of Biology I (4)
   - BIOL 1111 Principles of Biology II (4)
   - BIOL 1115 Human Biology (3)
   - BIOL 2100 Ecology (3)
   - BIOL 2201 Human Anatomy (4)
   - BIOL 2202 Human Physiology (4)
   - BIOL 2230 Plant Biology (4)
   - BIOL 2240 Genetics (3)
   - BIOL 2270 Microbiology (4)

2. One course must be from Chemistry or Physics:
   - CHEM 1100 Introduction to Chemistry (3)
   - CHEM 1101 General Chemistry I (4)
   - CHEM 1102 General Chemistry II (4)
   - CHEM 1150 Survey of Chemistry (4)
   - CHEM 2201 Organic Chemistry I (5)
   - PHYS 1100 Survey of Physics (3)
   - PHYS 1150 Survey of Astronomy (3)
   - PHYS 1201 Fundamentals of Physics I (4)
   - PHYS 1202 Fundamentals of Physics II (4)
   - PHYS 2121 General Physics I (5)
   - PHYS 2122 General Physics II (5)

Area 4. Mathematical/Logical Reasoning
Goal: To increase students’ knowledge about mathematical and logical modes of thinking. This will enable students to appreciate the breadth of applications of mathematics, evaluate arguments, and detect fallacious reasoning. Students will learn to apply mathematics, logic, and/or statistics to help them make decisions in their lives and careers. Minnesota’s public higher education systems have agreed that developmental mathematics includes the first three years of a high school mathematics sequence through intermediate algebra. (Recommendation from the intersystem Mathematics Articulation Council. Adopted by all systems in February 1992.)

Student Competencies: Students will be able to:
1. illustrate historical and contemporary applications of mathematical/logical systems.
2. clearly express mathematical/logical ideas in writing.
3. explain what constitutes a valid mathematical/logical argument (proof).
4. apply higher-order problem-solving and/or modeling strategies.

Student Requirements: Students will fulfill this area by completing any one of the listed courses:
1. Any 3-5 credit Math course numbered MATH 1105 or higher:
   - MATH 1105 Intro to Probability and Statistics (4)
   - MATH 1107 Concepts in Math (3)
   - MATH 1111 College Algebra (3)
   - MATH 1113 Pre-Calculus (4)
   - MATH 1121 Calculus (4)
   - MATH 1122 Calculus II (4)
   - MATH 2201 Calculus III (4)
   - MATH 2210 Linear Algebra (4)
2. PHIL 1200, Logic (3)

Area 5. History and the Social and Behavioral Sciences:
Goal: To increase students’ knowledge of how historians and social and behavioral scientists discover, describe, and explain the behaviors and interactions among individuals, groups, institutions, events, and ideas. Such knowledge will better equip students to understand themselves and the roles they play in addressing the issues facing humanity.

Student Competencies: Students will be able to:
1. employ the methods and data that historians and social and behavioral scientists use to investigate the human condition.
2. examine social institutions and processes across a range of historical periods and cultures.
3. use and critique alternative explanatory systems or theories.
4. develop and communicate alternative explanations or solutions for contemporary social issues.
Student Requirements: Students will fulfill this area by completing a minimum of 9 credits from three of the following areas:

Criminal Justice
   CJS 1101 Introduction to Criminal Justice (3)

Communications
   CMST 1150 Exploring Mass Media (3)

Economics
   ECON 1101 Introduction to Economics (3)
   No credit if ECON 2201 or 2202 has been previously completed
   ECON 2201 Principles of Macroeconomics (3)
   ECON 2202 Principles of Microeconomics (3)

Education
   EDUC 2900 Introduction to Special Education (3)

Geography
   GEOG 1100 Introduction to Geography (3)
   GEOG 2235 ST: Introduction to Human Geography (3)

History
   HIST 1101 United State History to 1865 (4)
   HIST 1102 United States History since 1865 (4)
   HIST 1105 Minnesota History (3)
   HIST 1121 Early World History (3)
   HIST 1122 Modern World History (3)
   HIST 2202 Modern American Wars (3)

Indigenous Studies
   IND 1101 Introduction to Indigenous Nations and Dakota Students (3)

Political Science
   PSCI 1101 Introduction to Political Science (3)
   PSCI 1201 American Government and Politics (3)
   PSCI 2202 State and Local Government (3)
   PSCI 2210 Environmental Politics (3)

Psychology
   PSYC 1101 Introduction to Psychology (4)
   PSYC 1111 Psychology of Adjustment (3)
   PSYC 1150 Developmental Psychology (3)
   PSYC 2210 Basic Counseling Skills (3)
   PSYC 2221 Abnormal Psychology (3)
   PSYC 2225 Addictive Behavior (3)
   PSYC 2230 Behavior Modification (3)
   PSYC 2260 Social Psychology (3)

Sociology
   SOC 1101 Introduction to Sociology (3)
   SOC 1102 Social Problems (3)
   SOC 2210 Marriage and the Family (3)
   SOC 2224 Racial and Ethnic Minorities (3)
   SOC 2225 Abuse in Society (3)

Social Work
   SWRK 1101 Introduction to Human Services: Social Work (3)
   SWRK 2250 Pre-Field Practicum: Social Work

Area 6. The Humanities and Fine Arts

Goal: To expand students' knowledge of the human condition and human cultures, especially in relation to behavior, ideas, and values expressed in works of human imagination and thought. Through study in disciplines such as literature, philosophy, and the fine arts, students will engage in critical analysis, form aesthetic judgments, and develop an appreciation of the arts and humanities as fundamental to the health and survival of any society.

Student Competencies: Students will be able to:
1. demonstrate awareness of the scope and variety of works in the arts and humanities.
2. understand those works as expressions of individual and human values within an historical and social context.
3. respond critically to works in the arts and humanities.
4. engage in the creative process or interpretive performance.
5. articulate an informed personal reaction to works in the arts and humanities.

Student Requirements: Students will fulfill this area by completing a minimum of 9 credits from three of the following departments (note: a minimum of two credits must be taken from each of the three countable areas):

Art
   ART 1101 Beginning Drawing (3)
   ART 1103 Display and Exhibition (1)
   ART 1114 Foundations of Art 2D (3)
   ART 1115 Beginning Painting (3)
   ART 1118 Foundations of Art 3D (3)
   ART 1120 Art Appreciation (3)
   ART 1124 Introduction to Ceramics (3)
   ART 1224 Investigations in Raku (3)
   ART 2201 Intermediate Drawing (3)
   ART 2215 Intermediate Painting (3)
   ART 2230 Computer Graphics (3)
   *ART 2235 Special Topics (1-3)
   ART 2240 Art History I (3)
   ART 2245 Art History II (3)

Communication
   CMST 2210 Oral Interpretation (3)
   CMST 2235 ST: Storytelling in Ireland (3)

English
   ENGL 1102 Composition II (3)
   ENGL 1105 Introduction to Literature (3)
   ENGL 1120 Introduction to Women’s Literature (3)
   ENGL 1141 Writing and Reading Poetry (2)
   ENGL 2120 Children’s Literature (3)
   ENGL 2201 Early American Literature (3)
   ENGL 2202 Modern American Literature (3)
   ENGL 2203 Midwest Literature
   ENGL 2221 Early British Literature (3)
   ENGL 2222 Modern British Literature (3)
ENGL 2231 Classical Mythology (2)
ENGL 2243 Composition: Creative Writing (3)

History
HIST 1111 Early Western Civilization (3)
HIST 1112 Modern Western Civilization (3)

Humanities
HUM 2121 The Turbulent Sixties (4)
HUM 2201 The Many Faces of Mexico (2)
HUM 2230 World Religions (3)

Music
MUSC 1101 Fundamentals of Music (3)
MUSC 1102 Introduction to Music Technology (3)
MUSC 1103 Music in World Cultures (3)
MUSC 1104 American Popular Music (3)
MUSC 1105 Music Appreciation (3)
MUSC 1110 Introduction to Rock Music (3)
MUSC 1111, 1112, 2111, 2112 Choir (1)
MUSC 1140, 1141, 2140, 2141 Piano Lessons (1)
MUSC 1145, 1146, 2145, 2146 Vocal Lessons (1)

Philosophy
PHIL 1101 Introduction to Philosophy (3)
PHIL 1102 Philosophy of Religion (2)
PHIL 2101 Ethics Theory & Practice (3),
PHIL 2201 Introduction to Ethical Theory (1)
One of the following three: PHIL 2202 General
Applied Ethics (1) PHIL 2205 Business Ethics (2)
PHIL 2222 Medical Ethics (1)

Spanish
SPAN 1101 Spanish I (4)
SPAN 1102 Spanish II (4)
SPAN 2201 Spanish III (4)
SPAN 2202 Spanish IV (4)

Theater
THTR 1101 Introduction to Theater (3)
THTR 1102 Acting for Everyone (3)
THTR 1104 Survey of Musical Theater (3)
THTR 1105, 1106, 2105, 2106 Theater Production
(1-3)
THTR 2122 Introduction to Film (3)
*THTR 2235 Special Topics (1-3)

* Special topics classes are presented to the Curriculum Committee prior to being taught. They are accepted as credits in a transfer curriculum area only if it is satisfactorily documented to the Curriculum Committee that more than 50 percent of the student competencies listed for that area are accomplished.

Area 7. Human Diversity

Goal: To increase students' understanding of individual and group differences (e.g., race, gender, class) and their knowledge of the traditions and values of various groups in the United States. Students should be able to evaluate the United States' historical and contemporary responses to group differences.

Student Competencies: Students will be able to:
1. understand the development of and the changing meanings of group identities in the United States' history and culture.
2. demonstrate an awareness of the individual and institutional dynamics of unequal power relations between groups in contemporary society.
3. analyze their own attitudes, behaviors, concepts and beliefs regarding diversity, racism, and bigotry.
4. describe and discuss the experience and contributions (political, social, economic, etc.) of the many groups that shape American society and culture, in particular those groups that have suffered discrimination and exclusion.
5. demonstrate communication skills necessary for living and working effectively in a society with great population diversity.

Student Requirements: Students will fulfill this area by completing any one of the listed courses (2 credit minimum):
CMST 1120 Intercultural Communication (3)
CMST 1140 Topics in Communication: Puerto Rican Cultures (3)
EDUC 2900 Introduction to Special Education (3)
ENGL 1105 Introduction to Literature (3)
ENGL 1120 Introduction to Women's Literature (3)
ENGL 2120 Children's Literature (3)
ENGL 2201 Early American Literature (3)
ENGL 2202 Modern American Literature (3)
ENGL 2221 Early British Literature (3)
ENGL 2222 Modern British Literature (3)
HIST 1101 United States History to 1865 (4)
HIST 1102 United States History since 1865 (4)
HIST 1105 Minnesota History (3)
HUM 2121 The Turbulent Sixties (4)
HUM 2201 The Many Faces of Mexico (2)
INDS 1101 Introduction to Indigenous Nations and Dakota Students (3)
PSYC 1101 Introduction to Psychology (4)
PSYC 1111 Psychology of Adjustment (3)
PSYC 1150 Developmental Psychology (3)
PSYC 2221 Abnormal Psychology (3)
PSYC 2225 Addictive Behavior (3)
PSYC 2260 Social Psychology (3)
SOC 1102 Social Problems (3)
SOC 2100 Human Relations (3)
SOC 2210 Marriage and the Family (3)
SOC 2224 Racial & Ethnic Minorities (3)
SWRK 1101 Intro to Human Services: Social Work (3)

Area 8. Global Perspective

Goal: To increase students' understanding of the growing interdependence of nations and peoples and develop their ability to apply a comparative perspective to cross-cultural social, economic and political experiences.

Student Competencies: Students will be able to:
1. describe and analyze political, economic, and cultural elements which influence relations of states
and societies in their historical and contemporary dimensions.
2. demonstrate knowledge of cultural, social, religious and linguistic differences.
3. analyze specific international problems, illustrating the cultural, economic, and political differences that affect their solution.
4. understand the role of a world citizen and the responsibility world citizens share for their common global future.

Student Requirements: Students will fulfill this area by completing any one of the listed courses for a minimum of 2 credits:
- ART 2240 Art History I (3)
- ART 2245 Art History II (3)
- CMST 1120 Intercultural Communication (3)
- CMST 1140 Topics in Communication: Puerto Rican Culture (3)
- GEOG 1100 Introduction to Geography (3)
- GEOG 2235 ST: Introduction to Human Geography (3)
- HIST 1111 Early Western Civilization (3)
- HIST 1112 Modern Western Civilization (3)
- HIST 1121 Early World History (3)
- HIST 1122 Modern World History (3)
- HUM 2230 World Religions (3)
- MUSC 1102 Introduction to Music Technology (3)
- MUSC 1103 Music in World Cultures (3)
- NSCI 1100 Issues in the Environment (3)
- PSCI 1101 Introduction to Political Science (3)
- SOC 2100 Human Relations (3)
- SOC 2224 Racial and Ethnic Minorities (3)
- SPAN 1101 Spanish I (4)
- SPAN 1102 Spanish II (4)
- SPAN 2201 Spanish III (4)
- SPAN 2202 Spanish IV (4)

Area 9. Ethical and Civic Responsibility

Goal: To develop students’ capacity to identify, discuss, and reflect upon the ethical dimensions of political, social, and personal life and to understand the ways in which they can exercise responsible and productive citizenship. While there are diverse views of social justice or the common good in a pluralistic society, students should learn that responsible citizenship requires them to develop skills to understand their own and others’ positions, be part of the free exchange of ideas, and function as public-minded citizens.

Student Competencies: Students will be able to:
1. examine, articulate, and apply their own ethical views.
2. understand and apply core concepts (e.g., politics, rights and obligations, justice, liberty) to specific issues.
3. analyze and reflect on the ethical dimensions of legal, social, and scientific issues.
4. recognize the diversity of political motivations and interests of others.
5. identify ways to exercise the rights and responsibilities of citizenship.

Student Requirements: Students will fulfill this area by completing any one of the listed courses for a minimum of 2 credits:
- CMST 1150 Exploring Mass Media (3)
- CMST 1160 Basic Media Writing (3)
- CMST 1170 Public Relations (3)
- HIST 2202 Modern American Wars (3), PHIL 1120 Environmental Ethics (3)
- PHIL 2101 Ethics Theory and Practice (3), PHIL 2201 Introduction to Ethical Theory (1)
- One of the following three: PHIL 2202 General Applied Ethics (1), PHIL 2205 Business Ethics (2), PHIL 2222 Medical Ethics (1),
- PSCI 1201 American Government and Politics (3)
- PSCI 2202 State and Local Government (3)
- SOC 2215 Drugs in Society (3)
- SOC 2225 Abuse in Society (3)

Area 10. People and the Environment

Goal: To improve students’ understanding of today’s complex environmental challenges. Students will examine the interrelatedness of human society and the natural environment. Knowledge of both biophysical principles and sociocultural systems is the foundation for integrative and critical thinking about environmental issues.

Student Competencies: Students will be able to:
1. explain the basic structure and function of various natural ecosystems and of human adaptive strategies within those systems.
2. discern patterns and interrelationships of biophysical and sociocultural systems.
3. describe the basic institutional arrangements (social, legal, political, economic, religious) that are evolving to deal with environmental and natural resource challenges.
4. evaluate critically environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions.
5. propose and assess alternative solutions to environmental problems.
6. articulate and defend the actions they would take on various environmental issues.

Student Requirements: Students will fulfill the area by completing any one of the listed courses (2 credit minimum):
- GEOG 1101 Introduction to Physical Geography (3)
- GEOG 2140 Natural Disaster and Meteorology (3)
- NSCI 1100 Issues in the Environment (3)
- PHIL 1120 Environmental Ethics (3)
- PSCI 2210 Environmental Politics (3)
Transfer Information

Preparing for Transfer

Students currently enrolled at Minnesota West Community & Technical College:

1. Discuss plans with the campus Student Services Advisor.
2. Review the information on the Minnesota Transfer Web site.
3. Call or visit intended transfer college.
4. Obtain the following materials and information: college catalog, transfer brochure, course syllabi, information on admissions criteria and on materials required for admission (e.g., portfolio, transcripts, test scores).
5. Review these materials and make an appointment to talk with an advisor. Bring a current college transcript for the Student Services Advisor, transfer specialist and department/faculty advisor to review. Transcripts from any college that is part of the Minnesota State system are available electronically for the advisors to view.

Understanding How Transfer Works

1. The receiving college or university decides which credits transfer and whether those credits meet its degree requirements. The accreditation of both the sending and the receiving institution can affect the transfer of the credits earned.
2. Institutions accept credits from courses and programs like those they offer. They look for similarity in course goals, content, and level. “Like” transfers to “like.”
3. Not everything that transfers counts toward graduation. Baccalaureate degree programs usually count credits in three categories: general education, major/minor courses and prerequisites, and electives.
4. If there are changes in career goals or major, student may be able to complete all degree requirements within the usual number of graduation credits.
5. Apply for transfer admission as early as possible and prior to the deadline. Be sure to enclose all required documents.
6. If student has not heard from the intended college of transfer after one month, they should call or check on the application’s status.
7. The transfer college will send a written evaluation of which courses transfer and which do not. How courses specifically meet degree requirements may not be decided until orientation or a major is chosen.
8. For questions about evaluation, call the college and speak with the transfer specialist. If not satisfied, student may appeal.

Your Rights as a Transfer Student

1. A clear, understandable statement of an institution’s transfer policy.
2. A fair credit review and an explanation of why credits were or were not accepted.
3. A copy of the formal appeals process.
4. A review, on request, of student eligibility for financial aid or scholarships.

Transferology

Transferology is a free web-based transfer information system that can be accessed by any Internet user.

Users have direct access to information on courses, course equivalencies, and program requirements among participating institutions across Minnesota and the United States. Transferology enables students to immediately see how courses will transfer and apply towards a degree at a Transferology institution.

Using Transferology, students can
• view course equivalency guides to see how courses transfer from one institution to another.
• view degree program requirements to see what is expected to complete a particular degree program.
• maintain a list of courses and grades for use in running a planning guide.
• run an unofficial planning guide (degree audit) to see how courses may transfer and apply to a degree program.
• view course descriptions directly from Transferology or from a Transferology institution’s Web site.

Note:
Information obtained through Transferology should be considered unofficial and must be verified through the Records Department of the degree granting school.
The following degrees and awards are available through Minnesota West:

- Associate of Arts (A.A.)
- Associate of Science (A.S.)
- Associate of Applied Science (A.A.S.)
- Diploma
- Certificate

**Minnesota State Transfer Pathway Degrees**

Through Transfer Pathways, students enrolled at Minnesota State’s two-year colleges can select a course of study that will prepare them to complete related bachelor’s degrees at any Minnesota State universities that offers a degree in that field. Students who complete the transfer degree will be guaranteed junior status upon admission to the university. The student will still need to meet any special admission requirement for the major. The bachelor’s degree can be completed in 60 additional credits.

Transfer Pathway degrees are listed on the college web site under Programs and Courses.

**Associate of Arts (A.A.) Degree Requirements**

Minnesota West offers the first two years of course work that is designed to transfer to a baccalaureate degree at four year colleges and universities. Some examples of transfer majors for which Minnesota West offers an emphasis in, for the first two years of preparation (A.A.) are listed below. Students pursuing this option will graduate with a Liberal Arts A.A. degree from Minnesota West.

- Art
- Biology-Fish-Wildlife
- Business Administration
- Business Education
- Business – Pre-Business
- Computer Information
- Science
- Economics
- Education – Elementary, Secondary and Special
- English
- Environmental Sciences
- Health
- Liberal Arts
- Management Information Systems
- Mathematics
- Music
- Physical Education
- Pre-Dental Hygiene
- Pre-Law
- Psychology
- Recreational/Parks Administration
- Sociology
- Theater

The Associate of Arts Degree can be used to fulfill the freshman-sophomore general education requirements at all state universities in Minnesota, at all colleges within the University of Minnesota and at most other 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.

To earn an A.A. degree, students must complete the following requirements:

1. A minimum of 60 credits, 15 of which must be earned at Minnesota West Community & Technical College.
2. A grade point average of 2.00 (“C”) or better.
3. A minimum of 40 credits of general education that fulfills the Minnesota Transfer Curriculum. Students must meet credit requirements in each of the ten listed areas of emphasis. Courses may count in no more than two of the areas of emphasis, but no individual course can count more than once in Areas 1-6. One-credit courses will apply to the MTC only if two or more one-credit courses are completed in the same discipline (i.e. two semesters of Chorale or two semesters of Theater Production).
4. STSK 1110 Freshman Seminar (1) Credit.
5. A minimum of four credits from two of the following areas, HLTH 1101, CSCI 1102, or any Physical Education course.
6. Electives sufficient to total 60 credits.

**Associate of Science (A.S.) Degree Requirements**

Minnesota West Community & Technical College offers the first two years of various majors leading to the baccalaureate or professional degree in several technical areas. This list is not all-inclusive. Students may work toward the Associate of Science (A.S.) degree with one or more of the following as their major field:

- Agriculture
- Agri. Business
- Ag Production Management
- Business Management
- Chemistry
- Child Development
- Communication Studies
- Computer Applied Technology
- Computer Science
- Computer Science 2+2 with SMSU
- Elementary Education
- Individualized Studies
- Law Enforcement
- Network Specialist
- Nursing
- Office Management
- Pre-Chiropractic
- Pre-Engineering
- Pre-Food Science
- Pre-Forestry/Natural Resources
- Pre-Human Services
- Pre-Medicine
- Plant Science
- Web Development
- Management and Supervision in Healthcare
Students planning to continue their education in engineering, medicine, medical technology, pharmacy, veterinary medicine and other such fields are advised to carefully plan their programs with an advisor. In such cases, students are encouraged to follow the requirements of the institution to which they will be transferring.

To earn an A.S. degree, students must complete the following requirements:

1. 60 semester credits of which at least 15 must be earned at Minnesota West Community & Technical College.
2. A grade point average of 2.0 ("C") or better.
3. A minimum of 30 credits selected from at least 6 of the 10 goal areas in the Minnesota Transfer Curriculum.
4. Fulfill at least a 30 credit core of technical courses unique to the program being completed.

Associate of Applied Science (A.A.S.) Degree Requirements

The Associate of Applied Science Degree is granted for successful completion of occupational programs. The A.A.S. career programs are designed to prepare students for entry into chosen occupations. An A.A.S. degree may be designed to transfer to a related baccalaureate major. Students planning to continue for a four-year degree should be aware that acceptance of degree/technical credits at the four-year institution is dependent upon the policies of the institution.

To earn an A.A.S. degree, students must complete the following requirements:

1. 60-72 semester credits, 15 of which must be earned at Minnesota West Community & Technical College.
2. A grade point average of 2.0 ("C") or better.
3. 30 semester credits shall be program related, occupational or technical credits.
4. Degrees and Awards must include a minimum of 15 credits in general education, selected from three of the ten goal areas of the Minnesota Transfer Curriculum.

Diploma Requirements

A diploma may be awarded for successful completion of a program intended to provide students with employment skills. The diploma programs are identified in the Programs of Study section of the catalog and require:

1. Between 30-72 semester credits.
2. If diplomas are awarded for under 45 credits, general education courses may be required as part of the program and are established through consultation with the program advisory committee.

3. If diplomas are awarded for 45 credits or more, 15% of the credits must be in general education or seek advisory committee approval requesting a waiver to require a minimum of 6 general education credits.
4. At least 1/3 (33%) of the credits must be completed at Minnesota West.
5. A grade point average of 2.0 ("C") or better is required.

Certificate Requirements

1. 9 - 30 semester credits.
2. 0 general education courses required
3. 100% of credits shall be completed at Minnesota West for certificates 9-15 credits in length and at least 12 credits for certificates 16-30 credits in length.
4. A grade point average of 2.0 ("C") or better is required.

Honorary Degree

Honorary degrees may be awarded by Minnesota West Community & Technical College. The College may award an honorary degree based upon the intended recipient’s field(s) of contributions, achievement, service, and distinction.
## Programs of Study

### Accountant, A.A.S.

**Locations:** Canby, Granite Falls, Jackson, Pipestone, Worthington and Online  
Accountants examine, analyze and interpret accounting data for the purpose of giving advice and preparing financial statements. Accountants also post details of business transactions, such as receipts, disbursements and payroll.

<table>
<thead>
<tr>
<th>General Education Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1101 Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ECON Any ECON Course</td>
<td>3</td>
</tr>
<tr>
<td>NSCI 1101 Issues in the Environment</td>
<td>3</td>
</tr>
<tr>
<td>Goal Area 3 (Science or Math)</td>
<td>3</td>
</tr>
<tr>
<td>Goal Area 6 (Humanities &amp; Fine Arts)</td>
<td>3</td>
</tr>
<tr>
<td>General Education Electives</td>
<td>3</td>
</tr>
</tbody>
</table>

| Total General Education | 15 |

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ACCT 1110 Payroll Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 1112 Accounting Information Systems</td>
<td>1</td>
</tr>
<tr>
<td>ACCT 1115 Computerized Acct Applications I</td>
<td>2</td>
</tr>
<tr>
<td>ACCT 1120 Spreadsheet Concepts and Applications I</td>
<td>2</td>
</tr>
<tr>
<td>ACCT 1122 Database Concepts and Applications II</td>
<td>2</td>
</tr>
<tr>
<td>ACCT 2100 Intermediate Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>ACCT 2101 Intermediate Accounting II</td>
<td>2</td>
</tr>
<tr>
<td>ACCT 2110 Income Tax I</td>
<td>4</td>
</tr>
<tr>
<td>ACCT 2115 Cost Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>ACCT 2120 Fund/Nonprofit Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 2125 Computerized Acct Applications II</td>
<td>2</td>
</tr>
<tr>
<td>ACCT 2130 Intermediate Accounting III</td>
<td>2</td>
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<tr>
<td>ACCT 2135 Internship</td>
<td>2</td>
</tr>
<tr>
<td>BUS 1104 Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2201 Principles of Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>BUS 2202 Principles of Accounting II</td>
<td>4</td>
</tr>
<tr>
<td>BUS 2241 Business Law</td>
<td>3</td>
</tr>
</tbody>
</table>

| Total Credits | 60 |

### Accountant, Diploma

**Locations:** Canby, Granite Falls, Jackson, Pipestone, Worthington and Online  
Accountants examine, analyze and interpret accounting data for the purpose of giving advice and preparing financial statements. Accountants also post details of business transactions, such as receipts, disbursements and payroll.

<table>
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<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ACCT 1110 Payroll Accounting</td>
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<td>ACCT 1120 Spreadsheet Concepts and Applications I</td>
<td>2</td>
</tr>
<tr>
<td>ACCT 1122 Database Concepts and Applications II</td>
<td>2</td>
</tr>
<tr>
<td>ACCT 2100 Intermediate Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>ACCT 2101 Intermediate Accounting II</td>
<td>2</td>
</tr>
<tr>
<td>ACCT 2110 Income Tax I</td>
<td>4</td>
</tr>
<tr>
<td>ACCT 2115 Cost Accounting I</td>
<td>4</td>
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<tr>
<td>ACCT 2120 Fund/Nonprofit Accounting</td>
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<tr>
<td>ACCT 2125 Computerized Acct Applications II</td>
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<tr>
<td>ACCT 2130 Intermediate Accounting III</td>
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</tr>
<tr>
<td>ACCT 2135 Internship</td>
<td>2</td>
</tr>
<tr>
<td>BUS 1104 Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2201 Principles of Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>BUS 2202 Principles of Accounting II</td>
<td>4</td>
</tr>
</tbody>
</table>

| Total Credits | 51 |

### Accounting Clerk, Diploma

**Locations:** Canby, Granite Falls, Jackson, Pipestone, Worthington and Online  
An accounting clerk performs any combination of routine calculating, posting, and verifying duties to obtain primary financial data for use in maintaining accounting records. They also post details of business transactions, such as receipts, disbursements and payroll, reconcile bank statements, and type vouchers, invoices, and other records.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 1110 Payroll Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 1112 Accounting Information Systems</td>
<td>1</td>
</tr>
<tr>
<td>ACCT 1115 Computerized Acct Applications I</td>
<td>2</td>
</tr>
<tr>
<td>ACCT 1120 Spreadsheet Concepts and Applications I</td>
<td>2</td>
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<td>ACCT 1122 Database Concepts and Applications II</td>
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<tr>
<td>ACCT 2125 Computerized Acct Applications II</td>
<td>2</td>
</tr>
<tr>
<td>ACCT 2130 Intermediate Accounting III</td>
<td>2</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>ACCT 2135 Internship</td>
<td>2</td>
</tr>
<tr>
<td>BUS 1104 Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2201 Principles of Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>BUS 2202 Principles of Accounting II</td>
<td>4</td>
</tr>
<tr>
<td>BUS 2241 Business Law</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1104 Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>CSCI 1102 Computer Applications I</td>
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</tr>
<tr>
<td>Electives</td>
<td>1</td>
</tr>
</tbody>
</table>

| Total Credits | 30 |

### Accounting, Certificate

**Location:** Canby, Granite Falls, Jackson, Pipestone, Worthington, and Online  
Students in the program will receive basic accounting knowledge which can be used immediately in the workplace or as part of a two year Accounting or Business degree. Students will focus on fundamental accounting principles and practices.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 1110 Payroll Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 2100 Intermediate Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>BUS 2201 Principles of Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>BUS 2202 Principles of Accounting II</td>
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<tr>
<td>ACCT 1120 Spreadsheet Concepts and Applications I</td>
<td>2</td>
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<tr>
<td>ACCT 2122 Database Concepts and Applications II</td>
<td>2</td>
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<tr>
<td>BUS 2201 Principles of Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>BUS 2202 Principles of Accounting II</td>
<td>4</td>
</tr>
<tr>
<td>ACCT 2135 Internship</td>
<td>2</td>
</tr>
</tbody>
</table>

| Total Credits | 16 |

### Administrative Assistant, A.A.S.

**Location:** Canby, Granite Falls, Jackson, Pipestone, Worthington, and Online  
An Administrative Assistant's duties may include business communications, word processing and data entry, office machines operations and maintenance, office management, public relations, office accounting, filing systems, records management, and report preparation.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 1120 Spreadsheet Concepts and Applications I</td>
<td>2</td>
</tr>
<tr>
<td>ACCT 2100 Intermediate Accounting I</td>
<td>4</td>
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<tr>
<td>BUS 1104 Business Mathematics</td>
<td>3</td>
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<tr>
<td>BUS 2201 Principles of Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>BUS 2202 Principles of Accounting II</td>
<td>4</td>
</tr>
<tr>
<td>ADSA 1100 College Keyboarding I</td>
<td>3</td>
</tr>
<tr>
<td>ADSA 1105 College Keyboarding II</td>
<td>3</td>
</tr>
<tr>
<td>ADSA 1111 Office Management</td>
<td>3</td>
</tr>
</tbody>
</table>

| Total Credits | 16 |
### Administrative Assistant, Diploma

**Locations:** Canby, Granite Falls, Jackson, Pipestone, Worthington, and Online

An Administrative Assistant’s duties may include business communications, word processing and data entry, office machines operations and maintenance, office management, public relations, secretarial accounting, filing systems and records management, and report preparation.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 1120</td>
<td>Spreadsheet Concepts and Applications</td>
<td>2</td>
</tr>
<tr>
<td>ACCT 1122</td>
<td>Database Concepts and Applications</td>
<td>2</td>
</tr>
<tr>
<td>ADSA 1100</td>
<td>College Keyboarding I</td>
<td>3</td>
</tr>
<tr>
<td>ADSA 1105</td>
<td>College Keyboarding II</td>
<td>3</td>
</tr>
<tr>
<td>ADSA 1111</td>
<td>Office Management</td>
<td>3</td>
</tr>
<tr>
<td>ADSA 1122</td>
<td>Word Processing I</td>
<td>2</td>
</tr>
<tr>
<td>ADSA 1123</td>
<td>Word Processing II</td>
<td>2</td>
</tr>
<tr>
<td>ADSA 1126</td>
<td>Advanced Office Applications</td>
<td>2</td>
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<tr>
<td>ADSA 1130</td>
<td>Office Accounting Concepts</td>
<td>3</td>
</tr>
<tr>
<td>ADSA 1141</td>
<td>Customer Service for Office Professionals</td>
<td>2</td>
</tr>
<tr>
<td>ADSA 1145</td>
<td>Supervisory Management</td>
<td>3</td>
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<tr>
<td>BUS 2221</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>ADSA 1190</td>
<td>Presentation Graphics</td>
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<tr>
<td>BUS 1104</td>
<td>Business Mathematics</td>
<td>3</td>
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<tr>
<td>BUS 2242</td>
<td>Business Communications</td>
<td>3</td>
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<tr>
<td>CMST 1101</td>
<td>Public Speaking</td>
<td>3</td>
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<tr>
<td>CSCI 1102</td>
<td>Computer Applications I</td>
<td>3</td>
</tr>
<tr>
<td>CST 2326</td>
<td>Web Page Concepts</td>
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<tr>
<td>GSCL 1105</td>
<td>Job Seeking Skills</td>
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<tr>
<td>ENGL 1101</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>NSCI 1101</td>
<td>Issues in the Environment</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>Area 3 or 4 (Science or Math)</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>Area 5 History and Social Science</td>
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<td>or</td>
<td>Humanities Electives</td>
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</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td><strong>60</strong></td>
</tr>
</tbody>
</table>

### Receptionist, Certificate

**Locations:** Canby, Granite Falls, Jackson, Pipestone, Worthington, and Online

Receptionists perform a wide variety of office tasks such as: keyboarding or typing business correspondences, reports, business forms, and other documents using word processing equipment. They also greet customers and other visitors, determine their needs and refer callers to the person who can help them. When not busy with callers, they may type, file, operate a switchboard, open and sort mail, schedule appointments, prepare travel vouchers and do simple bookkeeping.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 1120</td>
<td>Spreadsheet Concepts and Applications</td>
<td>2</td>
</tr>
<tr>
<td>ADSA 1100</td>
<td>College Keyboarding I</td>
<td>3</td>
</tr>
<tr>
<td>ADSA 1111</td>
<td>Office Management</td>
<td>3</td>
</tr>
<tr>
<td>ADSA 1122</td>
<td>Word Processing I</td>
<td>2</td>
</tr>
<tr>
<td>ADSA 1141</td>
<td>Customer Service for Office Professionals</td>
<td>2</td>
</tr>
<tr>
<td>BUS 2242</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>CSCI 1102</td>
<td>Computer Applications I</td>
<td>3</td>
</tr>
<tr>
<td>GSCL 1105</td>
<td>Job Seeking Skills</td>
<td>1</td>
</tr>
<tr>
<td>Electives</td>
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</tr>
<tr>
<td><strong>Total Credits</strong></td>
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<td><strong>35</strong></td>
</tr>
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</table>

### Agriculture, A.S.

**Location:** Worthington

Students selecting this option can transfer to upper division institutions with majors in several broad agriculture areas. Students are encouraged to review the requirements of the College to which they intend to transfer and discuss their plans with an advisor or the instructors in that area. The following specific requirements are designed to help students attain the basic transfer requirements for most four-year institutions offering agriculture.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1101</td>
<td>Introduction to Business</td>
<td>4</td>
</tr>
<tr>
<td>BUS 2201</td>
<td>Principles of Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>AGRI 2251</td>
<td>Principles of Farm &amp; Ranch Mgmt</td>
<td>4</td>
</tr>
<tr>
<td><strong>Business Courses - a minimum of 12 credits including:</strong></td>
<td></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

### Agriculture Business, A.S.

**Location:** Worthington

This two-year program is designed to prepare students for employment in agri-business or for continuing their education at a four-year institution. Graduates of this program may find job opportunities in sales, services, and management positions in agriculture related firms and industries. Students who plan to transfer are encouraged to review the requirements of the transfer institutions and plan their programs accordingly. Students in this program will receive the A.S. degree upon successful completion of the following requirements and suggested courses:

**Business Courses - a minimum of 12 credits including:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRI 1101</td>
<td>Introduction to Animal Science</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 1102</td>
<td>Principles of Agronomy</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 1103</td>
<td>Introduction to Soil Science</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 1110</td>
<td>Introduction to Horticulture</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 1121</td>
<td>Dairy Technician</td>
<td>2</td>
</tr>
<tr>
<td>AGRI 1125</td>
<td>Custom Application</td>
<td>2</td>
</tr>
<tr>
<td>AGRI 1151</td>
<td>Farm Records &amp; Business Analysis</td>
<td>4</td>
</tr>
<tr>
<td>AGRI 1152</td>
<td>Agricultural Marketing &amp; Pricing</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 2201</td>
<td>Principles of Animal Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 2202</td>
<td>Weed Science</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 2203</td>
<td>Soil Fertility and Fertilizers</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 2204</td>
<td>Introduction to Precision Agriculture</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 2212</td>
<td>Corn and Soybean Production</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 2214</td>
<td>Machinery Principles and Management</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 2216</td>
<td>Introduction to Meat Science</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 2235</td>
<td>Special Topics in Agriculture</td>
<td>1-3</td>
</tr>
<tr>
<td>AGRI 2251</td>
<td>Principles of Farm &amp; Ranch Management</td>
<td>4</td>
</tr>
<tr>
<td>AGRI 2299</td>
<td>Agri-Business Internship</td>
<td>2-8</td>
</tr>
</tbody>
</table>

**Agriculture Courses - a minimum of 18 credits including an Agri-business internship of at least 2 credits.**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRI 1101</td>
<td>Introduction to Animal Science</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 1102</td>
<td>Principles of Agronomy</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 1103</td>
<td>Introduction to Soil Science</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 1110</td>
<td>Introduction to Horticulture</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 1121</td>
<td>Dairy Technician</td>
<td>2</td>
</tr>
<tr>
<td>AGRI 1125</td>
<td>Custom Application</td>
<td>2</td>
</tr>
<tr>
<td>AGRI 1151</td>
<td>Farm Records &amp; Business Analysis</td>
<td>4</td>
</tr>
<tr>
<td>AGRI 1152</td>
<td>Agricultural Marketing &amp; Pricing</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 2201</td>
<td>Principles of Animal Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 2202</td>
<td>Weed Science</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 2203</td>
<td>Soil Fertility and Fertilizers</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 2204</td>
<td>Introduction to Precision Agriculture</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 2212</td>
<td>Corn and Soybean Production</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 2214</td>
<td>Machinery Principles and Management</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 2216</td>
<td>Introduction to Meat Science</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 2235</td>
<td>Special Topics in Agriculture</td>
<td>1-3</td>
</tr>
<tr>
<td>AGRI 2251</td>
<td>Principles of Farm &amp; Ranch Management</td>
<td>4</td>
</tr>
<tr>
<td>AGRI 2299</td>
<td>Agri-Business Internship</td>
<td>2-8</td>
</tr>
</tbody>
</table>

**Total Credits**

**35**
Agriculture Business Management and Marketing, A.A.S.

Location: Worthington

This program prepares students for employment in agribusiness. Graduates may find employment opportunities in sales, services, marketing or management positions in the agriculture business sector.

Required General Education from the following (15 credits required):
- CMST 1101 Public Speaking 3
- ENGL 1101 Composition I 3
- ECON 2201 Principles of Macroeconomics 3
- ECON 2202 Principles of Microeconomics 3
- NSCI 1100 Issues in the Environment 3
- PSCI 2202 State and Local Government 3
- Math Elective (Math 1105 or higher) 3
- Humanities Elective 3

Ag Business Management Core Requirements (25 credits required):
- BUS 1101 Introduction to Business 4
- BUS 2201 Principles of Accounting I 4
- BUS 2221 Principles of Management 3
- AGRI 1151 Farm Records & Business Management 3
- AGRI 1152 Agricultural Marketing and Pricing 3
- AGRI 2235 Special Topics Ag Marketing 3
- AGRI 2251 Principles of Farm and Ranch Management 3

Ag Business Management Agriculture Requirements (32 credits required):
- AGRI 1101 Introduction to Animal Science 3
- AGRI 1102 Principles of Agronomy 3
- AGRI 1103 Introduction to Soil Science 3
- AGRI 1110 Introduction to Horticulture 3
- AGRI 1125 Custom Application 2
- AGRI 2201 Principles of Animal Nutrition 3
- AGRI 2202 Weed Science 3
- AGRI 2203 Soil Fertility and Fertilizers 3
- AGRI 2204 Introduction to Precision Agriculture 3
- AGRI 2205 Introduction to Precision Mgt. Software 3
- AGRI 2212 Corn and Soybean Production 3
- AGRI 2214 Machinery Principles and Management 3
- AGRI 2216 Introduction to Meat Science 3
- AGRI 2299 Agri-Business Internship 2-11

Total Credits 72

Agriculture - Plant Science GIS/GPS, A.S.

Location: Worthington

The Plant Science GIS/GPS Associate of Science degree is designed to provide students with several options. One option is a career in the emerging field of Precision Agriculture. Examples of employment would include soil gridding, nutrient management planning and variable rate application. The second option allows the student to continue on to a Bachelor’s degree in this field with an emphasis in Agronomy.

- AGRI 1102 Principles of Agronomy 3
- AGRI 1103 Introduction to Soil Science 3
- AGRI 2202 Weed Science 3
- AGRI 2203 Soil Fertility and Fertilizers 3
- AGRI 2204 Introduction to Precision Agriculture 3
- AGRI 2205 Introduction to Precision Management Software 3
- AGRI 2212 Corn and Soybean Production 3

Agricultural Electives, choose from the following to equal or exceed 64 credits required:
- AUTO 1194 Commercial Driver’s License
- AGRI 1101 Principles of Animal Nutrition 3
- AGRI 1102 Principles of Agronomy 3
- AGRI 1103 Introduction to Soil Science 3
- AGRI 1151 Farm Records & Business Analysis 4
- AGRI 1152 Agricultural Marketing and Pricing 3
- AGRI 2201 Principles of Animal Nutrition 3
- AGRI 2203 Soil Fertility and Fertilizers 3
- AGRI 2205 Introduction to Precision Management Software 3
- AGRI 2214 Machinery Principles and Management 3
- AGRI 2235 ST in Agriculture: Ag Marketing 2
- AGRI 2251 Principles of Farm and Ranch Management 4
- AGRI 2297 Ag Production Mgt. Intern 2-8
- General Education 10

Page 16
Agriculture Production, A.A.S.
Location: Worthington
This A.A.S. degree in Agriculture Production is designed for the student whose career is in production Agriculture. This degree has two options, one is an Agronomy emphasis and the other option is an emphasis in Animal Science. The student will focus on course and lab work closely aligned to prepare the student to enter this field. This program is composed of many courses in Agriculture leading to a graduate with extensive preparation in Production Agriculture.

General Education Requirements 15 credits from the following:
- BIOL 1100 Survey of Biological Science 3
- CMST 1101 Public Speaking 3
- ENGL 1101 Composition I 3
- ECON 2202 Principles of Microeconomics 3
- GEOG 1101 Introduction to Physical Geography 3
- NSCI 1100 Issues in the Environment 3
- MATH 1107 Concepts in Math 3
- PSCI 2202 State and Local Government 3
- Humanities Electives 3

Ag production core requirements 57 credits from the following:
- AGRI 1101 Introduction to Animal Science 3
- AGRI 1102 Principles of Agronomy 3
- AGRI 1103 Introduction to Soil Science 3
- AGRI 1110 Introduction to Horticulture 3
- AGRI 1125 Custom Application 2
- AGRI 1151 Farm Records & Business Analysis 4
- AGRI 1152 Agricultural Marketing and Pricing 3
- AGRI 2201 Principles of Animal Nutrition 3
- AGRI 2202 Weed Science 3
- AGRI 2203 Soil Fertility and Fertilizers 3
- AGRI 2204 Introduction to Precision Agriculture 3
- AGRI 2212 Corn and Soybean Production 3
- AGRI 2214 Machinery Principles and Management 3
- AGRI 2216 Introduction to Meat Science 3
- AGRI 2235 ST in Agriculture: Ag Marketing 1-3
- AGRI 2251 Principles of Farm and Ranch Mngmt. 4
- AGRI 2297 Ag Production Mgt. Intern 2-8

Agriculture Production Management, A.S.
Location: Worthington
This two-year program is designed to prepare students for employment in production agriculture as farm operators or in fields of employment related to farm production or for continuing their education at a four-year institution. Students who plan to transfer are encouraged to review the requirements of the transfer institution and plan their programs accordingly.

Students in this program will receive the A.S. degree upon successful completion of the following requirements and suggested courses:
- AGRI 1101 Introduction to Animal Science 3
- AGRI 1102 Principles of Agronomy 3
- AGRI 1103 Introduction to Soil Science 3
- AGRI 1110 Introduction to Horticulture 3
- AGRI 1125 Custom Application 2
- AGRI 1151 Farm Records & Business Analysis 4
- AGRI 1152 Agricultural Marketing and Pricing 3
- AGRI 2201 Principles of Animal Nutrition 3
- AGRI 2202 Weed Science 3
- AGRI 2203 Soil Fertility & Fertilizers 3
- AGRI 2204 Introduction to Precision Agriculture 3
- AGRI 2212 Corn and Soybean Production 3
- AGRI 2214 Machinery Principles and Management 3
- AGRI 2216 Introduction to Meat Science 3
- AGRI 2235 ST in Agriculture: Ag Marketing 1-3
- AGRI 2251 Principles of Farm and Ranch Mngmt. 4
- AGRI 2297 Ag Production Mgt. Intern 2-8

Art, A.A.
Location: Worthington
The following is a suggested Minnesota Transfer Curriculum (MnTC) program for students interested in obtaining a four-year degree in art.

- CMST 1101 Public Speaking 3
- ENGL 1101 Composition I 3
- Choose one of the following: 3
  - ENGL 1102 Composition II 3
  - ENGL 2243 Composition: Creative Writing 3
  - ENGL 2276 Composition: Technical Writing 3
- ENGL 2276 Composition: Technical Writing 3
- Social Science Electives** 3-6
  - Biology Electives 3-4
- ART 1101 Beginning Drawing 3
- ART 1115 Beginning Painting 3
- ART 2240 Art History I 3
- ART 2245 Art History II 3
- Choose one of the following: 3-4
  - NSCI 1100 Issues in the Environment 3
  - PSCI 2210 Environmental Politics 3
  - GEOG 1101 **Introduction to Physical Geography 4
  - Chemistry or Physics Electives 3-5
  - Math Electives 3
- MUSC 1105 Music Appreciation 3
- HIST 1111 Early Western Civilization 3
- HIST 1112 Modern Western Civilization 3
- ART 1124 Introduction to Ceramics 3
- ART 2215 *Intermediate Painting 3
- ART 1103 *Display and Exhibition 1
- PSYC 1101 Introduction to Psychology 4

Total Credits 60

STSK 1110 – Freshman Seminar (1) credit - required.

Fulfill a minimum of 4 credits from two of the three areas. HLTH 1101, CSCI 1102, or any Physical Education course.

* Consult an advisor
**If either PSCI 2210 or GEOG 1101 is taken to meet Areas 5 and 10, only three credits in SOC SCI is required.
Automotive Technician, Diploma

Locations: Jackson

The Automotive Technician Program provides students with the skills needed to pursue a career in any area of automotive repair. Our program takes great pride in its professionalism. A dress code, attendance policy, and student conduct code are strictly enforced. Because the program is so intensive, class size is limited to ensure optimum training.

AUTO 1120 Air Conditioning 3
AUTO 1126 Steering/Suspension/Alignment 3
AUTO 1131 Brakes 3
AUTO 1136 Engine Technology and Lab 4
AUTO 2107 Automatic Transmissions 3
AUTO 2113 Manual Drivetrain and Axles 3
AUTO 2121 Engine Performance II 5
AUTO 2146 Body Computer Controlled Electrical Systems 4
TRAN 1100 Intro to Transportation 2
TRAN 1111 Electrical Fundamentals 3
TRAN 1145 Engine Performance I 2

Total Credits 35

Biology - Fish - Wildlife, A.A.

Location: Worthington

The program listed below is only a suggested guide, and the specific courses required vary among the four-year colleges. The student planning a degree in these areas should contact the Biology Department and the advisors at Minnesota West-Worthington campus for assistance with curriculum planning. This degree meets the Associate of Arts and MnTC requirements and will take five or six semesters to complete. Students desiring the Associate of Science degree may be able to complete the program in four semesters.

CMST 1101 Public Speaking 3
ENGL 1101 Composition I 3
BIOL 1110 Principles of Biology I 4
BIOL 2220 Animal Biology 4
BIOL 2230 Plant Biology 4
BIOL 2270 *Microbiology 4
CHEM 1101 General Chemistry I 4
CHEM 1102 General Chemistry II 4
PHYS 1201 Fundamentals of Physics I 4
PHYS 1202 Fundamentals of Physics II 4

Choose two of the following: 7-9
MATH 1111 College Algebra 3
MATH 1113 Pre-Calculus 4
MATH 1121 *Calculus I 4

Choose one of the following: 3
ENGL 1110 Composition II 3
ENGL 2276 Composition: Technical Writing 3
ENGL 2243 Composition: Creative Writing 3

Social Science Electives** 6-9

Choose one or two:
CHEM 2201 Organic Chemistry I 5
CHEM 2202 Organic Chemistry II 5

Choose one of the following:
NSCI 1100 Issues in the Environment 3
PSCI 2210 Environmental Politics 3
GEOG 1101 **Introduction to Physical Geography 4

Humanities Electives 9

Total Credits 60

STSK 1110 Freshman Seminar (1) is required.

Fulfill a minimum of 4 credits from two of the three areas. HLT TH 1101, CSCI 1102, or any Physical Education course.

*Depends on high school preparation and transfer institution.

**If either PSCI 2210 or GEOG 1101 is taken to meet Areas 5 and 10, only six credits in SOC SCI is required. Some institutions require ECON 2201.

Business Accounting, Diploma

Locations: Canby, Granite Falls, Jackson, Pipestone, Worthington and Online

The Business Accounting Diploma is designed to provide a strong foundation of knowledge and skills for students interested in entering the workforce or continuing their education. This program prepares the student to organize, maintain, analyze and interpret accounting data to make informed business decisions.

ACCT 1112 Accounting Information Systems 1
ACCT 1120 Spreadsheet Concepts and Applications 2
ACCT 1122 Database Concepts and Applications 2
BUS 1104 Business Mathematics 3
BUS 2201 Principles of Accounting I 4
BUS 2202 Principles of Accounting II 4
BUS 2211 Principles of Management 3
BUS 2230 Principles of Marketing 3
BUS 2241 Business Law 3
CSCI 1102 Computer Applications I 3
ECON 2202 Principles of Microeconomics 3

Total Credits 31

Business Administration, A.A.

Location: Worthington

Upon completion of the program listed below, the student may transfer to an upper division school of business and complete his/her requirements for the Bachelor of Arts or Bachelor of Science degree in Business. Students may also choose to delay the completion of their formal education and seek employment knowing that when they decide to return to school the credits they have earned at Minnesota West-Worthington will allow them to enter an upper division program on either a full or part-time basis. This program meets the Associate of Arts and MnTC requirements.

ENGL 1101 Composition I 3
MATH 1111 College Algebra 3
or
CMST 1101 Public Speaking 3

Chemistry or Physics 3-4
PSYC 1101 Introduction to Psychology 4
BUS 1101 Introduction to Business 4
BUS 2201 Principles of Accounting I 4
BUS 2202 Principles of Accounting II 4
ECON 2201 Principles of Macroeconomics 3
ECON 2202 Principles of Microeconomics 3
MATH 1105 Introduction to Probability and Statistics 4

Biology Electives 3-4

Choose one of the following:
ENGL 1102 Composition II 3
ENGL 2276 Composition: Technical Writing 3
ENGL 2243 Composition: Creative Writing 3

Choose one of the following:
Business Management, A.A.S.
Location: Worthington
This degree is designed for students who plan to enter the job market after completion of the program. It prepares students for entry-level positions in offices, private industry, the civil service, etc., and a variety of business fields. The following are the requirements for attaining a degree in this area:

1. General education requirements - sufficient to meet the minimum general education requirements of the general A.A.S. degree.
2. Career courses - to include the following:
   - BUS 1101 Introduction to Business 4
   - *BUS 1104 Business Mathematics 3
   - BUS 2201 Principles of Accounting I 4
   - BUS 2202 Principles of Accounting II 4
   - BUS 2221 Principles of Management 3
   - BUS 2230 Principles of Marketing 3
   - BUS 2241 Business Law 3
   - BUS 2242 Business Communications 3
   - CSCI 1102 Computer Applications I 3
   - CSCI 2100 Computer Applications II 3
   - General Education Electives 15
   - Electives 12
   *Total Credits 60

*Course may be waived by petition

Business Management, A.S.
Locations: Worthington and Online
This degree is designed for students planning to enter the job market after completion of the program or to continue their education in four-year colleges. It prepares students for entry-level positions in offices, private industry, civil service, and a variety of business fields. The following are the requirements for attaining a degree in this area:

1. Successful completion of a minimum of 60 credits of which at least 15 must be earned at Minnesota West Community & Technical College.
2. A grade point average of 2.0 ("C") or better.
3. Meet the minimum of 30 credits of general education as required by the A.S. degree.

BUS 1101 Introduction to Business 4
BUS 2201 Principles of Accounting I 4
BUS 2202 Principles of Accounting II 4

Management, Certificate.
Location: Canby, Granite Falls, Jackson, Pipestone, Worthington, and Online
Students in the Management certificate program will receive basic business knowledge which can be used immediately in the workplace or as part of a 2 year business degree. Students will focus on the business environment, management practices and marketing principles.

BUS 1101 Introduction to Business 4
BUS 2221 Principles of Management 3
BUS 2230 Principles of Marketing 3
Two Business or Accounting Courses 6

Total Credits 16

Business Transfer Pathway, A.S.
Locations: Online
The Business Transfer Pathway (AS) offers students a powerful option: the opportunity to complete an Associates of Science degree with course credits that directly transfer to designated Business bachelor's 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 a 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.

BUS 1101 Introduction to Business 4
BUS 2201 Principles of Accounting I 1
BUS 2202 Principles of Accounting II 4
BUS 2221 Principles of Management 3
BUS 2230 Principles of Marketing 3
BUS 2241 Business Law 3
CMST 1101 Public Speaking 3
CSCI 1102 Computer Applications I 3
ECON 2201 Principles of Macroeconomics 3
ECON 2202 Principles of Microeconomics 3
ENGL 1101 Composition I 3
ENGL 1102 Composition II 3
MATH 1105 Introduction to Probability and Statistics 3
MATH 1111 College Algebra 4
PHIL 2101 Ethics Theory and Practice 3
Science – Goal 3 3
Elective – Goal 5 2
Business Elective 5
Total Credits 60

Carpentry Diploma.

Location: Pipestone

The Carpentry program prepares students for a career as a carpenter in residential and commercial construction. In this program students study the concept of green building. Green building is a growing trend among home builders nationwide and incorporates a whole building design approach into every phase of the building process, including design, construction, energy, water efficiency, lot development, resource efficient building design to enhance the well-being of occupants, and to minimize negative impacts on the community and natural environment.

Students interested in this program should like to work outdoors, have an interest in doing hands-on work with common building materials, possess good problem solving skills, have strong math skills, and have a healthy work ethic. Most importantly, students should have the desire to learn and expand their knowledge of the construction industry.

CRPT 1101 Tool Safety, Construction Terms, & Materials 2
CRPT 1105 Floor and Wall Framing 4
CRPT 1135 Exterior Finishing Wall & Roof Covering 2
CRPT 1150 Site Layouts and Foundations 3
CRPT 1155 Building Science 2
CRPT 1160 Roof Framing 4
CRPT 1170 Applied Carpentry Calculations and Estimating 3
CRPT 2242 Deck and Porch Construction 2
CRPT 2249 Cabinet Installation 2
CRPT 2260 Interior Finish & Staircase Construction 3
CRPT 2270 Construction Business Management 2
CRPT 2271 Construction Drafting, Design, and Blueprint Reading 3
Total Credits 32

Carpentry, Certificate

Location: Pipestone and Lower Sioux Community

The certificate program gives the student an opportunity to get into the workforce quicker while giving them an overview of basic carpentry skills. The certificate program is designed to offer high school students the opportunity to complete the certificate before exiting high school.

CRPT 1101 Tool Safety, Construction Terms, & Materials 2
CRPT 1105 Floor and Wall Framing 4
CRPT 1160 Roof Framing 4
CRPT 1170 Applied Carpentry Calculations and Estimating 3
CRPT 2260 Interior Finish & Staircase Construction 3
Total Credits 16

Chemistry Transfer Pathway, A.S.

Location: Worthington

The Chemistry 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 Chemistry 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.

ENGL 1101 Composition I 3
ENGL 1102 Composition II 3
ENGL 2276 Composition: Technical Writing 3
ENGL 2243 Composition: Creative Writing 3
Choose one of the following:

CHEM 1101 General Chemistry I 4
CHEM 1102 General Chemistry II 4
CHEM 2201 Organic Chemistry I 5
CHEM 2202 Organic Chemistry II 5
ENGL 1101 Composition I 3
MATH 1121 Calculus I 4
MATH 1122 Calculus II 4
PHYS 2121 General Physics I 5
PHYS 2122 General Physics II 5
Choose from Goal Area 5 Electives 3-8
Choose from Goal Area 6 Electives 3-8

Choose one of the following:

ENGL 1102 Composition II 3
ENGL 2276 Composition: Technical Writing 3
ENGL 2243 Composition: Creative Writing 3

Choose one of the following:

CMST 1101 Public Speaking 3
CMST 1103 Interpersonal Communication 3
CMST 1130 Small Group Communication 3

Recommended Electives:

MATH 2201 Calculus III 4
BIOL 1110 Principles of Biology I 4
*HLTH 1101 Personal Wellness 3
*HLTH 2220 Drugs, Society, and the Individual 4
*Recommended for students interested in secondary education.

Total Credits 60

Chiropractic (pre-chiropractic), A.A.

Location: Worthington

This profession has experienced a strong resurgence in the past decade. The profession stresses a holistic approach to health. Chiropractors advocate that most common ills can be prevented and/or alleviated through exercise, nutrition, adjustment, maintenance, and personal health counseling.

Minnesota West-Worthington campus provides all of the academic courses for the first two years of the chiropractic program. The transfer institutions (primarily Northwestern School of Chiropractics) for continued study readily accept our Associate of Science degree graduates.

ENGL 1101 Composition I 3
Choose one of the following 2: 3-4
MATH 1111 College Algebra 3
MATH 1113 Pre-Calculus 4
CHEM 1101 General Chemistry I 4
CHEM 1102 General Chemistry II 4
BIOL 1115 Human Biology 3
Choose one of the following 3:

ENGL 1102 Composition II 3
ENGL 2276 Composition: Technical Writing 3
ENGL 2243 Composition: Creative Writing 3

PHYS 1201 Fundamentals of Physics I 4
PHYS 1202 Fundamentals of Physics II 4
Humanities Electives* 3
CMST 1101 Public Speaking 3
Choose two of the following 3: 8-10
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>BIOL 2201</td>
<td>Human Anatomy</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 2202</td>
<td>Human Physiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 2245</td>
<td><strong>Medical Terminology</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 1101</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1101</td>
<td>Introduction to Psychology</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Credits: 60**

STSK 1110 – Freshman Seminar (1) credit required.

Fulfill a minimum of 4 credits from two of the three areas. HLTH 1101, CSCI 1102, or any Physical Education course.

* Minimum only

** Depends on transfer institution

### Communication Studies Transfer Pathway, A.A.

**Location:** Canby, Granite Falls, Jackson, Pipestone, Worthington, and Online

The purpose of a Minnesota State Transfer Pathway is to identify the courses a student at a two-year college completes as part of an associate degree. Transfer Pathway associate degrees (AA, AS, or AFA) are accepted at any Minnesota State university that offers a designated bachelor’s degree. The university guarantees that a student transfers into a designated bachelor’s program with junior standing and may complete the bachelor’s degree with an additional 60 credits.

In accordance with the Laws of Minnesota 2015, Chapter 5, Article 3, Section 21 all Minnesota State Colleges and Universities (Minnesota State) agree to the following principles governing the transfer pathways for baccalaureate degrees. This transfer pathway specifically ensures that a student who successfully completes a Communication Studies Transfer Pathway Associate of Arts (AA) can transfer the entire completed degree into a designated parallel baccalaureate degree program in Communication Studies at one of the seven Minnesota State universities (Minnesota State Transfer Pathways Template, 2017).

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 2240</td>
<td>Art History I</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1100</td>
<td>Survey of Biological Science</td>
<td>3</td>
</tr>
<tr>
<td>CMST 1101</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>CMST 1103</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>CMST 1120</td>
<td>Intercultural Communication</td>
<td>3</td>
</tr>
<tr>
<td>CMST 1130</td>
<td>Small Group Communication</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1101</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1102</td>
<td>Composition II</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1105</td>
<td>Introduction to Literature</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1105</td>
<td>Minnesota History</td>
<td>3</td>
</tr>
<tr>
<td>HLTH 1101</td>
<td>Personal Wellness</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1107</td>
<td>Concepts in Math</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 1105</td>
<td>Music Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>NSCI 1100</td>
<td>Issues in the Environment</td>
<td>3</td>
</tr>
<tr>
<td>PHED 1140</td>
<td>Body Conditioning</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 1100</td>
<td>Survey of Physics</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 1201</td>
<td>American Government &amp; Politics</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1101</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1102</td>
<td>Social Problems</td>
<td>3</td>
</tr>
<tr>
<td>STSK 1110</td>
<td>Freshman Seminar</td>
<td>1</td>
</tr>
<tr>
<td>THTR 1101</td>
<td>Introduction to Theatre</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credits: 60**

### Community Health Worker, Certificate

**Location:** Canby, Granite Falls, Jackson, Pipestone, Worthington, and Online

The Community Health Worker (CHW) program will prepare you to obtain employment in a variety of organizations. Community Health Workers perform a broad range of health-related functions and play an important role in bridging the gap between cultures and health care systems. A CHW will work with health care organizations to increase cultural competence, improve access to health care for racial and ethnic minorities, improve the quality of care for the chronically ill, promote healthy communities, and educate families about access to and use of health care coverage.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMHW 1000</td>
<td>Community Health Worker Role, Advocacy, Outreach, and Resources</td>
<td>3</td>
</tr>
<tr>
<td>CMHW 1100</td>
<td>Health Communication, Teaching, and Capacity Building</td>
<td>3</td>
</tr>
<tr>
<td>CMHW 1200</td>
<td>Documentation, Legal &amp; Ethical Issues in Community Health Work</td>
<td>3</td>
</tr>
<tr>
<td>CMHW 1250</td>
<td>Health Promotion I</td>
<td>2</td>
</tr>
<tr>
<td>CMHW 1300</td>
<td>Health Promotion II</td>
<td>3</td>
</tr>
<tr>
<td>CMHW 1400</td>
<td>Community Health Worker Internship</td>
<td>2</td>
</tr>
<tr>
<td>EMS 1112</td>
<td>AHA CPR Healthcare Provider, AED First Aid Certification</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total Credits: 17**

### Computer Applied Technology, A.S.

**Location:** Worthington

The completion of the Computer Applied Technology degree offers the student an opportunity to transfer into several articulated Baccalaureate programs. While students concentrate on an area of study in computer science, they are assured that after completion of this degree, they are employable in many technical and business settings, including manufacturing companies, data processing firms, software development companies, banks, insurance companies, government agencies, colleges and universities. The degree is heavily dependent upon technology based course offerings. To complete the degree, students must fulfill the following requirements:

1. Successful completion of 60 credits of which at least 15 must be earned at Minnesota West Community & Technical College.
2. A grade point average of 2.0 ("C") or better.
3. Computer Division requirements: 9 credits
   A. ENGL 1101 Composition I
   B. CSCI 1102 Computer Applications I
   C. MATH 1111 College Algebra
4. A minimum of 24 credits from the four general education categories listed below:
   1. Communications: ENGL 2276 or CMST 1101
   2. One or more credits from Science/Math
   3. Four or more credits from Behavior/Social Science – PSYC 1101 or ECON 2201 or ECON 2202 required.
5. Fulfill at least a 30 credit core of technical courses.
   Note: 3 credits from Item #3. CSCI 1102 required and an additional 27 credits from the table below:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1101</td>
<td>Introduction to Business</td>
<td>4</td>
</tr>
<tr>
<td>BUS 2201</td>
<td>Principles of Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>CSCI 2100</td>
<td>Computer Applications II</td>
<td>3</td>
</tr>
<tr>
<td>CSCI 2140</td>
<td>Electronic Spreadsheets and Graphics</td>
<td>3</td>
</tr>
<tr>
<td>CSCI 2200</td>
<td>Visual Basic Programming</td>
<td>4</td>
</tr>
<tr>
<td>CSCI 2250</td>
<td>Java Programming</td>
<td>4</td>
</tr>
</tbody>
</table>
Although successful completion of the Computer and Information Technology (CIT) program prepares the student for employment within the dynamic computer, electronic information and technology areas, the program is specifically designed to maximize transferability into the Bachelor of Applied Science (BAS) at Minnesota State University, Mankato, MN. This degree also articulates to Minnesota State University, Moorhead, MN and Southwest Minnesota State University, Marshall, MN. Students are encouraged to consult with faculty and/or advisors at Minnesota West and the transfer institution of their choice.

Select a minimum of 3 credits from the following:
- HIST 1101 US History to 1865 4
- HIST 1102 US History from 1865 4
- GEOG 1100 Introduction to Geography 3
- GEOG 1101 Introduction to Physical Geography 4
- PSCI 1101 Introduction to Political Science 3
- PSCI 1201 American Government and Politics 3
- PSCI 2201 Environmental Politics 3
- PSCI 2202 State and Local Government 3
- PSYC 1101 Introduction to Psychology 4

Select a minimum of 3 credits from the following:
- ART 2240 Art History I 3
- ART 2245 Art History II 3
- HIST 1111 Early Western Civilization 3
- HIST 1112 Modern Western Civilization 3
- ENGL 1105 Introduction to Literature 3
- ENGL 2201 Early American Literature 3
- ENGL 2202 Modern American Literature 3
- PHIL 2201 Introduction to Ethical Theory 1
- PHIL 2202 General Applied Ethics 1

Required Core Courses
- CST 1122 CLI/PowerShell 1
- CST 1190 Introduction to Networking 4
- CST 2110 PC Maintenance & Repair Hardware 3
- CST 2215 PC Maintenance & Repair Software 3
- CST 2224 Windows Client/Server Administration 4
- CST 2310 Info Technology Customer Service 2
- CST 2199 Internship 1-8
- CSCI 2290 Technology Capstone Seminar 1
- CSCI 1102 Computer Applications I 3
- CSCI 2200 Visual Basic Programming 4
- CSCI 2250 Java Programming 4
- CSCI 2255 Java Programming II 4

Select one of the following courses
- CSCI 2240 Fundamentals of Programming I 4
- MATH 1121 **Calculus I 4

**If not completed within A.A.S., additional mathematics will be required at Minnesota State University, Mankato.

Computer Science, A.S.
Location: Worthington
The Computer Science A.S. program is designed to provide students the option to enter the computer related job market on completion or optionally transfer to Southwest Minnesota State University at Marshall, MN to complete the Bachelor of Science in the Computer Science degree.

- ART 2230 Computer Graphics 3
- CMST 1101 Public Speaking 3
- CSCI 1102 Computer Applications I 3
- CSCI 2250 Java Programming 4
- or
- CSCI 2240 Fundamentals of Programming I 4
- CSCI 2255 Java Programming II 4
- CST 1135 UNIX Operating System 3
- CST 1192 Introduction to Networking 4
- CST 2224 Windows Client/Server Administration 4
- ECON 2201 Principles of Macroeconomics 3
- or
- ECON 2202 Principles of Microeconomics 3
- ENGL 1101 Composition I 3
- ENGL 2276 Composition: Technical Writing 3
- MATH 1105 Introduction to Probability and Statistics 4
- MATH 1121 Calculus I 4
- NSCI 1100 Issues in the Environment 3
- PHYS 1201 Fundamentals of Physics 4
- PSYC 1101 Introduction to Psychology 4

Total Credits 60
**Computer Support Technician, Diploma**

Computer support technicians solve software and hardware problems, set up computer systems, install new software and hardware, train users, and maintain networks. Support technicians may work directly with computer users in person or provide support over the phone through a help desk. This major provides hands-on training in computer operating system operation, the use of application software, network administration and installation, software installation and removal, computer maintenance and repair, hardware installation, and help desk skills. Provides the students with practical knowledge needed to solve computer problems.

Accuplacer test scores determine placement in Math and English courses and may require additional courses to be completed.

**Location: Granite Falls**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CST 1101</td>
<td>IT Exploration</td>
<td>2</td>
</tr>
<tr>
<td>CST 1112</td>
<td>CLI/PowerShell</td>
<td>1</td>
</tr>
<tr>
<td>CST 1125</td>
<td>Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>CST 1180</td>
<td>Data Security Awareness</td>
<td>1</td>
</tr>
<tr>
<td>CST 1190</td>
<td>Introduction to Networking</td>
<td>4</td>
</tr>
<tr>
<td>CST 1200</td>
<td>Introduction to Information Security</td>
<td>3</td>
</tr>
<tr>
<td>CST 2110</td>
<td>PC Maintenance &amp; Repair Hardware</td>
<td>3</td>
</tr>
<tr>
<td>CST 2215</td>
<td>PC Maintenance &amp; Repair Software</td>
<td>3</td>
</tr>
<tr>
<td>CST 2224</td>
<td>Windows Client/Server Administration</td>
<td>4</td>
</tr>
<tr>
<td>CST 2310</td>
<td>Info Technology Customer Service</td>
<td>2</td>
</tr>
</tbody>
</table>

Choose electives from: ACCT, ADSA, CST, CSCI.

**Total Credits** 30

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**Computer Maintenance and Repair, Certificate**

**Location: Granite Falls, Jackson**

Students in the Computer Maintenance and Repair certificate receive training in administrating, installing and configuring computers; installing, implementing and utilizing software; and upgrading and troubleshooting personal computer hardware. This program provides training in personal computer (PC) maintenance and repair, operating systems, including Windows and DOS, and help desk etiquette. This program is designed to prepare the students for CompTIA’s A+ certification. A successful graduate will be prepared to work in the fields of PC maintenance and repair, help desk and software support.

CST Department Disclosure: Due to scheduling, the courses that satisfy this certificate are not guaranteed to be offered within one year.

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<tr>
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<td>IT Exploration</td>
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<tr>
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<td>1</td>
</tr>
<tr>
<td>CST 1125</td>
<td>Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>CST 1135</td>
<td>UNIX Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>CST 1180</td>
<td>Data Security Awareness</td>
<td>1</td>
</tr>
<tr>
<td>CST 1190</td>
<td>Introduction to Networking</td>
<td>4</td>
</tr>
<tr>
<td>CST 1195</td>
<td>Network Basics</td>
<td>2</td>
</tr>
<tr>
<td>CST 2110</td>
<td>PC Maintenance &amp; Repair Hardware</td>
<td>3</td>
</tr>
<tr>
<td>CST 2215</td>
<td>PC Maintenance &amp; Repair Software</td>
<td>3</td>
</tr>
<tr>
<td>CST 2310</td>
<td>Info Technology Customer Service</td>
<td>2</td>
</tr>
</tbody>
</table>

Choose electives from: ACCT, ADSA, CST, CSCI.

**Total Credits** 30

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**Computer Information Security and Assurance, A.A.S.**

**Location: Online**

This program prepares students to assess, administer, and secure computer information systems and networks by performing technical security audits and implementing numerous technical information solutions to bring networks into compliance.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1101</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>CST 1101</td>
<td>IT Exploration</td>
<td>2</td>
</tr>
<tr>
<td>CST 1112</td>
<td>CLI/PowerShell</td>
<td>1</td>
</tr>
<tr>
<td>CST 1125</td>
<td>Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>CST 1135</td>
<td>UNIX Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>CST 1180</td>
<td>Data Security Awareness</td>
<td>1</td>
</tr>
<tr>
<td>CST 1190</td>
<td>Introduction to Networking</td>
<td>4</td>
</tr>
<tr>
<td>CST 1200</td>
<td>Introduction to Information Security</td>
<td>3</td>
</tr>
<tr>
<td>CST 1220</td>
<td>Information Security Management</td>
<td>3</td>
</tr>
<tr>
<td>CST 1300</td>
<td>Computer Forensics</td>
<td>3</td>
</tr>
<tr>
<td>CST 1500</td>
<td>Routers and Switches</td>
<td>3</td>
</tr>
<tr>
<td>CST 2110</td>
<td>PC Maintenance &amp; Repair Hardware</td>
<td>3</td>
</tr>
<tr>
<td>CST 2310</td>
<td>Information Technology</td>
<td>2</td>
</tr>
<tr>
<td>CST 2224</td>
<td>Windows Client/Server Admin.</td>
<td>4</td>
</tr>
<tr>
<td>CST 2350</td>
<td>Virtual Computing</td>
<td>2</td>
</tr>
<tr>
<td>CST 2520</td>
<td>Ethical Hacking</td>
<td>2</td>
</tr>
<tr>
<td>ENGL 1101</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>CST 1101</td>
<td>IT Exploration</td>
<td>2</td>
</tr>
<tr>
<td>CST 1112</td>
<td>CLI/PowerShell</td>
<td>1</td>
</tr>
<tr>
<td>CST 1125</td>
<td>Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>CST 1135</td>
<td>UNIX Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>CST 1180</td>
<td>Data Security Awareness</td>
<td>1</td>
</tr>
<tr>
<td>CST 1190</td>
<td>Introduction to Networking</td>
<td>4</td>
</tr>
<tr>
<td>CST 1200</td>
<td>Introduction to Information Security</td>
<td>3</td>
</tr>
<tr>
<td>CST 1220</td>
<td>Information Security Management</td>
<td>3</td>
</tr>
<tr>
<td>CST 2430</td>
<td>CyberOps</td>
<td>3</td>
</tr>
<tr>
<td>CST 2520</td>
<td>Ethical Hacking</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total Credits** 60

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**Computer Information Security, Certificate**

**Location: Granite Falls, Jackson, and Online**

Students in the Information Security Management Certificate learn to assess the need for security; examine ethical, legal and professional security issues; assess and control risks; design secure networks; examine disaster recovery plans; educate personnel; and maintain a security program. In addition, the students learn about the theory of authentication, encryption, attacks and malicious code, and the components of a secure network including web servers and remote access. This certificate is designed for the person responsible for the security direction of the organization, including managers, accounting personnel, administrative assistants, and computer technical support personnel.

CST Department Disclosure: Due to scheduling, the courses that satisfy this certificate are not guaranteed to be offered within one semester.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CST 1112</td>
<td>CLI/PowerShell</td>
<td>1</td>
</tr>
<tr>
<td>CST 1190</td>
<td>Introduction to Networking</td>
<td>4</td>
</tr>
<tr>
<td>CST 1200</td>
<td>Introduction to Information Security</td>
<td>3</td>
</tr>
<tr>
<td>CST 1220</td>
<td>Information Security Management</td>
<td>3</td>
</tr>
<tr>
<td>CST 2430</td>
<td>CyberOps</td>
<td>3</td>
</tr>
<tr>
<td>CST 2520</td>
<td>Ethical Hacking</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total Credits** 16

---

* General Education electives in three additional areas of the curriculum.
**Electives in the areas of ACCT, ADSA, BUS, CSCI, CST, ELEC, RNEW, ROBT with the approval of the advisor.
| Location: Online | CST 1101 IT Exploration | 2 |
| Location: Online | CST 1112 CLI/Powershell | 1 |
| Location: Online | CST 1125 Operating Systems | 3 |
| Location: Online | CST 1180 Data Security Awareness | 1 |
| Location: Online | CST 1190 Introduction to Networking | 4 |
| Location: Online | CST 2110 PC Maintenance and Repair Hardware | 3 |
| Location: Online | Technical Elective | 2 |
| Total Credits | 16 |

### (Computer) CISCO Networking, Certificate

**Location:** Granite Falls, Jackson, Pipestone, Worthington, and Online

The Cisco Networking Certificate includes four courses from the Cisco CCNA curriculum and aligns to Federal standards for networking job roles of system administrators and security professionals. Graduates will be prepared to take the CCNA certification test. Cisco Certified Network Associate (CCNA®) validates the ability to install, configure, operate, and troubleshoot medium-size route and switched networks, including implementation and verification of connections to remote sites in a WAN. CCNA curriculum includes basic mitigation of security threats, introduction to wireless networking concepts and terminology, and performance-based skills. The widely respected Cisco Career Certifications bring valuable, measurable rewards to network professionals, their managers, and the organizations that employ them.

**CST Department Disclosure:** Due to scheduling, the courses that satisfy this certificate are not guaranteed to be offered within one semester.

| CST 1190 | Introduction to Networking | 4 |
| CST 1500 | Routers and Switches | 3 |
| CST 2150 | Advanced Routing Technology | 4 |
| CST 2600 | Fundamentals of Wireless Networking | 3 |
| Technical Elective | 1 |
| Total Credits | 15 |

### Cosmetology, Diploma

**Locations:** Jackson and Pipestone

Students receive theory as well as practical experience in hair, skin, and nail care through classroom study, demonstrations and practical experience in the campus clinic. Some areas of study include safety and sanitation, customer service, and job seeking skills. Upon successful completion of hours and quota requirements mandated by the Minnesota Board of Cosmetologists Examiners, students must also take a written and a skills certification tests for licensure. Some of the opportunities include salon owner, salon manager, stylist, hair colorist, nail technician, esthetician, manufacturer's representative, state board inspector, just to name a few.

| COSM 1100 | Preclinic Introduction | 4 |
| COSM 1105 | Preclinic Hair Care | 4 |
| COSM 1110 | Preclinic Nail Care | 4 |
| COSM 1115 | Preclinic Color and Texture | 4 |
| COSM 1120 | Preclinic Skin Care | 4 |
| COSM 1135 | Salon Preparation | 3 |
| COSM 1130 | Advanced Hair Care | 3 |
| COSM 1140 | Clinic I | 4 |
| COSM 1145 | Clinic II | 4 |
| COSM 1150 | Clinic III | 4 |
| COSM 1155 | Clinic IV | 3 |

### Dental Assistant, A.A.S.

**Location:** Canby

The Dental Assistant program is designed to prepare individuals for a career in a variety of oral healthcare settings. This may be as a clinical chairside assistant to a dentist or dental hygienist or as a non-clinical practice management assistant. The program is accredited by the American Dental Association Commission on Dental Accreditation and upon completion the student will take national and state examinations leading to certification and licensure in dental assisting.
The course work includes content in general studies, biomedical and dental sciences, clinical practices, and expanded functions allowed by the State of Minnesota.

Students will spend 10 weeks in extramural clinical experiences in area dental offices.

CMST 1101 Public Speaking 3  
CMST 1103 Interpersonal Communication 3  
ENGL 1101 Composition I 3  
PSYC 1101 Introduction to Psychology 4  
SOC 1101 Introduction to Sociology 3  
GSCL 1105 Job Seeking Skills 1  
General Education Electives 5-6  
DEN 1100 Oral Radiology I 3  
DEN 1105 Oral Radiology II 3  
DEN 1110 Dental Science 3  
DEN 1115 Dental Health 2  
DEN 1120 Chairside Dental Assisting I 3  
DEN 1125 Chairside Dental Assisting II 4  
DEN 1130 Preclinical Dental Assisting 4  
DEN 1135 Dental Practice Management 2  
DEN 1140 Dental Materials 3  
DEN 1145 Expanded Functions A 3  
DEN 1150 Expanded Functions B 3  
DEN 1155 Extramural Clinical Experience I 3  
DEN 1160 Extramural Clinical Experience II 3  
DEN 1180 Dental Ethics and Jurisprudence 1  
DEN 1185 Nitrous Oxide Inhalation Admin 1  
Total Credits 60

Dental Assistant, Diploma

Location: Canby

CMST 1101 Public Speaking 3  
CMST 1103 Interpersonal Communication 3  
ENGL 1101 Composition I 3  
GSCL 1105 Job Seeking Skills 1  
DEN 1100 Oral Radiology I 3  
DEN 1105 Oral Radiology II 3  
DEN 1110 Dental Science 3  
DEN 1115 Dental Health 2  
DEN 1120 Chairside Dental Assisting I 3  
DEN 1125 Chairside Dental Assisting II 4  
DEN 1130 Preclinical Dental Assisting 4  
DEN 1135 Dental Practice Management 2  
DEN 1140 Dental Materials 3  
DEN 1145 Expanded Functions A 3  
DEN 1150 Expanded Functions B 3  
DEN 1155 Extramural Clinical Experience I 3  
DEN 1160 Extramural Clinical Experience II 3  
DEN 1180 Dental Ethics and Jurisprudence 1  
DEN 1185 Nitrous Oxide Inhalation Admin 1  
Total Credits 48

Dental Hygiene Science (pre-dental hygiene), A.A.

Location: Worthington

The pre-dental hygiene program at Minnesota West-Worthington Campus is designed to prepare a student for transfer into a dental hygiene program by fulfilling all of the major academic requirements of lower division dental hygiene programs at transfer universities. This program meets MnTC requirements.

ART 1120 Art Appreciation 3  
ART 1101 Beginning Drawing 3  
ART 1115 Beginning Painting 3  
BIOL 1110 Principles of Biology I 4  
BIOL 2270 Microbiology* 4  
CHEM 1101 General Chemistry I* 4  
CHEM 1102 General Chemistry II 4  
ENGL 1101 Composition I 3  
ENGL 2243 Composition: Creative Writing 3  
HLTH 2240 Basic Nutrition 3  
MATH 1105 Introduction to Probability and Statistics 4  
NSCI 1100 Issues in the Environment 3  
SOC 1101 Introduction to Sociology 3  
PSYC 1101 Introduction to Psychology 4  
STSK 1110 – Freshman Seminar (1) credit required.  
Total Credits 60

Dental Science (pre-dental science), A.S.

Location: Worthington

The pre-dental course is a three-year program (as semester credits) that prepares a student for entrance to a school of dentistry. Two and one-half years of this program may be taken at Minnesota West-Worthington campus. The following program is patterned after the University of Minnesota and meets the Associate of Science degree requirements.

ART 1120 Art Appreciation 3  
ART 1101 Beginning Drawing 3  
ART 1115 Beginning Painting 3  
BIOL 1110 Principles of Biology I 4  
BIOL 2270 Microbiology* 4  
CHEM 1101 General Chemistry I* 4  
CHEM 1102 General Chemistry II 4  
CHEM 2201 Organic Chemistry I 4  
CHEM 2202 Organic Chemistry II 4  
ENGL 1101 Composition I 3  
ENGL 1102 Composition II 3  
NSCI 1100 Issues in the Environment 3  
PSYC 1101 Introduction to Psychology 4  
Total Credits 60

* Chemistry requirement varies. See an advisor for appropriate courses.  
** Includes literature course for University of Minnesota. See an advisor for appropriate courses.  
*** Includes a history course for University of Minnesota. See an advisor for appropriate courses.  
**** If either PSCI 2210 or GEOG 1101 is taken the SOC SCI requirement is complete.  
***** See an advisor for assistance in choosing appropriate courses to meet transfer institutions, and MnTC requirements. Proficiency in a second language (e.g., Spanish) is highly desired.
ENGL 2276 Composition: Technical Writing 3
MATH 1113 Pre-Calculus 4
MATH 1121 Calculus I 4
MATH 1105 Introduction to Probability & Statistics 4
MUSC 1105 Music Appreciation 3
PHYS 1201 Fundamentals of Physics I 4
PHYS 1202 Fundamentals of Physics II 4
Total Credits 60

Third Year
BIOL 2201 Human Anatomy 4
BIOL 2202 Human Physiology 4
CMST 1101 Public Speaking 3
PSYC 1101 Introduction to Psychology 4
Remaining MnTC Requirements 14-18
Total ** 29-33

An additional semester is required to complete the Associate of Arts degree and MnTC requirements. Students should take: three credits in HUM; five credits in SOC SCI (PSCI 2210 or GEOG 1101 recommended); two-six credits to meet areas 8, 9, and 10 if requirement is not met through HUM or SOC SCI courses; three credits HLTH 1101; one credit PHED Activity if not previously completed. The total is 14-18 additional credits.

* Depends on transfer institution.
** An overall GPA of 3.25 is highly recommended for an application to be considered competitive. Additional courses in Biochemistry, Cell Biology and History are required as is volunteer experience in a one-on-one personal service agency. Note: Students are required to complete the DSAT (Dental School Admissions Test) prior to acceptance by dental schools.

Diesel Technology, A.A.S.
Location: Canby
The Diesel Technology program provides individuals with the training needed for maintaining and repairing heavy-duty diesel powered equipment. Coursework emphasizes diesel engines, hydraulics, electrical, air conditioning, and diesel fuel injection systems. The program prepares students for careers in field services and as sales representatives and as managers of diesel service departments.

General Education
General Education from 3 of the 10 goal areas of the Minnesota Transfer Curriculum. 15

Technical Electives
DSL 1100 Diesel Engine Theory 3
DSL 1105 Diesel Engine Lab 4
DSL 1110 Electrical Theory 2
DSL 1115 Electrical Lab 2
DSL 1120 Powertrain Principles 2
DSL 1125 Powertrain Lab 3
DSL 1130 Hydraulics Theory and Application 3
DSL 1135 Fuel Injection Principles 3
DSL 1150 Internship 4
DSL 2106 Advanced Powertrain Theory 3
DSL 2111 Advanced Powertrain Lab 4
DSL 2131 Service Department Operations and Procedures 3
DSL 2136 Fuel Systems Theory 5
DSL 2145 Advanced Diesel 4
DSL 2150 Advanced Engine Lab 5
DSL 2155 Diesel Engine Control Systems 3
DSL 2180 Computerized Diagnostic Systems 2
DSL 2190 GPS Systems Operations 2
Total Credits 72

Diesel Technician (Ag & Truck), Diploma
Location: Canby
DSL 1150 Internship 4
DSL 2131 Service Department Operations and Procedures 3
DSL 2136 Fuel Systems Theory 5
DSL 2137 Fuel Lab 5
DSL 2145 Advanced Diesel 4
DSL 2150 Advanced Engine Lab 5
DSL 2155 Diesel Engine Control Systems 3
DSL 2180 Computerized Diagnostic Systems 2
DSL 2190 GPS Systems Operation 2
General Education or General Studies Electives 2
Total Credits 35

Diesel Mechanics (Ag & Truck), Diploma
Location: Canby
DSL 1100 Diesel Engine Theory 3
DSL 1105 Diesel Engine Lab 4
DSL 1110 Electrical Theory 2
DSL 1115 Electrical Lab 2
DSL 1120 Powertrain Principles 2
DSL 1125 Powertrain Lab 3
DSL 1130 Hydraulics Theory and Application 3
DSL 1135 Fuel Injection Principles 3
DSL 1142 Heating and Air Conditioning 3
DSL 2106 Advanced Powertrain Theory 3
DSL 2111 Advanced Powertrain Lab 4
General Education or General Studies Electives 3
Total Credits 35

Advanced Diesel, Certificate
Location: Canby
DSL 2131 Service Dept. Operations and Procedures 3
DSL 2136 Fuel Systems Theory 5
DSL 2137 Fuel Systems Lab 5
DSL 2145 Advanced Diesel 4
DSL 2150 Advanced Engine Lab 5
DSL 2155 Diesel Engine Control Systems 3
DSL 2180 Computerized Diagnostic Systems 2
DSL 2190 GPS Systems Operation 2
Total Credits 29

Basic Diesel, Certificate
Location: Canby
DSL 1100 Diesel Engine Theory 3
DSL 1105 Diesel Engine Lab 4
DSL 1110 Electrical Theory 2
DSL 1115 Electrical Lab 2
DSL 1135 Fuel Injection Principles 3
DSL 1142 Heating and Air Conditioning Systems 3
Total Credits 17

Diesel Powertrain and Hydraulics, Certificate
Location: Canby
GSCL 1105 Job Seeking Skills 1
DSL 1120 Powertrain Principles 2
DSL 1125 Powertrain Lab 3
DSL 1130 Hydraulics Theory and Application 3
Geography

Biology, ART 2240 Art History I, GEOG 1100 Introduction to
HIST 1111 Early Western Civilization, BIOL 1110 Principles of
ART 1120 Art Appreciation, MUSC 1105 Music Appreciation,
(Suggested Electives: NSCI 1100 Issues in the Environment,
Total Credits 30

EDUC 1240 Family & Community Relations 3
EDUC 1262 Creative Activities 4
EDUC 1265 Foundations of Child Development 2
EDUC 1266 Foundations of Child Development Lab 1
EDUC 1267 Health, Nutrition & Safety 2
EDUC 1268 Health, Nutrition & Safety Lab 1
EDUC 1269 Guidance: Managing the Physical
and Social Environment Lab 1
EDUC 1270 Guidance: Managing the Physical and
Social Environment 2
Total Credits 16

Early Childhood, A.S.

Location: Granite Falls

This degree is designed for students planning to enter the job market after completion of the program or to continue their education. Included in the course of study are a minimum of 30 transfer-level general education credits and 30 occupational credits. In conjunction with lab school/field experience, the course work prepares students as Early Childhood professionals in a variety of settings. The courses meet the Minnesota Department of Human Services requirements for child care professionals.

1. A minimum of 30 credits from at least 6 of the 10 goal areas in the Minnesota Transfer Curriculum. Required general education categories are listed below:

   A. Communications - a minimum of 9 credits
      CMST 1101 Public Speaking (3), required
      ENGL 1101 Composition I, (3) required
      ENGL 1102 Composition II, (3) required

   B. Science/Math – a minimum of 3 credits.
      MATH 1111 College Algebra (3) suggested

   C. Behavior/Social Science – a minimum of 7 credits
      PSYC 1101 Introduction to Psychology (4) required or
      PSYC 1150 Developmental Psychology (3)
      SOC 1101 Introduction to Sociology (3) required

   D. Humanities – a minimum of 3 credits

2. Career courses: Fulfill a minimum of 30 credits in technical core courses including those listed below:

   EDUC 1262 Creative Activities 4
   EDUC 1265 Foundations of Child Development 2
   EDUC 1266 Foundations of Child Dev. Lab 1
   EDUC 1267 Health, Nutrition & Safety 2
   EDUC 1268 Health, Nutrition & Safety Lab 1
   EDUC 1269 Guidance: Managing the Physical
   and Social Environment Lab 1
   EDIC 1270 Guidance: Managing the Physical and
   Social Environment 2
   EDUC 1340 Planning & Implementing w/lab 4
   EDUC 2200 Infant & Toddler Development
   and Learning Experiences 4
   EDUC 2900 Introduction to Special Education 3

   Choose 2 of the following courses
   EDUC 1100 Introduction to Education 3
   EDUC 1240 Family & Community Relations 3
   EDUC 2560 Language & Literacy Experiences 3

   Total Credits 30

   (Suggested Electives: NSCI 1100 Issues in the Environment,
   ART 1120 Art Appreciation, MUSC 1105 Music Appreciation,
   HIST 1111 Early Western Civilization, BIOL 1110 Principles
   of Biology, ART 2240 Art History I, GEOG 1100 Introduction to
   Geography

Early Childhood, Certificate

Location: Granite Falls

Persons completing this program would work in a variety of settings related to child care and education such as preschools, day cares, public schools, Head Start programs, and private homes (e.g. nannies). Students enrolled in the program receive instruction in safety, health, nutrition, guidance, child development, and the preparation and presentation of learning experiences to enhance all areas of a child’s development. This course of study is designed to improve the quality of services children receive, to increase professionalism in graduates, and to promote the overall development of children. Lab School and field experience in various settings provide opportunities for students to apply their knowledge and skills.

   EDUC 1240 Family & Community Relations 3
   EDUC 1262 Creative Activities 4
   EDUC 1265 Foundations of Child Development 2
   EDUC 1266 Foundations of Child Development Lab 1
   EDUC 1267 Health, Nutrition & Safety 2
   EDUC 1268 Health, Nutrition & Safety Lab 1
   EDUC 1269 Guidance: Managing the Physical
   and Social Environment Lab 1
   EDUC 1270 Guidance: Managing the Physical and
   Social Environment 2

   Total Credits 16

Early Childhood, Diploma

Location: Granite Falls

Persons completing this program would work in a variety of settings related to child care and education such as preschools, day cares, public schools, Head Start programs, and private homes (e.g. nannies). Students enrolled in the program receive instruction in safety, health, nutrition, guidance, child development, and the preparation and presentation of learning experiences to enhance all areas of a child’s development. This course of study is designed to improve the quality of services children receive, to increase professionalism in graduates, and to promote the overall development of children. Lab School and field experience in various settings provide opportunities for students to apply their knowledge and skills.

Prerequisite: Completed certificate program to enter the Diploma program.

   EDUC 1340 Planning and Implementing with lab 4
   EDUC 1510 Internship 2-4
   EDUC 2200 Infant & Toddler Development
   and Learning Experiences 4
   EDUC 2560 Language & Literacy Learning
   Experiences 3
   EDUC 2900 Introduction to Special Education 3

   Total Credits 34

Economics, A.A.

Location: Worthington

Economics is an independent area of study. It is, therefore, not listed under the business section. Students planning to major in economics should obtain a catalog from the four-year school to which they intend to transfer and consult with the Worthington advisors to determine their exact program. This program meets the MnTC and the Associate of Arts requirements.

   BUS 1101 Introduction to Business 4
   BUS 2201 Principles of Accounting I 4
   BUS 2202 Principles of Accounting II 4
   CMST 1101 Public Speaking 3
   ENGL 1101 Composition I 3
   ENGL 1102 Composition II 3
   ECON 2201 Principles of Macroeconomics 3

   Total Credits 16

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ECON 2202 Principles of Microeconomics 3
MATH 1105 *Introduction to Probability & Statistics 4
MATH 1113 *Pre-Calculus 4
or
MATH 1121 *Calculus I 4
NSCI 1100 Issues in the Environment 3
or
PSCI 2210 Environmental Politics 3
or
GEOG 1101 Introduction to Physical Geography 4
PSCI 1201 American Government & Politics 3
PSYC 1101 Introduction to Psychology 4
Biology Electives 3-4
Chemistry or Physics Electives 3-4
Humanities Electives 6
Total Credits 60

STSK 1110 – Freshman Seminar (1) credit required.

Fulfill a minimum of 4 credits from two of the three areas. HLTH 1101, CSCI 1102, or any Physical Education course.

* Depends on high school preparation and transfer institution.

Education, Elementary or Special, A.A.

Location: Worthington

Minnesota West-Worthington campus offers the first two years of courses for that program and, in addition, a number of supporting courses for those students planning the special education emphasis. Many colleges require a grade of B in composition as well as a GPA of 2.5 or better in all courses for admission into the Education Department. The program below meets the Associate of Arts degree and MnTC requirements for Minnesota State, but can be adapted to meet the varied needs of other institutions.

ENGL 1101 Composition I 3
BIOL 1100 Survey of Biological Science 3
or
BIOL 1110 Principles of Biology I 4*
PHYS 1100 Survey of Physics 3
CHEM 1100 Introduction to Chemistry 4
ART 1120 Art Appreciation 3
or
ART 1118 Foundations of Art 3
HIST 1101 US History to 1865 4
HIST 1102 US History from 1865 4
ENGL 1102 Composition II 3
or
ENGL 2243 Composition: Creative Writing 3
or
ENGL 2276 Composition: Technical Writing 3
HLTH 2220 Drugs, Society & the Individual 3
HLTH 1117 CPR for the Professional Rescuer & Community First Aid 1-3
or
HLTH 1120 Comprehensive CPR & other First Aid 1-3
PSYC 1101 Introduction to Psychology 4
or
PSYC 1150 Developmental Psychology 3
or
PSYC 1140 Child & Adolescent Psychology 3
HIST 1105 Minnesota History 3
GEOG 1100 Introduction to Geography 3
MUSC 1101 Fundamentals of Music 3
CMST 1101 Public Speaking 3

STSK 1110 – Freshman Seminar (1) credit required.

Fulfill a minimum of 4 credits from two of the three areas. HLTH 1101, CSCI 1102, or any Physical Education course.

* Depends on transfer institution.
The State of Minnesota Board of Licensure is currently redefining the professional and pre-professional requirements for education majors. Consult your advisor for current information.

Note: The PPST exam is required before students can enroll in education courses at the junior level. See Student Services for more information and a test application.

Education, Secondary, A.A.

Location: Worthington

Minnesota West-Worthington campus offers the necessary courses for students who are planning to teach in secondary schools. The secondary education program for high school teaching prepares students for teaching in all of the various popular subject fields including English, social sciences, natural sciences, humanities, physical education, foreign language (Spanish), home economics, math, computer science, business and industrial technical. The education programs meet the AA degree and MnTC requirements at state universities. The following suggested program is to be used as a guideline only. Students preparing for teaching in secondary schools or colleges should earn about 10 credits in their major field with at least a 2.5 grade point average. Grades consisting of “B’s” in composition courses are required by many colleges.

CMST 1101 Public Speaking 3
ENGL 1101 Composition I 3
PSYC 1101 Introduction to Psychology 4
PSYC 1150 Developmental Psychology 3
GEOG 1100 Introduction to Geography 3
Chemistry or Physics 3-5
NSCI 1100 Issues in the Environment 3

STSK 1110 – Freshman Seminar (1) credit required.

Fulfill a minimum of 4 credits from two of the three areas. HLTH 1101, CSCI 1102, or any Physical Education course.

* Depends on transfer institution.
STSK 1110 – Freshman Seminar (1) credit required.

Fulfill a minimum of 4 credits from two of the three areas. HLTH 1101, CSCI 1102, or any Physical Education course.

**Education Paraprofessional, Certificate**

**Location: Online**

This certificate program prepares graduates for employment in a K-12 school district and provides a curriculum which meets the core competencies. The curriculum will provide a career pathway for paraprofessionals that will allow them to begin, continue, and enhance their education. The curriculum is organized to move the learner through the selected course work online and through the A.S. degree without unnecessary duplication of course work. The certificate is made up of four required and five elective online classes developed by incorporating the core competencies that have been produced for paraprofessionals by the Institute on Community Integration at the University of Minnesota. The coursework is designed to begin students with a 12-credit certificate, which is also part of the Child Development, Diploma; Child Development A.S.; as well as the Child Development Track of the Human Services degree.

**Required Courses:**
- EDUC 1265 Foundations of Child Development (2)
- EDUC 1267 Health, Nutrition & Safety (2)
- EDUC 1270 Guidance: Managing the Physical & Social Environment (2)
- EDUC 2900 Introduction to Special Education (3)

**Electives:**
Choose one elective from the following:
- EDUC 1240 Family and Community Relations (3)
- CSCI 1102 Computer Applications I (3)
- HSER 1121 American Sign Language (3)

**Total Credit: 12**

**Electric Utility Substation Technology, A.A.S.**

**Location: Jackson**

Curriculum includes extensive hands-on practice and theory in single and three phase metering, overcurrent and complex relaying, single-and-three phase transformers, regulators, capacitors, generation, transmission, distribution and many other subjects. Career opportunities include installing and calibrating electrical watt-hour meters, planning and working in electrical substations, testing and installing high voltage and high current relays used in transmission and distribution lines, electrical dispatcher, or a power plant maintenance technician.

**Required Courses:**
- ENGL 1101 Composition I (3)
- MATH MN Transfer Area 4 course (3)
- CSCI 1102 Computer Applications I (3)
- ELCO 1100 Electric Circuits Fundamentals (3)
- ELCO 1105 Electric Circuits Fundamentals Lab (3)
- MATH 1100 Integrated Math or higher (3)
- ELEC 1230 Safety Principles and OSHA (1)
- ELEC 2205 Electric Motor Controls I (4)
- ELEC 2225 Electric Motor Control II (4)
- ELEC 2230 Programmable Logic Controllers (4)
- ELUT 1105 Blueprint, Schematics and Transit (3)
- ELUT 1110 Transformer Banking I (3)
- ELUT 1115 Transformer Banking II (3)
- ELUT 2100 Electrical Metering (3)
- ELUT 2110 Transformer Banking II (2)
- ELUT 2116 Reclosures & Protective Equipment (2)
- EMS 1112 AHA CPR Healthcare Provider, AED First Aid Certification (1)

**Electives:**
Choose from the following:
- ELCO 1100 Electrical Circuits Fundamentals (3)
- CSCI 1102 Computer Applications Lab (3)

**Total Credit: 60**

**Electrician, A.A.S.**

**Locations: Canby and Jackson**

The electrician program prepares individuals to apply their knowledge and skills to install, operate, maintain, and repair electrical apparatuses and systems such as residential, commercial, and industrial electric power wiring, and D.C. and A.C. motors, controls, and electrical distribution panels. Also, included is instruction in the use of test equipment.

**Required Courses:**
- ENGL 1101 Composition I (3)
- MATH MN Transfer Area 4 course (3)
- CSCI 1102 Computer Applications I (3)
- ELCO 1100 Electric Circuits Fundamentals (3)
- ELCO 1105 Electric Circuits Fundamentals Lab (3)
- ELEC 1230 Safety Principles and OSHA (1)
- ELEC 2205 Electric Motor Controls I (4)
- ELEC 2225 Electric Motor Control II (4)
- ELEC 2230 Programmable Logic Controllers (4)

**General Education Electives:**
Choose from the following:
- English, Biology, Chemistry, Philosophy, Theatre, Western Civilization, Economics, Geography, History, Political Science, Psychology, and Sociology

**Total Credit: 60**

**Electric Utility Substation Technician, Diploma**

**Location: Jackson**

**General Education and/or GSCL1105 Job Seeking Skills:**
- CSCI 1102 Computer Applications I (3)
- ELCO 1100 Electric Circuits Fundamentals (3)
- ELCO 1105 Electric Circuits Fundamentals Lab (3)
- MATH 1100 Integrated Math or higher (3)
- ELEC 1230 Safety Principles and OSHA (1)
- ELEC 2205 Electric Motor Controls I (4)
- ELEC 2225 Electric Motor Control II (4)
- ELEC 2230 Programmable Logic Controllers (4)
- ELUT 1105 Blueprint, Schematics, and Transit (3)
- ELUT 1110 Transformer Banking I (3)
- ELUT 1115 Transformer Banking II (3)
- ELUT 2100 Electrical Metering (3)
- ELUT 2110 Transformer Banking II (2)
- ELUT 2116 Reclosures and Protective Equipment (2)
- EMS 1112 AHA CPR Healthcare Provider, AED First Aid Certification (1)

**Electives:**
Choose from the following:
- ELCO 1100 Electrical Circuits Fundamentals (3)

**Total Credit: 60**
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<td>Transformers</td>
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<td>ELEC 2250</td>
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<td>ELEC 2265</td>
<td>Alternative Energies</td>
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**Electrician, Diploma**

Locations: Canby and Jackson

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<tr>
<td>ELEC 2250</td>
<td>Heating and Air Cond. Controls</td>
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</table>

| **General Education, or Related, of 8 credits would include the following courses:** |
| GSCL 1105 Job Seeking Skills or English, Biology, Chemistry, Math above 1000 level, Physics, Natural Science, Art, Foreign Language, Literature, Music, Philosophy, Theatre, Western Civilization, Economics, Geography, History, Political Science, Psychology, and Sociology |

**Total Credits** | 74

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### Emergency Medical Services, Certificate

**Location: Jackson and Marshall Center Site**

An instructional program that prepares individuals to perform initial medical diagnosis, treatment, and comprehensive care in medical crises under the general supervision of a coordinating physician. Includes instruction in all aspects of basic health care; disease, disorder, and injury symptomatology and diagnosis; emergency medical treatment procedures for various injuries and disease outbreaks; basic pharmacology; anesthetics; intravenous and other drug administration procedures; obstetrics procedures; basic surgical techniques; emergency medical equipment operation and maintenance; special care of patients exposed to heat, cold, radiation, or contagious disease; and administrative aspects of emergency medicine. Programs may include emergency vehicle operation and patient transportation procedures, depending on level of training.

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<td>HC 1151</td>
<td>Body Structures &amp; Function</td>
<td>3</td>
</tr>
<tr>
<td>HC 1290</td>
<td>Health Care and Society</td>
<td>1</td>
</tr>
<tr>
<td>HC 2120</td>
<td>Disease Conditions</td>
<td>3</td>
</tr>
<tr>
<td>ADSM 1120</td>
<td>Medical Office Procedures</td>
<td>3</td>
</tr>
</tbody>
</table>

| **Total Credits** | 81

---

### Emergency Medical Technician, Certificate

**Location: Jackson and Marshall Center Site**

This certificate meets the initial requirements of the EMS Regulatory Board and the National Registry for EMTs for direct employment with an Emergency Ambulance Service, basic transport service, and emergency room, law enforcement or fire department. Successful completion of this course, the practical skills exam and the designated readiness written exams allows the student eligibility to take the National Registry Exam.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 1101</td>
<td>Introduction to Emergency Medical Technician</td>
<td>2.5</td>
</tr>
<tr>
<td>EMS 1102</td>
<td>EMT Completion/Bridge</td>
<td>4.5</td>
</tr>
</tbody>
</table>

| **Total Credits** | 16

---

### (Energy) Biofuels Technology; Biodiesel, Certificate

**Location: Granite Falls and Online**

This 18-credit program is offered to students in an on-line format. The program courses provide foundational learning to support process plant technologies and operation with a concentration in biodiesel technologies.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>RNEW 1100</td>
<td>Process Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>RNEW 1102</td>
<td>Biodiesel Fundamentals</td>
<td>2</td>
</tr>
<tr>
<td>RNEW 1107</td>
<td>Industrial Safety</td>
<td>2</td>
</tr>
<tr>
<td>RNEW 1115</td>
<td>Mechanical Fundamentals for Process Controls</td>
<td>3</td>
</tr>
<tr>
<td>RNEW 1125</td>
<td>P &amp; ID, PFD Reading</td>
<td>1</td>
</tr>
<tr>
<td>RNEW 1160</td>
<td>Instrumentation &amp; Control</td>
<td>3</td>
</tr>
<tr>
<td>RNEW 1175</td>
<td>Industrial Water Treatment</td>
<td>2</td>
</tr>
<tr>
<td>RNEW 1195</td>
<td>Biodiesel Technologies &amp; Regulatory Issues</td>
<td>2</td>
</tr>
</tbody>
</table>

| **Total Credits** | 18

---

**Note:** The total credits for the Electrician, Diploma and Emergency Medical Technician, Certificate programs are 74 and 16 respectively. The (Energy) Biofuels Technology; Biodiesel, Certificate program offers 18 credits.
(Energy) Biofuels Technology; Ethanol, Certificate
Location: Granite Falls and Online
The Biofuels Technology Ethanol program focuses on ethanol production. This certificate will enhance an individual's ability to enter and advance a career in the renewable energy industry, such as a process technician or in sales and marketing.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>RNEW 1100</td>
<td>Process Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>RNEW 1101</td>
<td>Ethanol Process Fundamentals</td>
<td>2</td>
</tr>
<tr>
<td>RNEW 1107</td>
<td>Industrial Safety</td>
<td>2</td>
</tr>
<tr>
<td>RNEW 1115</td>
<td>Mechanical Fundamentals for Process Controls</td>
<td>3</td>
</tr>
<tr>
<td>RNEW 1125</td>
<td>P &amp; ID, PFD Reading</td>
<td>1</td>
</tr>
<tr>
<td>RNEW 1160</td>
<td>Instrumentation &amp; Control</td>
<td>3</td>
</tr>
<tr>
<td>RNEW 1175</td>
<td>Industrial Water Treatment</td>
<td>2</td>
</tr>
<tr>
<td>RNEW 2120</td>
<td>Ethanol Separation Technology</td>
<td>2</td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

Energy Technical Specialist, A.A.S.
Location: Canby, Granite Falls and Online
This degree, which can be completed online, will prepare students for work as technicians in energy technology and convey the skills and knowledge necessary to be successful in the traditional and renewable energy fields.

In addition to 15 General Education credits students enrolled in the Energy Technical Specialist program will study a 35 credit core curriculum providing a strong base in electrical, electronic and mechanical systems. Students will select 10 credits in an area of specialization to complete their program of study from the following: Wind Energy, Ethanol, Biodiesel, Fossil Fuels or Nuclear Power Generation.

The Energy Technical Specialist degree is offered through a partnership of multiple colleges in the Minnesota State system. Each of the partner colleges offer courses in their respective areas of expertise and the participating colleges accept transfer courses from each other.

Students entering into the Energy Technical Specialist program should realize that the energy industry is highly specialized and there are extraordinary employment characteristics associated in some areas of the power industry. Depending on the energy company, hiring managers may require a federal background check, drug and alcohol testing, and a physical if necessary for a position.

Required Courses
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>RNEW 1107</td>
<td>Industrial Safety</td>
<td>2</td>
</tr>
<tr>
<td>RNEW 1300</td>
<td>Intro to Traditional &amp; Renewable Energy</td>
<td>3</td>
</tr>
<tr>
<td>ELCO 1110</td>
<td>AC/DC I and</td>
<td>3</td>
</tr>
<tr>
<td>ELCO 1120</td>
<td>AC/DC II</td>
<td>3</td>
</tr>
<tr>
<td>MECA 1210</td>
<td>Digital/Solid State Electronics *</td>
<td>3</td>
</tr>
<tr>
<td>RNEW 1110</td>
<td>Process Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>RNEW 1115</td>
<td>Mechanical Fundamentals for Process Controls</td>
<td>3</td>
</tr>
<tr>
<td>MECH 2136</td>
<td>Programmable Logic Controllers</td>
<td>3</td>
</tr>
<tr>
<td>or RNEW 2543</td>
<td>Program Logic Controls *</td>
<td>3</td>
</tr>
<tr>
<td>MECH 1120</td>
<td>Pneumatic Theory</td>
<td>3</td>
</tr>
<tr>
<td>MECH 1103</td>
<td>Basic Hydraulics</td>
<td>3</td>
</tr>
<tr>
<td>RNEW 1160</td>
<td>Instrumentation &amp; Control</td>
<td>3</td>
</tr>
<tr>
<td>RNEW 1125</td>
<td>P &amp; ID &amp; PFD Reading and</td>
<td>1</td>
</tr>
<tr>
<td>or MECH 1120</td>
<td>Pneumatic Theory</td>
<td>3</td>
</tr>
<tr>
<td>or RNEW 1160</td>
<td>Instrumentation &amp; Control</td>
<td>3</td>
</tr>
<tr>
<td>or RNEW 1125</td>
<td>P &amp; ID &amp; PFD Reading</td>
<td>1</td>
</tr>
<tr>
<td>RNEW 1175</td>
<td>Industrial Water Treatment</td>
<td>2</td>
</tr>
<tr>
<td>RNEW 1115</td>
<td>Mechanical Fundamentals for Process Controls</td>
<td>3</td>
</tr>
<tr>
<td>RNEW 1125</td>
<td>P &amp; ID &amp; PFD Reading</td>
<td>1</td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>18</td>
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</tbody>
</table>

Specialty Emphasis/Certificate Courses (select 10 credits)

Bio Fuel
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>RNEW 1101</td>
<td>Ethanol Process Fundamentals</td>
<td>2</td>
</tr>
<tr>
<td>RNEW 1102</td>
<td>Biodiesel Process Fundamentals</td>
<td>2</td>
</tr>
<tr>
<td>RNEW 1110</td>
<td>Low &amp; High Pressure Boilers</td>
<td>1</td>
</tr>
<tr>
<td>RNEW 1130</td>
<td>Pollution Control Fundamentals</td>
<td>2</td>
</tr>
<tr>
<td>RNEW 1175</td>
<td>Industrial Water Treatment</td>
<td>2</td>
</tr>
<tr>
<td>RNEW 1195</td>
<td>Biodiesel Technologies &amp; Regulatory Issues</td>
<td>2</td>
</tr>
<tr>
<td>RNEW 2120</td>
<td>Ethanol Separation Technology</td>
<td>2</td>
</tr>
<tr>
<td>ELWT 1100</td>
<td>Wind Energy Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>ELWT 1160</td>
<td>Environmental Health/Safety Wind Energy</td>
<td>1</td>
</tr>
<tr>
<td>ELWT 1170</td>
<td>Wind Energy OSHA Standards &amp; Climb Lab</td>
<td>3</td>
</tr>
</tbody>
</table>

Wind Power
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOLR 1020</td>
<td>Introduction to Solar Assessment</td>
<td>3</td>
</tr>
<tr>
<td>SOLR 1030</td>
<td>Solar Energy Construction Projects</td>
<td>2</td>
</tr>
<tr>
<td>SOLR 2020</td>
<td>Advanced Photovoltaic Systems</td>
<td>3</td>
</tr>
<tr>
<td>SOLR 2025</td>
<td>Photovoltaic Systems Lab</td>
<td>2</td>
</tr>
</tbody>
</table>

General Education Requirements (15 credits)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1111</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1101</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>PHSY 1100</td>
<td>Survey of Physics</td>
<td>3</td>
</tr>
<tr>
<td>NSCI 1100</td>
<td>Issues in the Environment</td>
<td>3</td>
</tr>
<tr>
<td>General Education Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>60</td>
</tr>
</tbody>
</table>

*Not a Minnesota West course.

(Energy) Solar Photovoltaic Technician, Certificate
Location: Canby and Jackson
The Solar Photovoltaic program combines lecture and hands on training to provide the skills necessary to install solar PV systems. Graduates will develop an understanding of where PV systems started, where they are now and where they will be in the future. Under minimal supervision graduates must be able to define the solar resource and complete a site assessment. They must also develop a comfort level with the capabilities, limitations, and basic construction of all major PV system pieces. Graduates must also be able to size systems to client’s expectations, inspect, commission and maintain the systems.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELCO 1100</td>
<td>Electrical Circuits Fundamentals and</td>
<td>3</td>
</tr>
<tr>
<td>ELCO 1105</td>
<td>Electrical Circuits Fundamentals Lab</td>
<td>3</td>
</tr>
<tr>
<td>ELCO 1110</td>
<td>AC/DC I and</td>
<td>3</td>
</tr>
<tr>
<td>ELCO 1120</td>
<td>AC/DC II</td>
<td>3</td>
</tr>
<tr>
<td>ELEC 1205</td>
<td>National Electric Code I</td>
<td>2</td>
</tr>
<tr>
<td>ELEC 1220</td>
<td>Conduit Installation</td>
<td>4</td>
</tr>
<tr>
<td>ELEC 1230</td>
<td>Safety Principles and OSHA</td>
<td>1</td>
</tr>
<tr>
<td>ELEC 1235</td>
<td>Applied Electrical Calculations</td>
<td>2</td>
</tr>
<tr>
<td>SOLR 1020</td>
<td>Introduction to Solar Assessment</td>
<td>3</td>
</tr>
<tr>
<td>SOLR 1030</td>
<td>Solar Energy Construction Projects</td>
<td>2</td>
</tr>
<tr>
<td>SOLR 2020</td>
<td>Advanced Photovoltaic Systems</td>
<td>3</td>
</tr>
<tr>
<td>SOLR 2025</td>
<td>Photovoltaic Systems Lab</td>
<td>2</td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>25</td>
</tr>
</tbody>
</table>
(Energy) Wind Energy Technology, A.A.S.

Location: Canby

The Wind Energy Technology program combines lecture and hands-on training to provide skills necessary in completing advanced technical troubleshooting and repairs on wind energy turbines. Under minimal supervision, graduates will be able to carry out complex daily assembly, service, repair, and operations of infrastructure to wind turbine generators and related equipment. Exposure to concepts of basic digital circuits, motor controllers, programmable logic controllers, and computerized data collection, interpretation, storage, and retrieval is evident throughout the program.

Wind Energy Technicians must operate in compliance with company, State, and Federal OSHA requirements and be capable of climbing to 300 feet. They work closely with clients and must have an understanding of environmental issues and politics, written technical skills, and data interpretation.

CSCI 1102 Computer Applications I 3
DSL 1130 Hydraulics Theory and Application 3
ELCO 1110 AC/DC I 3
ELCO 1120 AC/DC II 3
ELEC 1225 Electric Motors 3
ELEC 1235 Applied Electrical Calculations 2
ELEC 2200 Low Voltage 2
ELEC 2205 Electric Motor Control I 4
ELEC 2230 Programmable Logic Controllers 4
ELEC 2240 Transformers 3
ELEC 2265 Alternative Energies 3
ELWT 1101 Introduction to Wind Energy 2
ELWT 1102 Hydraulics Lab 1
ELWT 1110 Mechanical Systems 3
ELWT 1170 Wind Energy OSHA Standards and Clim Lab 3
ELWT 2110 Turbine Siting & Construction 3
General Education Electives 15
Total Credits 60

(Energy) Wind Energy Mechanic, Diploma

Location: Canby

CSCI 1102 Computer Applications I 3
DSL 1130 Hydraulics Theory and Application 3
ELCO 1110 AC/DC I 3
ELCO 1120 AC/DC II 3
ELEC 1225 Electric Motors 3
ELEC 1235 Applied Electrical Calculations 2
ELEC 2200 Low Voltage 2
ELEC 2240 Transformers 3
ELEC 2265 Alternative Energies 3
ELWT 1101 Introduction to Wind Energy 2
ELWT 1102 Hydraulics Lab 1
ELWT 1110 Mechanical Systems 3
ELWT 1170 Wind Energy OSHA Standards and Clim Lab 3
Total Credits 34

(Energy) Windsmith, Certificate

Location: Online

The Windsmith Certificate is designed as an introductory to the Wind Energy Industry. Individuals wanting to increase their working knowledge of this field are best suited for this course. However, students may be able to secure employment as a Technician by completing the Windsmith Certificate.

CSCI 1102 Computer Applications I 3
DSL 1130 Hydraulics Theory and Application 3
ELWT 1170 Wind Energy OSHA Standards & Clim Lab 3
Total Credits 16

This certificate will introduce students to how the wind works, its reliability, and the related economic, environmental, and political issues. Students will also be introduced to the basic operating principles of wind energy systems and status of the industries past and future. OSHA safety regulations and standards that pertain to the construction and maintenance of wind turbines and the energy industry will also be covered. In addition, concepts of AC and DC circuits, as well as basic hydraulic applications are incorporated into the Windsmith certificate.

DSL 1130 Hydraulics Theory and Application 3
ELCO 1110 AC/DC I 3
ELCO 1120 AC/DC II 3
ELEC 2200 Low Voltage 2
ELWT 1101 Introduction to Wind Energy 2
ELWT 1170 Wind Energy OSHA Standards & Clim Lab 3
Total Credits 60

Engineering (pre-engineering), A.S.

Location: Worthington

Engineering programs prepare graduates to do research and to design and develop new technologies and devices. Engineering technology programs prepare graduates to apply engineering knowledge and methods along with technical skills. Engineering technologists often translate and apply engineering research in real world applications.

The engineering program at Minnesota West-Worthington campus is designed to fulfill the major requirements of lower division engineering programs at transfer universities. This program meets the Associate of Science requirements but does not meet the Minnesota Transfer Curriculum.

For most fields of engineering, the first two years of the program provide students with a needed foundation in math and science. In addition, students begin fulfilling general education requirements for graduation. Actual specialization in such fields as computer, agricultural, aeronautical, chemical, civil, geological, material processing, electrical, mechanical, and industrial engineering generally begins in the junior year.

In an effort to meet the needs of each student, Minnesota West-Worthington campus offers three engineering tracks, each allowing graduates to transfer as juniors.

CHEM 1101 General Chemistry I 4
CMST 1101 Public Speaking 3
ECON 2201 Principles of Macroeconomics 3
ENGL 1101 Composition I 3
ENGL 2276 Composition: Technical Writing 3
ENGR 1101 Introduction Engineering 1
ENGR 2214 Engineering Mechanics-Statics 3
ENGR 2215 Engineering Mechanics-Dynamics 3
GEOG 1101 Introduction to Physical Geography 4
HIST 1111 Early Western Civilization 3
MATH 1121 Calculus I 4
MATH 1122 Calculus II 4
MATH 2201 Calculus III 4
MATH 2203 Differential Equations 3
PHIL 2101 Ethics Theory & Practices 3
PHIL 2205 Business Ethics 2
PHYS 2121 General Physics I 5
PHYS 2122 General Physics II 5
Total Credits 60
English Transfer Pathway, A.A.

Location: Worthington

The English Transfer Pathway, A.A. offers students a powerful option: the opportunity to complete an Associate of Arts degree with course credits that directly transfer to designated English 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.

Universities within the Minnesota State system include Bemidji State University; Metropolitan State University; Minnesota State University, Mankato; Minnesota State University Moorhead; Southwest Minnesota State University; St. Cloud State University; and Winona State University.

This is one example of an English Transfer Pathway, AA degree. Courses with an * are optional courses in this transfer pathway.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1100</td>
<td>Survey of Biological Science</td>
<td>3</td>
</tr>
<tr>
<td>CMST 1103</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>CSCI 1102</td>
<td>Computer Applications I</td>
<td>3</td>
</tr>
<tr>
<td>CMST 1150</td>
<td>Exploring Mass Media</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1101</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1102</td>
<td>Composition II</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1120</td>
<td>Introduction to Women’s Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1105</td>
<td>Introduction to Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 2202</td>
<td>Modern American Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 2222</td>
<td>Modern British Literature</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1107</td>
<td>Concepts in Math</td>
<td>3</td>
</tr>
<tr>
<td>NSCI 1100</td>
<td>Issues in the Environment</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 2101</td>
<td>Ethics Theory and Practice</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1100</td>
<td>Survey of Physics</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 2210</td>
<td>Environmental Politics</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1101</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1101</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1102</td>
<td>Social Problems</td>
<td>3</td>
</tr>
<tr>
<td>STSK 1110</td>
<td>Freshman Seminar</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credits 60

1. Upon completion of this transfer pathway degree, students can transfer to a receiving Minnesota State Institution with junior standing. Four credits will transfer into at least one track (though, at each receiving school's discretion, possibly more than one) of the receiving institution's English major. Those four credits may be applied directly to a required major course when applicable at a particular receiving school or as an elective course in the major. Each receiving institution will make that determination. Thus, after completing the AA transfer pathway at a community college, a student transferring into a university that currently requires 40 credits of English Major coursework would only have to take 36 credits of English major coursework.

2. Students completing the transfer pathway must complete one course of three or more credits in each of the four specified content areas even though some courses may, from a course outcome standpoint, meet the outcome requirements of more than one area. In other words, there are four content areas in the pathway and students must complete four courses to address those content areas.

3. When possible, students are encouraged to take additional English courses beyond the four required by the transfer pathway to better prepare themselves for the major at the BA level. However, students must ensure that any classes they choose help them fulfill the MnTC requirements, and they should also know that there is no guarantee that such courses would transfer to the receiving institution's English major.

Environmental Sciences, A.A.

Location: Worthington

The study of the environment combines knowledge of biological, chemical and physical principles with the broad background of the liberal arts. Students will find a variety of fields in which to specialize at the BA/BS level. At Minnesota West-Worthington campus, students should concentrate on completing the MnTC and a broad science/math background.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1110</td>
<td>Principles of Biology I</td>
<td>4</td>
</tr>
<tr>
<td>CMST 1101</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1101</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1102</td>
<td>Composition II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1101</td>
<td>General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1102</td>
<td>General Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1111</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>NSCI 1100</td>
<td>Issues in the Environment</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 1201</td>
<td>American Government &amp; Politics</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 2202</td>
<td>State and Local Government</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 2210</td>
<td>Environmental Politics</td>
<td>3-9</td>
</tr>
<tr>
<td>AGRI 1103</td>
<td>Introduction to Soil Science</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 2204</td>
<td>Introduction to Precision Agriculture</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 60

STSK 1110 – Freshman Seminar (1) credit required.

Fulfill a minimum of 4 credits from two of the three areas. HLTH 1101, CSCI 1102, or any Physical Education course.

** Depends on program emphasis

*** See an Advisor

Food Science, A.S.

Location: Worthington

Food Science degrees are limited almost exclusively to land grant universities, although some state universities do have Food Science Technology majors. The Associate of Science degree listed below would prepare students to complete the first two years of a bachelor's degree in a science option of a Food Science Degree program. The degree requirements listed below are based primarily on the requirements of the University of Minnesota and Minnesota State University, Mankato. The degree requirements for schools in Wisconsin (U of W-River Falls), North Dakota (NDSU), South Dakota (SDSU) and Iowa (Iowa State University) are very similar in
the areas of communications and math/science. Calculus and Organic Chemistry requirements may vary, as well as social science, humanities, and physical education. This does not meet the MnTC requirements. Students planning to attend the University of Minnesota are advised to complete the Associate of Arts degree and the MnTC.

**Biology**

**MnTC if not complete as part of HUM/SOC SCI**

**Minimums only BIOL 2201 and 2202 are required at Minnesota State University, Mankato MATH 1121 and 1122 are required at the University of Minnesota**

An additional semester is required to complete the A.A. degree and MnTC requirements. Students should take six credits in HUM; two-six credits in SOC SCI (PSCI 2210 recommended); two-six credits to meet areas 7, 8 and 9 of credits in HUM; two-six credits in SOC SCI. This will total 10-20 additional credits.

**Choose two of the following:**

**PHYS 1201 Fundamentals of Physics I 4**
**PHYS 1202 Fundamentals of Physics II 4**
**PSYC 1101 Introduction to Psychology 4**

**Total Credits 60**

**Health, A.A.**

**Location: Worthington**

The lower division courses for these three areas of concentration are basically the same. Therefore, we have listed them under a common heading in the program of study. The student is advised to check with Minnesota West-Worthington campus counseling staff for the exact requirements for the four-year college he/she intends to attend.

Recreation/Parks Administration majors may specialize in one of several areas of concentration. The area desired should be determined while in attendance at Minnesota West in order to meet the transfer requirements. Additional credits in business courses may be in order for some receiving colleges. The curriculum requirements below meet the MnTC requirements.

**Forestry/Natural Resources, A.S.**

**Location: Worthington**

Four-year college graduates in the field of forestry are responsible for the management of approximately one-third of the land area of the United States. The educational program in the School of Natural Resources (University of Minnesota) prepares the student in forest resource development and forest science curricula in the art, science and business of managing forest lands for all their products (timber, water, wildlife, grazing, and recreation). Forest products, forest engineering and forest marketing graduates are directly involved in the harvesting, processing, distribution and marketing of forest products in the nation. The recreation resource management curriculum specializes in manufactured housing, marketing, pulp and paper, wood science and technology as well as the management and marketing of recreation areas.

The College of Natural Resources at the University of Minnesota has many options or areas of specialization within the broad area of forestry. All of these programs require a broad science background, and the following is only one possible two-year course of study. Upon completion of this program, the student earns the AS degree.

**AGRI 1103 Introduction to Soil Science 3**
**BIOL 1110 Principles of Biology I 4**
**BIOL 2220 Animal Biology 4**
**BIOL 2230 Plant Biology 4**
**CHEM 1101 General Chemistry I 4**
**CHEM 1102 General Chemistry II 4**
**CHEM 2201 Organic Chemistry I 5**
**CHEM 2202 Organic Chemistry II 5**
**CMST 1101 Public Speaking 3**
**ENGL 1101 Composition I 3**
**ENGL 1102 Composition II 3**
**ECON 2201 Principles of Macroeconomics 3**
**ENGL 1101 Composition I 3**
**ENGL 1102 Composition II 3**
**MATH 1105 Introduction to Probability & Statistics 4**
**MATH 1121 Calculus I 4**
**PHYS 1201 Fundamentals of Physics I 4**
**PHYS 1202 Fundamentals of Physics II 4**
**PSYC 1101 Introduction to Psychology 4**

**Total Credits 60**

* Required for forest resources and forest science majors for the Itasca Biological Sciences Program
** Depends on the area of specialization
*** Minimums only.
**** Depends on high school preparation

An additional semester is required to complete the A.A. degree and MnTC requirements. Students should take six credits in HUM; two-six credits in SOC SCI (PSCI 2210 recommended); two-six credits to meet areas 7, 8 and 9 of MnTC if not complete as part of HUM/SOC SCI requirements. This will total 10-20 additional credits.
PHED 1110    Prevention and Care of Athletic Injuries I 3
PHED 1120    Biology Elective 3
PHED 1130    Humanities Electives 9
PHED 1135    Math Elective 3
PHED 1140    Physics Electives 3
PHED 1160    Social Science Electives** 9
Total Credits 60

STSK 1110 – Freshman Seminar (1) credit required.

Fulfill a minimum of 4 credits from two of the three areas. HLTH 1101, CSCI 1102, or any Physical Education course.

* If either PSCI 2210 or GEOG 1101 is taken to meet Areas 5 and 10, deduct three credits from SOC SCI requirements.

**MAJORS TO NOTE:

Health Information Technology, A.A.S
Location: Canby, Granite Falls, Jackson, Pipestone, Worthington, and Online

Health information management technicians are the pivotal link in administrative and clinical data for the healthcare team. Health information management includes collecting, analyzing, storing, protecting and ensuring health information. These professionals can perform diagnostic and procedure coding, utilizes electronic systems for reimbursement, report data for enterprise-wide planning and research activities, and maintain a legal patient record. They work to ensure what is put in a medical record is accurate, timely, and accessible when needed, by those allowed to have access to it.

Students receive a comprehensive education in health information data structure, content & information governance; information protection; informatics, analytics, and data use; revenue cycle management; health law & compliance; and organizational management & leadership. In the last semester, students complete a 40-hour supervised practicum incorporating their education and we work together to study for the certification exam.

Employment can be found in academic institutions, government agencies, healthcare software companies, law offices, insurance companies, hospitals, long-term care facilities, clinics, hospice, health information management consulting agencies and many other places.

Prior experience of the basic elements of word processing, spreadsheets, databases, and presentation software are recommended. This program pairs well with the Medical Coding Specialist Diploma or Healthcare Administrative Assistant, Diploma or AAS.

The Health Information Management accreditor of Minnesota West Community & Technical College is the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). The College’s accreditation for Associate degree in Health Information Management has been reaffirmed through 2029-2030. All inquiries about the program’s accreditation status should be directed by mail to CAHIIM, 200 East Randolph Street, Suite 5100, Chicago, IL, 60601; by phone at (312) 235-3255; or by email at info@cahiim.org.

HC 1151    Body Structure & Function 3
HC 1180    Medical Terminology in Healthcare 2
HC 2120    Disease Conditions 3
HIMC 1100    CPT/HCPCS Coding 3
HIMC 1110    Diagnosis Coding 3
HIMC 1120    Procedure Coding 3
HIMC 1130    Advanced Coding 3
HIMC 1140    Introduction to Health Information Management 3
HIMC 1150    Reimbursement & Insurance in Health Information 3
HIMC 1165    Health Information Law 2
HIMC 2100    Computerized Health Information 3
HIMC 2110    Leadership & Management in Health Information 3
HIMC 2115    Computerized Health Information II 1
HIMC 2120    Quality Management in Health Information 3
HIMC 2130    HIT Professional Practice Experience 1
HIMC 2135    HIT Seminar 1
HIMC 2140    Statistics in Health Information 2
MEDA 2135    Pharmacology 3

General Education
CMST 1103    Interpersonal Communication 3
ENGL 1101    Composition I 3
MATH 1105    Introduction to Probability and Statistics 4

General Education from 2 MnTC areas: 5,6,7,8,9,or 10 5
Total Credits 60

Health Information Technician Assistant, Certificate
Location: Canby, Granite Falls, Jackson, Pipestone, Worthington, and Online

HC 1180    Medical Terminology in Healthcare 2
HIMC 1140    Introduction to Health Information Management 3
HIMC 1150    Reimbursement & Insurance in Health Information 3
HIMC 1165    Health Information Law 2
HIMC 2100    Computerized Health Information 3
HIMC 2110    Leadership & Management in Health Information 3
HIMC 2115    Computerized Health Information II 1
HIMC 2120    Quality Management in Health Information 3
HIMC 2140    Statistics in Health Information 2
Total Credits 22

Healthcare Administrative Assistant, A.A.S.
Locations: Canby, Granite Falls, Jackson, Pipestone, Worthington, and Online

A healthcare administrative assistant performs the confidential administrative and clerical work of a medical office. The variety of duties may include bookkeeping, billing, scheduling appointments, and processing insurance claims. They may be responsible for telephone, mail, transcription and typing duties. Other duties include ordering laboratory tests and supplies, as well as receiving, interviewing and instructing patients.

ADSA 1100    College Keyboarding I 3
ADSA 1105    College Keyboarding II 3
ADSA 1111    Office Management 3
ADSA 1122    Word Processing I 2
ADSA 1123    Word Processing II 2
ADSA 1141    Customer Service for the Office Professional 2
ADSA 1145    Supervisory Management 3
ADSM 1120    Medical Office Procedures 4
ADSM 1190    Healthcare Documentation 4
ADSM 1200    Introduction to Medical Coding, Billing, and Insurance 3

Page 35
BUS 2242 Business Communications 3
CSCI 1102 Computer Applications I 3
GSCL 1105 Job Seeking Skills 1
HC 1151 Body Structure & Function 3
HC 1180 Medical Terminology in Healthcare 2
HC 1290 Health Care & Society 1
HC 2120 Disease Conditions 3

General Education Requirements:
CMST 1101 Public Speaking 3
ENGL 1101 Composition I 3
NSCI 1100 Issues in the Environment 3
PSYC 1150 Developmental Psychology 3
SOC 1101 Introduction to Sociology 3

Total Credits 60

Healthcare Administrative Assistant, Diploma
Locations: Canby, Granite Falls, Jackson, Pipestone, Worthington, and Online
ADSA 1100 College Keyboarding I 3
ADSA 1122 Word Processing I 2
ADSA 1123 Word Processing II 2
ADSA 1141 Customer Service for the Office Professional 2
ADSM 1120 Medical Office Procedures 4
ADSM 1190 Healthcare Documentation 4
ADSM 1200 Introduction to Medical Coding, Billing, And Insurance 3
BUS 2242 Business Communications 3
CSCI 1102 Computer Applications I 3
GSCS 1105 Job Seeking Skills 1
HC 1151 Body Structure & Function 3
HC 1180 Medical Terminology in Healthcare 2
HC 1290 Health Care & Society 1
HC 2120 Disease Conditions 3

Total Credits 36

Healthcare Supervision & Leadership, Certificate
Location: Online
This Internet-based certificate will provide the opportunity for the incumbent frontline leaders and supervisors/workers from all departments of healthcare facilities to pursue advanced training in the areas of Employment, Customer Services, Personnel Supervision, Leadership, Legal Compliance, Finance, Industry Trends and Marketing as these topics relate to the healthcare environment. The Internet platform will allow healthcare personnel to pursue advanced training without leaving their facility or placing undue hardships on their current positions and/or employment status. The curriculum will provide for independent practice and virtual role-playing, and the student will be able to interact with college instructional staff via email.

SBMT 1400 Employment 2
SBMT 1405 Customer Service 2
SBMT 1410 Personnel Supervision 4
SBMT 1415 Leadership 4
SBMT 1420 Corporate Compliance 2
SBMT 1425 Finance for Healthcare 3
SBMT 1430 Healthcare Industry Trends 1
SBMT 1435 Marketing in Healthcare 1

Total Credits 19

Management and Supervision in Healthcare, A.S.
Location: Online
The Management and Supervision in Healthcare A.S. program is designed to provide students with the education needed to enhance their management skills. This Internet based A.S. program will provide the opportunity for healthcare workers to gain advanced training in pursuing a management position in healthcare. Frontline leaders within healthcare facilities can also pursue advancement in their assigned areas. The Internet platform allows students to continue their education without leaving their facility and without placing undue hardships on their current positions and/or employment status. The curriculum will provide for independent practice and virtual role playing, and the student will be able to interact with college instruction staff via email and discussion groups. Students will have the option upon completing the A.S. degree to transfer to a university to complete a four-year degree depending on the university’s requirement.

To earn an A.S. degree students must complete the following requirements:

1. Successful completion of 60 semester credits of which at least 15 must be earned at Minnesota West Community & Technical College.
2. A grade point average of 2.00 ("C") or better.
3. A minimum of 30 credits selected from at least 6 of the 10 goal areas in the Minnesota Transfer Curriculum. (see page 5)

Students can ensure seamless transfer of course work at a receiving institution by contacting the institution of transfer for information relating to advanced course work or test out procedure.

Required Core:
SBMT 1310 Resolving Conflict 1
SBMT 1315 Principles of Supervisory Leadership 3
SBMT 1325 Problem Solving & Decision Making 2
SBMT 1330 Interpersonal Skills for Supervisors 1
SBMT 1335 Work Teams 1
SBMT 1345 Finance & Accounting for Non-Financial Managers 3
SBMT 1400 Employment 2
SBMT 1405 Customer Service 2
SBMT 1410 Personnel Supervision 4
SBMT 1415 Leadership 4
SBMT 1420 Corporate Compliance 2
SBMT 1425 Finance for Healthcare 3
SBMT 1430 Healthcare Industry Trends 1
SBMT 1435 Marketing in Healthcare 1

Also Required:
General Education Requirements 30
Total Credits 60

Home Economics (Human Ecology), A.A.
Location: Worthington
There are many programs available in the field of home economics: costume design, dietetics, fashion merchandising, food service, home management, textiles and clothing, foods in business, community nutrition, etc. Each has different requirements. Because of this diversity, it would be misleading to list absolute requirements for all home economics programs. At Worthington, it is possible to take at least one, and more often, two years of courses required for any of the home economics programs. Be sure
to check with your advisor to ensure that you are getting the appropriate courses for your major and transfer institution.

You are strongly encouraged to earn the Associate of Arts degree and meet the MnTC requirement if attending the University of Minnesota or a state university. The two-year program outlined below meets these requirements.

**ART 1120** Art Appreciation 3
**Biol 1110** Principles of Biology I 4
**Chem 1101** General Chemistry I 4
**Chem 1102** General Chemistry II 4
**Chem 2201** Organic Chemistry I 5
**Chem 2202** Organic Chemistry II 5
**Cmst 1101** Public Speaking 3
**Econ 2201** Principles of Macroeconomics 3
**Econ 2202** Principles of Microeconomics 3
**Engl 1101** Composition I 3
**Engl 1102** Composition II 3
or
**Engl 2276** Composition: Technical Writing 3
or
**Engl 2243** Composition: Creative Writing 3
**Hlth 1110** Dimensions of Community/Public Health 3
**Math 1111** College Algebra 3
**Math 1113** Pre-Calculus 4
**Musc 1105** Music Appreciation 3
or
**Thtr 1101** Introduction to Theater 3
**Nsci 1100** Issues in the Environment 3
or
**Gog 1101** Introduction to Physical Geography 4
or
**Psci 2210** Environmental Politics 3
**Phil 2201** Introduction to Ethical Theory 1
**Phil 2202** General Applied Ethics 1
**Phys 1201** Fundamentals of Physics I 4
**Phys 1202** Fundamentals of Physics II 4
**Psyc 1101** Introduction to Psychology 4
**Soc 1101** Introduction to Sociology 3
or
**Soc 1102** Social Problems 3
or
**Soc 2210** Marriage and the Family 3
or
**Soc 2220** Family Life Dynamics 3
**Humanities Electives** 4
**Total Credits** 60

**STSK 1110** – Freshman Seminar (1) credit required.

Fulfill a minimum of 4 credits from two of the three areas. **Hlth 1101, Csci 1102, or any Physical Education course.**

* Depends on transfer institution and area of specialization
** Depend on high school preparation

**Individualized Studies A.A.S.**

**Location: Worthington and Online**

This degree program is designed for working adults and/or students who have well-defined career goals. The program is intended to provide students with the opportunity to develop specific competencies and earn an Associate in Applied Science degree in technical studies that are not available through existing degree programs at Minnesota West

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cmst 1101</td>
<td>Public Speaking</td>
</tr>
<tr>
<td><strong>Engl 1101</strong></td>
<td>Composition I</td>
</tr>
<tr>
<td><strong>Engl 1102</strong></td>
<td>Composition II</td>
</tr>
<tr>
<td><strong>Hist 1101</strong></td>
<td>US History to 1865</td>
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<tr>
<td><strong>Hist 1102</strong></td>
<td>US History from 1865</td>
</tr>
<tr>
<td><strong>Psci 1101</strong></td>
<td>Introduction to Political Science</td>
</tr>
<tr>
<td><strong>Psci 1201</strong></td>
<td>American Government and Politics</td>
</tr>
<tr>
<td><strong>Psci 2202</strong></td>
<td>State and local Government</td>
</tr>
<tr>
<td><strong>Musc 1105</strong></td>
<td>Music Appreciation</td>
</tr>
</tbody>
</table>

**Community & Technical College.** This program is not intended to provide certification in any field.

The program requires submission of a written degree plan initiated by the student with assistance from an academic advisor/faculty member. The plan must also demonstrate transferability to at least one four-year accredited institution, even when it may not be the intention of the student to transfer immediately after completing this degree.

Career-area credits may be earned in technical courses, independent study projects and internships. Credits may be transferred from other institutions in accord with Minnesota State residency requirement for earning the Associate in Applied Science degree.

To earn an A.A.S. degree, students must complete the following requirements:

1. Successful completion of 60 semester credits of which at least 15 must be earned at Minnesota West Community & Technical College.
2. A grade point average or 2.0 (C) or better.
3. A minimum of 15 credits selected from at least 3 of the 10 goal areas in Minnesota Transfer Curriculum.
4. Fulfill at least a 45 credit core of technical courses unique to the program being completed of which no more than 6 credits can be from an internship.

**Law (pre-law), A.A.**

**Location: Worthington**

Law schools in Minnesota do not require specific undergraduate major or courses as pre-law preparation. Rather, they recommend that students acquire a broad education such as is usually assured in a liberal arts program. Special emphasis is placed on the development of skills in oral and written expression. Pre-law students should choose a major and plan a program which is as broad as possible while still being consistent with degree requirements. The student is ultimately responsible of registering in courses that fulfill degree and transfer requirements. Professional advisement is available to the student while he/she pursues his/her course work. Many pre-law students major in history, political science and business administration, though other departmental majors provide good background for law study. Most law schools emphasize that students present a major demonstrating depth of knowledge of the particular field, accompanied by a wide variety of electives that meet the MnTC requirements.

The program outlined below meets the AA degree and MnTC requirements. It is recommended that a pre-law student pursue a course of study leading to the Associate of Arts degree and that whatever the intended major, it includes the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Cmst 1101</td>
<td>Public Speaking</td>
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<td><strong>Engl 1101</strong></td>
<td>Composition I</td>
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<tr>
<td><strong>Engl 1102</strong></td>
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<tr>
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<tr>
<td><strong>Psci 2202</strong></td>
<td>State and local Government</td>
</tr>
<tr>
<td><strong>Musc 1105</strong></td>
<td>Music Appreciation</td>
</tr>
</tbody>
</table>

**Humanities Electives**
Choose one of the following: 3-4
NSCI 1100 Issues in the Environment 3
GEOG 1101 Introduction to Physical Geography 4
PSCI 2210 Environmental Politics 3
Free Electives*** 6-10
Biology Electives 3-4
Social Science Electives** 3
Total Credits 60

STSK 1110 – Freshman Seminar (1) credit required.

Fulfill a minimum of 4 credits from two of the three areas. HLTH 1101, CSCI 1102, or any Physical Education course.

* THTR 2210, HIST 1111 AND 1112, PHIL 2201 AND 2202 and proficiency in a second language are strongly recommended.
** SOC courses, PSYC 1101, 1150, 2221, ECON 2201, 2202, are strongly recommended.
***BUS 2201, 2202 and courses from HUM and SOC SCI areas listed above as well as foreign languages are strongly recommended.

Law Enforcement Transfer Pathway, A.S.

Location: Worthington

The Minnesota West Community and Technical College law enforcement A.S. program is a Minnesota Board of Peace Officers Standards and Training (POST) approved program and will qualify students for licensing as a law enforcement officer in the state of Minnesota upon completion of the A.S. degree. The curriculum has been designed to meet the learning objectives for Professional Peace Officer Education (PPOE) and Minnesota State Transfer Pathways for Criminal Justice – Law Enforcement.

The program offers small class sizes, individualized attention, and is focused on modern 21st century education and hands-on training that will prepare students for the demands of today’s law enforcement careers. The program instructors are experienced law enforcement individuals that have taught in the field and are recognized experts in the areas that they teach.

Students have the option to pursue certification after completing the summer skills program and begin their career upon completing the Associate of Science (A.S.) degree or continuing their education under the transfer pathways.

A separate application and admissions process is required for admission into the Law Enforcement Program.

CJS 1101 Introduction to Criminal Justice 3
LAWE 1120 Juvenile Justice 3
LAWE 1220 Law Enforcement and Community 3
LAWE 1230 Law Enforcement and Human Behaviors 3
LAWE 1240 Police Leadership - Ethics 3
LAWE 2400 Minnesota Statutes 4
LAWE 2410 Criminal Investigations 3
LAWE 2420 Criminal Procedures 3
LAWE 2350 Skills Certificate 12

General Education Requirements:
CMST 1101 Public Speaking 3
CMST 1103 Interpersonal Communication 3
ENGL 1101 Composition I 3
ENGL 2276 Composition: Technical Writing 3
MATH 1107 Concepts in Math 3
PHIL 2101 Ethics Theory and Practice 3

PSCI 2202 State and Local Government 3
PSYC 1101 Introduction to Psychology 4
PSYC 2221 Abnormal Psychology 3
SOC 1102 Social Problems 3
Total Credits 68
EMS 1110 Emergency Medical Responder 2
Recommended spring semester of year two
LAWE 2297 Law Enforcement Internship 1-3
Recommended spring semester of year two
Emergency Vehicle Operations Course 0
Recommended summer semester

Law Enforcement, A.A.S.

Location: Worthington

CMST 1101 Public Speaking 3
or
CMST 1103 Interpersonal Communication 3
ENGL 1101 Composition I 3
PHIL 2101 Ethics Theory and Practice 3
PSYC 1101 Introduction to Psychology 4
SOC 1102 Social Problems 3
EMS 1110 Emergency Medical Responder 2
CJS 1101 Introduction to Criminal Justice 3
LAWE 1120 Juvenile Justice 3
LAWE 1210 Communication Relations 4
LAWE 1220 Law Enforcement and Community 3
LAWE 1230 Law Enforcement and Human Behaviors 3
LAWE 1240 Police Leadership – Ethics 3
LAWE 2224 Police Report Writing 2
LAWE 2233 Firearms – Tactical Management 4
LAWE 2250 Accident Investigation – Radar/Radio/DUI Enforcement 4
LAWE 2300 Patrol Operations 4
LAWE 2310 Use of Force 4
LAWE 2400 Minnesota Statutes 4
LAWE 2410 Criminal Investigations 3
LAWE 2420 Criminal Procedures 3
LAWE 2500 Traffic Stops 2
LAWE 2510 Crime Scene Processing 2
Emergency Vehicle Operations Course (EVOC) 0
Total Credits 72

Law Enforcement Skills, Certificate

Location: Worthington

Provides students that have completed POST Boards approved Professional Peace Officers Education (PPOE) Academic Program with the skills requirements of the Professional Peace Officers Education Category Three: Performance of Peace Officer Duties and Tasks, and Category Four: Tools, Techniques and Tactics for licensing as a police officer. This program meets the transfer pathways requirements.

Prerequisite(s): Completion of the POST Boards approved Professional Peace Officers Education (PPOE) Academic Program or the approval of a POST approved PPOE Coordinator.

LAWE 2350 Skills Certificate 12
Total Credits 12
**Liberal Arts, A.A.**  
**Location: All Campuses and Online**  
The Liberal Arts Program leads to a Bachelor of Arts or Bachelor of Science degree. The following outline should be used as a guide for students seeking a broad and general foundation in the arts and sciences during the first two years. This program will provide the student an opportunity to test several occupational areas before making a final decision by acquainting him/her with all the basic fields of human knowledge. The program outlined will meet the requirements for the Associate of Arts Degree and Minnesota Transfer Curriculum. The Associate of Arts degree can be used to fulfill the freshman-sophomore general education requirements at all state universities and most four-year colleges and universities in other states. The degree is the basic graduation award toward which most students will work if they intend to transfer. It emphasizes a broad general education. A year of world languages may be required at some schools in some majors. In order to obtain an Associate of Arts degree, students must complete the following uniform requirements:

**FRESHMAN**  
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENGL 1101</td>
<td>Composition I</td>
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<tr>
<td>BIOL</td>
<td>Biology Lab Course</td>
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<tr>
<td>Humanities Electives*</td>
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<td>Free Electives</td>
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<tr>
<td>General Education Electives</td>
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<tr>
<td>ENGL 1102</td>
<td>Composition II</td>
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<td>or</td>
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<tr>
<td>ENGL 2243</td>
<td>Composition: Creative Writing</td>
<td>3</td>
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<td>or</td>
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<tr>
<td>ENGL 2276</td>
<td>Composition: Technical Writing</td>
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<td><strong>Total Credits for First Year</strong></td>
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**SOPHOMORE**  
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<thead>
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<th>Title</th>
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<tbody>
<tr>
<td>CMST 1101</td>
<td>Public Speaking</td>
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<tr>
<td>CHEM/PHYS</td>
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<td>3-5</td>
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<tr>
<td>MATH/PHIL 1200</td>
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<td>3-5</td>
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<tr>
<td>Social Science Electives*</td>
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<tr>
<td>Free Electives**</td>
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<td>6-10</td>
</tr>
<tr>
<td><strong>Total Credits for Second Year</strong></td>
<td><strong>32</strong></td>
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</tr>
</tbody>
</table>

**Total Credits** | **60** |

STSK 1110 – Freshman Seminar (1) credit required.

Fulfill a minimum of 4 credits from two of the three areas. HLTH 2220, CSCI 1102, or any Physical Education course.

* Students should choose courses that will meet humanities and social sciences requirements as well as the "Themes" of Gender Education; Diversity; Global Perspective; Ethical and Civic Responsibility; and the Environment to maximize their electives.

** Students may select courses in business, agriculture, human services, computer science, health, or physical education.

**Manufacturing Production Technician, Certificate**  
**Location: Granite Falls and Worthington**  
Introduces students to production technologies and information to start on a manufacturing career pathway. Students are given opportunities to enhance or develop important work-place knowledge and skills in the areas of safety, quality, manufacturing processes, and maintenance awareness.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMAE 1514</td>
<td>Safety Awareness</td>
<td>2</td>
</tr>
<tr>
<td>CMAE 1518</td>
<td>Manufacturing Process &amp; Production</td>
<td>2</td>
</tr>
<tr>
<td>CMAE 1522</td>
<td>Quality Practices</td>
<td>2</td>
</tr>
</tbody>
</table>

**Mass Communication Transfer Pathway, A.A.**  
**Location: Canby, Granite Falls, Jackson, Pipestone, Worthington, and Online**  
The purpose of a Minnesota State Transfer Pathway is to identify the courses a student at a two-year college completes as part of an associate degree. Transfer Pathway associate degrees (AA, AS, or AFA) are accepted at any Minnesota State university that offers a designated bachelor’s degree. The university guarantees that a student transfers into a designated bachelor’s program with junior standing and may complete the bachelor’s degree with an additional 60 credits.

This transfer pathway specifically ensures that a student who successfully completes a Mass Communication Transfer Pathway Associate of Arts (AA) can transfer the entire completed degree into a designated parallel baccalaureate degree program in Mass Communication at one of the seven Minnesota State universities (Minnesota State Transfer Pathways Template, 2017).

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 2240</td>
<td>Art History</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1100</td>
<td>Survey of Biological Science</td>
<td>3</td>
</tr>
<tr>
<td>CMST 1101</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>CMST 1150</td>
<td>Exploring Mass Media</td>
<td>3</td>
</tr>
<tr>
<td>CMST 1160</td>
<td>Basic Media Writing</td>
<td>3</td>
</tr>
<tr>
<td>CMST 1170</td>
<td>Public Relations</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1101</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1102</td>
<td>Composition II</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1105</td>
<td>Introduction to Literature</td>
<td>3</td>
</tr>
<tr>
<td>HLTH 1101</td>
<td>Personal Wellness</td>
<td>3</td>
</tr>
<tr>
<td>PHED 1140</td>
<td>Body Conditioning</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 1100</td>
<td>Survey of Physics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1107</td>
<td>Concepts in Math</td>
<td>3</td>
</tr>
<tr>
<td>NSCI 1100</td>
<td>Issues in the Environment</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 1201</td>
<td>American Government &amp; Politics</td>
<td>3</td>
</tr>
<tr>
<td>PSH 1150</td>
<td>Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 1105</td>
<td>Music Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1101</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1102</td>
<td>Social Problems</td>
<td>3</td>
</tr>
<tr>
<td>STSK 1110</td>
<td>Freshman Seminar</td>
<td>1</td>
</tr>
<tr>
<td>THTR 1101</td>
<td>Introduction to Theater</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>60</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Mathematics Transfer Pathway, A.A.**  
**Location: Canby, Granite Falls, Jackson, Pipestone, Worthington, and Online**  
The Mathematics Transfer Pathway, A.A. offers students a powerful option: the opportunity to complete an Associate of Arts degree with course credits that directly transfer to designated Mathematics 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.

*Universities within the Minnesota State system include Bemidji State University; Metropolitan State University; Minnesota State University, Mankato; Minnesota State University Moorhead; Southwest Minnesota State University;
University; St. Cloud State University; and Winona State University.

ART 1120 Art Appreciation 3
BIOL 1100 Survey of Biological Science 3
CSCI 1102 Computer Applications I 3
CMST 1101 Public Speaking 3
ENGL 1101 Composition I 3
ENGL 1102 Composition II 3
GEOG 1100 Introduction to Geography 3
MATH 1121 **Calculus I 4
MATH 1122 Calculus II 4
MATH 2201 Calculus III 4
MATH 2206 Ordinary Differential Equations 4
MUSC 1104 American Popular Music 3
NSCI 1100 Issues in the Environment 3
PHED 1126 Beginning Yoga 1
PHYS 1201 Fundamentals of Physics I 4
PSCI 2210 Environmental Politics 3
PSYC 1101 Introduction to Psychology 4
STSK 1110 Freshman Seminar 1

Total Credits 60

Mechatronics, A.A.S.
Location: Granite Falls and Worthington
Mechatronics integrates mechanical, electronics, fluid power, and computer control systems to create automated manufacturing production systems. The Mechatronics program prepares students for entry-level technician positions in the areas of robotics, industrial manufacturing and maintenance, fluid power, instrumentation, electronics, and process control automation.

MECH 1102 Mechanical Power Transmission 2
MECH 1103 Basic Hydraulics 3
MECH 1105 Hydraulics Lab 3
MECH 1110 Fluid Power Calculations 2
MECH 2110 Circuit Design & Control Theory 3
MECH 2136 Programmable Logic Controllers 3
MECH 2141 Proportional & Servo Control Theory 2
MECH 1125 Electrical Controls I 2
MECH 1135 Electrical Controls II 3
MECH 2120 Automated Systems 5
MECH 2125 Motion Control 3
MECH 2165 Instrumentation & Control Lab 1
RNEW 1160 Instrumentation & Control 3

* General Education 16

Total Credits 60

Medical Coding Specialist, Diploma
Location: Canby, Granite Falls, Jackson, Pipestone, Worthington and Online
Medical Coding Specialists work closely with other healthcare professionals in coding diagnosis and procedures on patient medical records, analysing medical records for completeness of documentation, working with insurance companies, and reimbursement procedures.

Prior knowledge of the basic elements of word processing, spreadsheets, databases and document integration, along with the basic concepts of graphics, telecommunications, and the Internet are recommended.

(Recommend taking this degree with the Medical Secretary Diploma or the Medical Secretary A.A.S.)

ADSM 1120 Medical Office Procedures 4
ADSM 1200 Introduction to Medical Coding, Billing & Insurance 3
ADSM 1210 CPT/HCPCS Coding 3
ADSM 1220 Diagnosis Coding 3
ADSM 1230 Procedure Coding 3
ADSM 1240 Introduction to Health Records 3
ADSM 1250 Advanced Coding 3
ADSM 2200 Board Review 1
HC 1151 Body Structure & Function 3
HC 1180 Medical Terminology in Healthcare 2
HC 2120 Disease Conditions 3
MEDA 2135 Pharmacology 3

Total Credits 34
## Medical Assistant, A.A.S.

**Location: Luverne**

Medical Assistants help physicians examine and treat patients, as well as perform routine tasks needed to keep an office running efficiently. In small practices, medical assistants handle both clerical and clinical duties and report directly to the office manager or physician. Those employed in large practices tend to specialize in a particular area under the supervision of department administrators. Clerical duties may include patient scheduling, receptionist duties, medical record management, office correspondence, medical insurance procedures, and management of office accounts, fees, and collections. Clinical duties may include interviewing patients, patient education, taking vital signs, preparing patients for examination and assisting the physician during exams, performing routine laboratory testing and electrocardiography, sterilizing instruments, and administering medications. Students enrolling in the medical assistant program must possess a high school diploma or GED. Prior to participating in the clinical practicum, students must submit health information and evidence of valid CPR/First Aid certification. Successful completion of all required program courses and general education courses with a grade of "C" or better is necessary to graduate.

Students in the medical assistant program will undergo a background study as required by Minnesota law. Graduates of the Minnesota West Medical Assistant program are eligible to earn certification by taking the American Association of Medical Assistant's Certification Exam.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ADSM 1120</td>
<td>Medical Office Procedures</td>
<td>4</td>
</tr>
<tr>
<td>ADSM 1200</td>
<td>Introduction to Medical Coding, Billing and Insurance</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 2245</td>
<td>Medical Terminology</td>
<td>2</td>
</tr>
<tr>
<td>or</td>
<td>Medical Terminology in Healthcare</td>
<td>2</td>
</tr>
<tr>
<td>HC 1180</td>
<td>Medical Terminology in Healthcare</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 1110</td>
<td>Principles of Biology I</td>
<td>4</td>
</tr>
<tr>
<td>or</td>
<td>Human Biology</td>
<td>3</td>
</tr>
<tr>
<td>EMS 1112</td>
<td>AHA CPR Healthcare Provider, AED First Aid Certification</td>
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</tr>
<tr>
<td>ENGL 1101</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>HC 1100</td>
<td>Nutrition</td>
<td>1</td>
</tr>
<tr>
<td>HC 1151</td>
<td>Body Structure and Function</td>
<td>3</td>
</tr>
<tr>
<td>HC 1290</td>
<td>Health Care &amp; Society</td>
<td>1</td>
</tr>
<tr>
<td>HC 2120</td>
<td>Disease Conditions</td>
<td>3</td>
</tr>
<tr>
<td>MDLT 1100</td>
<td>Introduction to Laboratory Science</td>
<td>3</td>
</tr>
<tr>
<td>MEDA 1105</td>
<td>Clinical Procedures I</td>
<td>3</td>
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<tr>
<td>MEDA 1135</td>
<td>Laboratory Skills</td>
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<td>MEDA 2110</td>
<td>Clinical Procedures II</td>
<td>4</td>
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<tr>
<td>MEDA 2135</td>
<td>Pharmacology</td>
<td>3</td>
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<tr>
<td>MEDA 2139</td>
<td>Professional Integration</td>
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<td>MEDA 2140</td>
<td>Medical Assistant Practicum</td>
<td>6</td>
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<tr>
<td>STSK 0091</td>
<td>Basic Math Skills (if needed)</td>
<td>1</td>
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<tr>
<td></td>
<td><strong>Total Credits</strong></td>
<td><strong>60</strong></td>
</tr>
</tbody>
</table>

## Medical Laboratory Technician, A.A.S.

**Location: Granite Falls and Luverne**

The Medical Laboratory Technician (MLT) program at Minnesota West is designed to prepare students for employment in the medical, clinical, research and public health laboratories. A MLT collects and/or receives patient specimens and performs general laboratory tests to aid physicians in the diagnosis and treatment of disease. The MLT program combines academic general education with a concentration in the basic sciences, didactic studies in medical laboratory science and clinical training (externship) in a hospital laboratory. It is recommended that students enrolling in the Medical Laboratory Technician program have a science and math background. Prior to participating in the clinical externship, student must submit health vaccination and undergo a background study as required by Minnesota law. Successful completion of all required course with a grade of C (75%) or better is necessary to graduate. Student must test into MATH 0098 level.

Accredited by: The National Accrediting Agency for Clinical Laboratory Science (NAACLS); 8410 West Bryn Mawr Avenue – Suite 670; Chicago, IL 60631: (773) 714-8880

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1115</td>
<td>Human Biology</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1150</td>
<td>Survey of Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 1101</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>Humanities or Social/Behavioral/Social Science Electives</td>
<td>5</td>
</tr>
<tr>
<td>HC 1180</td>
<td>Medical Terminology in Healthcare</td>
<td>2</td>
</tr>
<tr>
<td>HC 1290</td>
<td>Health Care &amp; Society</td>
<td>1</td>
</tr>
<tr>
<td>MDLT 1100</td>
<td>Introduction to Laboratory Science</td>
<td>3</td>
</tr>
<tr>
<td>MDLT 1105</td>
<td>Medical Microbiology I</td>
<td>3</td>
</tr>
<tr>
<td>MDLT 1110</td>
<td>Laboratory Math Calculations</td>
<td>2</td>
</tr>
<tr>
<td>MDLT 1115</td>
<td>Biological Fluids</td>
<td>3</td>
</tr>
<tr>
<td>MDLT 1120</td>
<td>Immunology</td>
<td>3</td>
</tr>
<tr>
<td>MDLT 1125</td>
<td>Clinical Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>MDLT 1130</td>
<td>Hematology I</td>
<td>3</td>
</tr>
<tr>
<td>MDLT 2101</td>
<td>Medical Microbiology II</td>
<td>3</td>
</tr>
<tr>
<td>MDLT 2106</td>
<td>Immunohematology</td>
<td>3</td>
</tr>
<tr>
<td>MDLT 2110</td>
<td>Clinical Chemistry II</td>
<td>2</td>
</tr>
<tr>
<td>MDLT 2120</td>
<td>Hematology II</td>
<td>3</td>
</tr>
<tr>
<td>MDLT 2310</td>
<td>Clinical: Urinalysis/BIO Fluids</td>
<td>2</td>
</tr>
<tr>
<td>MDLT 2320</td>
<td>Clinical: Hematology &amp; Hemostasis</td>
<td>4</td>
</tr>
<tr>
<td>MDLT 2330</td>
<td>Clinical: Medical Microbiology</td>
<td>2</td>
</tr>
<tr>
<td>MDLT 2340</td>
<td>Clinical: Clinical Chemistry &amp; Immunology</td>
<td>3</td>
</tr>
</tbody>
</table>

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Source: [Minnesota West Community and Technical College](https://www.minnesotawest.edu)
**Total Credits 39**

the ATI Testing Program.

Notes: Practical nursing students are required to participate in the Practical Nursing Program, students will receive the Practical Nursing Diploma and be eligible to take the NCLEX-PN examination. Students may enter the workforce at this point or continue to take the Associate Degree in Nursing program (after graduation students are eligible to take the RN licensing examination).

Prerequisites: Courses must be taken prior to starting the nursing program: Nursing Assistant (NA) course (from a state approved NA course and location), BIOL 2201 Human Anatomy, EMS 1112 or an equivalent American Heart Association (AHA) Basic Life Support (BLS) CPR course with an in person skills test-out certification. Students must remain CPR certified through the completion of the program.

The following course sequence is required for completion of this program. Only students who have been accepted into the Nursing program are allowed to take the NURS courses. The non-nursing course, PSYC 1150 Developmental Psychology, may be taken either before or during the fall term. All other prerequisite courses must be taken before the beginning of the program. Recommended courses to prepare for the Practical Nursing Program are: MATH 1111 College Algebra, BIOL 2245 Medical Terminology, and CSCI 1102 Computer Applications I.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MDLT 2350</td>
<td>Clinical: Immunohematology</td>
<td>4</td>
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<tr>
<td>MDLT 2360</td>
<td>Capstone</td>
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<tr>
<td>MDLT 2370</td>
<td>Clinicals: SIM Medical Microbiology</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits</strong></td>
<td><strong>67</strong></td>
</tr>
</tbody>
</table>

**Nursing – Practical Nursing, Diploma**

**Location: Pipestone, Worthington and Distance**

Practical Nursing is designed to create upward mobility nursing education opportunities. After successful completion of the Practical Nursing Program, students will receive the Practical Nursing Diploma and be eligible to take the NCLEX-PN examination. Students may enter the workforce at this point or continue to take the Associate Degree in Nursing program (after graduation students are eligible to take the RN licensing examination).

The following course sequence is required for completion of this program. Only students who have been accepted into the Nursing program are allowed to take the NURS courses. The non-nursing course, PSYC 1150 Developmental Psychology, may be taken either before or during the fall term. All other prerequisite courses must be taken before the beginning of the program. Recommended courses to prepare for the Practical Nursing Program are: MATH 1111 College Algebra, BIOL 2245 Medical Terminology, and CSCI 1102 Computer Applications I.

<table>
<thead>
<tr>
<th>Prerequisites</th>
<th>BIOL 2201 Human Anatomy</th>
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<tbody>
<tr>
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<tr>
<td>PSYC 1150</td>
<td>Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>NURS 1100</td>
<td>Principles &amp; Practices of Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 1120</td>
<td>Nursing of the Adult I</td>
<td>3</td>
</tr>
<tr>
<td>NURS 1130</td>
<td>Pharmacology I</td>
<td>3</td>
</tr>
<tr>
<td>NURS 1140</td>
<td>Nursing Skills Lab</td>
<td>2</td>
</tr>
<tr>
<td>NURS 1180</td>
<td>*Clinical Applications I</td>
<td>2</td>
</tr>
<tr>
<td>NURS 1220</td>
<td>Nursing of the Adult II</td>
<td>3</td>
</tr>
<tr>
<td>NURS 1230</td>
<td>Pharmacology II</td>
<td>3</td>
</tr>
<tr>
<td>NURS 1250</td>
<td>Family Nursing</td>
<td>4</td>
</tr>
<tr>
<td>NURS 1260</td>
<td>Mental Health Nursing</td>
<td>1</td>
</tr>
<tr>
<td>NURS 1280</td>
<td>*Clinical Application II</td>
<td>6</td>
</tr>
<tr>
<td>NURS 1295</td>
<td>PN Integration</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits</strong></td>
<td><strong>39</strong></td>
</tr>
</tbody>
</table>

Notes: Practical nursing students are required to participate in the ATI Testing Program.

Required end of program assessment will include:
- Completion of an ATI Integrated predictor exam prior to graduation
- Completion of an ATI Review course prior to authorization to test for NCLEX-PN exam.

*Nursing A.S. – Registered Nurse**

**Location: Worthington and Online**

Nursing A.S. is designed for Licensed Practical Nurses who wish to obtain the Associate of Science Nursing Degree. It is an entrance point for mobility students who have graduated from another nursing program or have completed Minnesota West's Practical Nursing Program. After successful completion of the Nursing A.S. Program, students are awarded the Associate of Science (AS) Nursing Degree and are then eligible to take the NCLEX-RN examination. At this point, students are also eligible to articulate to a BSN/BAN program in the Minnesota State system.

Admission requirements include: a minimum decision score of 80 on the NLN exam (required for licensed LPN’s who have been practicing as an LPN for more than one year or graduated from another nursing program), a grade of C or higher in all required coursework, a minimum GPA of 2.5, and completion of the courses described below.

**Note:** Associate of Science program admission criteria will be changing for 2015-2016 AS program applicants.

NURS 2000, Transition into Professional Nursing Education (1 credit), is required prior to entrance into Fall Semester nursing classes for students who have graduated from another nursing program or are returning to Minnesota West's Nursing Program.

LPN Licensure is required prior to taking any NURS courses in the A.S. Nursing Program.

The following course sequence is required for completion of this program. Only students who have been accepted into the Nursing program are allowed to take the nursing courses. The non-NURS courses shown may be taken either before or during the program.

<table>
<thead>
<tr>
<th>Prerequisites</th>
<th>BIOL 2201 Human Anatomy</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Prerequisites</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 1150</td>
<td>Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>NURS 1100</td>
<td>Principles &amp; Practices of Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 1120</td>
<td>Nursing of the Adult I</td>
<td>3</td>
</tr>
<tr>
<td>NURS 1130</td>
<td>Pharmacology I</td>
<td>3</td>
</tr>
<tr>
<td>NURS 1140</td>
<td>Nursing Skills Lab</td>
<td>2</td>
</tr>
<tr>
<td>NURS 1180</td>
<td>*Clinical Applications I</td>
<td>2</td>
</tr>
<tr>
<td>NURS 1220</td>
<td>Nursing of the Adult II</td>
<td>3</td>
</tr>
<tr>
<td>NURS 1230</td>
<td>Pharmacology II</td>
<td>3</td>
</tr>
<tr>
<td>NURS 1250</td>
<td>Family Nursing</td>
<td>4</td>
</tr>
<tr>
<td>NURS 1260</td>
<td>Mental Health Nursing</td>
<td>1</td>
</tr>
<tr>
<td>NURS 1280</td>
<td>*Clinical Application II</td>
<td>6</td>
</tr>
<tr>
<td>NURS 1295</td>
<td>PN Integration</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits</strong></td>
<td><strong>39</strong></td>
</tr>
</tbody>
</table>

Notes: Practical nursing students are required to participate in the Practical Nursing Program.

Required end of program assessment will include:
- Completion of an ATI Integrated predictor exam prior to graduation
- Completion of an ATI Review course prior to authorization to test for NCLEX-PN exam.

Nursing A.S. – Registered Nurse

**Location: Worthington and Online**

Nursing A.S. is designed for Licensed Practical Nurses who wish to obtain the Associate of Science Nursing Degree. It is an entrance point for mobility students who have graduated from another nursing program or have completed Minnesota West's Practical Nursing Program. After successful completion of the Nursing A.S. Program, students are awarded the Associate of Science (AS) Nursing Degree and are then eligible to take the NCLEX-RN examination. At this point, students are also eligible to articulate to a BSN/BAN program in the Minnesota State system.

Admission requirements include: a minimum decision score of 80 on the NLN exam (required for licensed LPN’s who have been practicing as an LPN for more than one year or graduated from another nursing program), a grade of C or higher in all required coursework, a minimum GPA of 2.5, and completion of the courses described below.

**Note:** Associate of Science program admission criteria will be changing for 2015-2016 AS program applicants.

NURS 2000, Transition into Professional Nursing Education (1 credit), is required prior to entrance into Fall Semester nursing classes for students who have graduated from another nursing program or are returning to Minnesota West's Nursing Program.

LPN Licensure is required prior to taking any NURS courses in the A.S. Nursing Program.

The following course sequence is required for completion of this program. Only students who have been accepted into the Nursing program are allowed to take the nursing courses. The non-NURS courses shown may be taken either before or during the program.

<table>
<thead>
<tr>
<th>Prerequisites</th>
<th>BIOL 2201 Human Anatomy</th>
<th>4</th>
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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>PSYC 1150</td>
<td>Developmental Psychology</td>
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</tr>
<tr>
<td>NURS 1100</td>
<td>Principles &amp; Practices of Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 1120</td>
<td>Nursing of the Adult I</td>
<td>3</td>
</tr>
<tr>
<td>NURS 1130</td>
<td>Pharmacology I</td>
<td>3</td>
</tr>
<tr>
<td>NURS 1140</td>
<td>Nursing Skills Lab</td>
<td>2</td>
</tr>
<tr>
<td>NURS 1180</td>
<td>*Clinical Applications I</td>
<td>2</td>
</tr>
<tr>
<td>NURS 1220</td>
<td>Nursing of the Adult II</td>
<td>3</td>
</tr>
<tr>
<td>NURS 1230</td>
<td>Pharmacology II</td>
<td>3</td>
</tr>
<tr>
<td>NURS 1250</td>
<td>Family Nursing</td>
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<tr>
<td>NURS 1260</td>
<td>Mental Health Nursing</td>
<td>1</td>
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<td>NURS 1280</td>
<td>*Clinical Application II</td>
<td>6</td>
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<td>NURS 1295</td>
<td>PN Integration</td>
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<tr>
<td></td>
<td><strong>Total Credits</strong></td>
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</tr>
</tbody>
</table>

Notes: Practical nursing students are required to participate in the Practical Nursing Program.

Required end of program assessment will include:
- Completion of an ATI Integrated predictor exam prior to graduation
- Completion of an ATI Review course prior to authorization to test for NCLEX-PN exam.

*Clinical experiences are a part of the program and are done in healthcare facilities located in southwest Minnesota. On-campus and online learning students need to be prepared to travel to assigned clinical sites as part of the program.
NURS 2145 Principles of Professional Nursing I 2
NURS 2150 Skills Lab 2
NURS 2190 Acute Care Clinical I 2
NURS 2225 Patient Centered Care II 3
NURS 2245 Health Promotion and the Role of the Professional Nurse 2
NURS 2255 Pharmacology: A Pathophysiologic Approach II 2
NURS 2260 Family-Centered Care 3
NURS 2275 Nursing Preceptorship 1
NURS 2290 Acute Care Clinical II 2
NURS 2390 Clinical in Alternate Settings 2
Total Credits 64

Notes:
Recommended electives include: ENGL 1102, humanities, social sciences (HIST 1101, HIST 1102, geography, political science or economics), chemistry, BIOL 1115, PSYC 1101, college math or statistics.
Humanities: choose from the areas of art, literature, theatre, HIST 1111, HIST 1112, music, or any course with HUM designator.

AS nursing students are required to participate in the ATI Testing Program.
Required end of program assessment will include:
- Completion of a ATI Integrated predictor exam prior to graduation
- Completion of a ATI Review course prior to authorization to test for NCLEX-RN exam.

**Clinical experiences are a part of the program and are completed in healthcare facilities located in southwest Minnesota. On-campus and distance learning students need to be prepared to travel to assigned clinical sites as a program requirement.

Occupational Therapy, (pre-occupational therapy) A.A.
Location: Worthington
Occupational therapy is treatment by means of mental and physical activities, including arts and crafts. The ultimate objective of the occupational therapist is to help individuals restore themselves to their highest level of independence through improvement of their physical, emotional and social well-being. You may complete the Associate of Arts or the Associate of Science degree depending on the transfer institution. The program listed meets MnTC and is an Associate of Arts program.

ART 1118 Foundations of Art 3D 3
BIOL 1110 Principles of Biology I 4
BIOL 2201 Human Anatomy 4
BIOL 2202 Human Physiology 4
CHEM 1101 General Chemistry I 5
CMST 1101 Public Speaking 3
ENGL 1101 Composition I 3
ENGL 1102 Composition II 3
GEOG 1101 Introduction to Physical Geography 4
MATH 1111 College Algebra 3
PHIL 2201 Introduction to Ethical Theory 1
PHIL 2222 Medical Ethics 1
PHYS 1201 Fundamentals of Physics I 4
PSYC 1101 Introduction to Psychology 4
PSYC 1150 Developmental Psychology 3
SOC 1101 Introduction to Sociology 3
THTR 1101 Introduction to Theater 3

NSCI 1100 Issues in the Environment 3
or
PSCI 2210 Environmental Politics 3
Social Science Course* 3
Total Credits 60

STSK 1110 – Freshman Seminar (1) credit required.
Fulfill a minimum of 4 credits from two of the three areas. HLTH 1101, CSCI 1102, or any Physical Education course.

* If either PSCI 2210 or GEOG 1101 is taken to meet Areas 5 and 10, only three credits of Social Science electives are required.

Occupational Therapy Assistant, A.A.S.
Location: Worthington
Occupational Therapy provides services to people of all ages whose lives have been affected by physical injury, illness, and age related problems, mental health, developmental or learning abilities. Occupational Therapy Assistants work under the guidance and supervision of an Occupational Therapist to provide interventions, adaptions to the environment, or education/instruction outlined in the treatment plan. The treatment plan assists individuals to gain or regain the ability to perform daily activities including self-care, social participation, work, play, and leisure activities. OTA practice areas may include the following: children with disabilities, individuals suffering from depression, adults suffering from brain trauma, surgery, disease, and injury; and older adults suffering from Parkinson, Dementia, or home/workplace solutions. The OTA program includes general and technical courses and supervised fieldwork experiences.

BIOL 2201 Human Anatomy 4
BIOL 2202 Human Physiology 4
ENGL 1101 Composition I 3
HC 1180 Medical Terminology 2
OTAC 1100 Introduction to OTA 2
OTAC 1105 Clinical Conditions and Abilities 2
OTAC 1110 Foundational Skills for the OTA 4
OTAC 1115 Scholarly Writing in OTA I 2
OTAC 1200 Movement of Operations 3
OTAC 1210 Pediatric Applications 4
OTAC 1215 Scholarly Writing in OTA II 2
OTAC 1220 Rural & Community-Based OT 4
OTAC 1230 Level I Fieldwork A 1
OTAC 1240 Documentation for the OTA 1
OTAC 2100 Mental Health Across the Lifespan 3
OTAC 2110 Adult Applications 4
OTAC 2115 Scholarly Writing in OTA III 2
OTAC 2120 Geriatric Applications 4
OTAC 2130 Level I Fieldwork B 1
OTAC 2140 Professional Seminar 2
OTAC 2230 Level II Fieldwork A 6
OTAC 2240 level II Fieldwork B 6
PSYC 1150 Developmental Psychology 3
PSYC 2221 Abnormal Psychology 3
Total Credits 72
Office Management, A.S.
Locations: Canby, Granite Falls, Jackson, Pipestone, Worthington, and Online

The Office Management program is designed to provide students the option to enter business management related job market on completion or optionally transfer to Southwest Minnesota State University at Marshall, MN to complete the Bachelor of Science in the Business Management degree.

An Office Manager's duties may include business communications, word processing and data entry, office machines operations and maintenance, office management, customer service, office accounting, records management, and supervision of office staff.

Biology (BIOL)
- BIOL 1110 Principles of Biology 4
- CHEM 1150 Survey of Chemistry 4
- CSCI 1102 Computer Applications I 3
- ACCT 1120 Spreadsheet Concepts and Applications 2
- ACCT 1122 Database Concepts and Applications 2
- ADSA 1111 Office Management 3
- ADSA 1122 Word Processing I 2
- ADSA 1123 Word Processing II 2
- ADSA 1126 Advanced Office Applications 2
- ADSA 1145 Supervisory Management 3
- ADSA 1176 Business Communications 3
- BUS 2242 Business Communications 3
- BUS 2201 Principles of Accounting I 4
- BUS 2202 Principles of Accounting II 4
- CMST 1101 Public Speaking 3
- CMST 1103 Interpersonal Communication 3
- ENGL 1101 Composition I 3
- ECON 2201 Principles of Macroeconomics 3
- ECON 2202 Principles of Microeconomics 3
- ENGL 2276 Composition: Technical Writing 3
- MATH 1105 Introduction to Probability & Statistics 4
- PHIL 2101 Ethical Theory & Practices 3
- PSYC 1101 Introduction to Psychology 4

Total Credits 60

Phlebotomy, Certificate
Location: Luverne

The curriculum prepares the student for employment as a Phlebotomist/Laboratory Assistant in a hospital, laboratory, or clinic. The training is designed to prepare students to collect specimens, perform venipunctures and dermal punctures, prepare and transport specimens, and perform laboratory computer operations. Full-time students can complete the academic portions of the program in two semesters. The clinical portion of the program is by arrangement, and completion may vary by student. Successful completion of all required program courses and general education courses with a grade of C (75%) or better is necessary to graduate. Enrollment notes: A physical exam; hepatitis immunization; entrance assessment; and a copy of high school transcript, diploma or GED are all needed for enrollment. Students in the Phlebotomy Technician program will undergo a background study as required by Minnesota law.

BIOL 2245 Medical Terminology 2
HC 1180 Medical Terminology-Healthcare 2
HC 1151 Body Structure and Function 3
HC 1290 Healthcare and Society 1

MDLT 1100 Introduction to Laboratory Science 3
MDLT 2200 Phlebotomy Externship 4
MEDA 1135 Laboratory Skills 3

Total Credits 16

Optometry (pre-optometry), A.S.
Location: Worthington

Students planning to pursue the pre-optometry program at Minnesota West-Worthington campus are advised to determine quite early in their program where they plan to complete the degree requirements. The lower division courses are similar for pre-optometry programs, but in most cases the applicant must complete a prescribed set of courses if he/she is not accepted for study. These courses are available at Minnesota West-Worthington campus for the pre-optometry major. We will assist you in gaining acceptance for further training. Students planning to study as optometrists are expected to perform in the "B" range and above. The following program is patterned after the University of Minnesota. Students are encouraged to complete the Associate of Arts degree or the Minnesota Transfer Curriculum requirements. THIS WILL TAKE ONE ADDITIONAL SEMESTER. To complete the Associate of Arts degree and MnTC requirements, students should add: five credits of HUM courses; five credits of SOC SCI courses; two-nine credits to meet Areas 8, 9, 10 (if not met through HUM or SOC SCI courses); three credits of PSYC 1150; This is a total of 15-26 additional credits

FRESHMAN
- BIOL 1110 Principles of Biology I 4
- CHEM 1101 General Chemistry I 4
- CHEM 1102 General Chemistry II 4
- CMST 1101 Public Speaking 3
- ENGL 1101 Composition I 3
- ENGL 1102 Composition II 3
- MATH 1121 **Calculus I 4

*Humanities Electives 3

SOPHOMORE
- BIOL 2201 Human Anatomy 4
- BIOL 2202 Human Physiology 4
- BIOL 2270 Microbiology 4
- CHEM 2201 Organic Chemistry I 5
- PHYS 1201 Fundamentals of Physics I 4
- PSYC 1101 Introduction to Psychology 4

**Social Science Electives 3

Total Credits 60

** Depends on high school preparation and placement. Check with an advisor about the requirements at transfer institutions. Proficiency in a second language is highly desired.

Pharmacy Technology, Diploma
Location: Canby, Granite Falls, Jackson, Pipestone, Worthington, and Online

The Pharmacy Technician Diploma Program prepares graduates for entry level careers working under the direction of a trained and licensed Pharmacist in retail, clinic or hospital settings. A pharmacy technician assists the pharmacist in all aspects of prescription processing, customer services, and administrative duties in accordance with the standard written procedures and guidelines under the supervision of a professional pharmacist. Pharmacy technicians will perform different duties depending on the practice setting in which they are employed. In general, a
pharmacy technician may perform the following duties: receive and verify prescriptions, and prepare medications for customers/patients through mixing, counting and labeling prescriptions. Pharmacy technicians also consult with doctors, nurses, and other healthcare professionals regarding patient information, allergies, and lab results to determine optimal patient care. This program prepares graduates for the Pharmacy Technician Certification Board exam which is necessary for certification.

**Pharmacy Technician, Certificate**

**Location: Online**

The Pharmacy Technician program prepares pharmacy technicians to assist licensed pharmacists dispense prescription medications in pharmacies. The Pharmacy Technician training program will prepare students to work in a pharmacy and be eligible to take a certification examination at the age of 18. An externship provides the student with hands-on experience as well as providing the necessary skills to pass the certification exam to be successful in the industry.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HC 1180</td>
<td>Medical Terminology in Healthcare</td>
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<tr>
<td>BIOL 2245</td>
<td>Medical Terminology</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 1151</td>
<td>Body Structure &amp; Function</td>
<td>3</td>
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<tr>
<td>HC 1290</td>
<td>Health Care and Society</td>
<td>1</td>
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<tr>
<td>PHRM 1100</td>
<td>Pharmacy Principles and Practices I</td>
<td>5</td>
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<tr>
<td>PHRM 1115</td>
<td>Pharmacology for Technicians I</td>
<td>4</td>
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<tr>
<td>PHRM 2120</td>
<td>Disease Conditions</td>
<td>3</td>
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<tr>
<td>PHRM 1105</td>
<td>Pharmacy Principles and Practices II</td>
<td>5</td>
</tr>
<tr>
<td>PHRM 1110</td>
<td>Pharmaceutical Calculations</td>
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<td>PHRM 1120</td>
<td>Pharmacology for Technicians II</td>
<td>3</td>
</tr>
<tr>
<td>PHRM 1130</td>
<td>Hospital Externship</td>
<td>3</td>
</tr>
<tr>
<td>PHRM 1135</td>
<td>Retail Externship</td>
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<tr>
<td><strong>Total Credits</strong></td>
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</table>

**Pharmacy (pre-pharmacy), A.S.**

**Location: Worthington**

The Colleges of Pharmacy at the University of Minnesota, South Dakota State University, and North Dakota State University have Pharm-D (Doctor of Pharmacy) degrees. The completion of two years of college work is required for admission to the Colleges in the university. The following courses offered at Minnesota West meet the requirements for entrance to the College of Pharmacy at the University of Minnesota. The program can be adjusted to meet the requirements at other Colleges of Pharmacy. This meets the Associate of Science degree requirements. Students are encouraged to complete the Associate of Arts degree and the MnTC if they plan to attend the University of Minnesota. A year of college-level world language or second language proficiency may be required by some schools and is highly desired when seeking employment.

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
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<tr>
<td>BIOL 1110</td>
<td>Principles of Biology I</td>
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<tr>
<td>BIOL 2220</td>
<td>Animal Biology</td>
<td>4</td>
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<tr>
<td>BIOL 2201</td>
<td>Human Anatomy</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 2202</td>
<td>Human Physiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 2270</td>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1101</td>
<td>General Chemistry I</td>
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<tr>
<td>CHEM 1102</td>
<td>General Chemistry II</td>
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<td>CHEM 2201</td>
<td>Organic Chemistry I</td>
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<tr>
<td>CMST 1101</td>
<td>Public Speaking</td>
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<tr>
<td>ECON 2201</td>
<td>Principles of Macroeconomics</td>
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<td>Principles of Microeconomics</td>
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<td>ENGL 1102</td>
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<tr>
<td>MATH 1113</td>
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<td>&quot;Calculus I</td>
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<td>Fundamentals of Physics I</td>
<td>4</td>
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<td>PHYS 1202</td>
<td>Fundamentals of Physics II</td>
<td>4</td>
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<tr>
<td>PSYC 1101</td>
<td>Introduction to Psychology</td>
<td>4</td>
</tr>
<tr>
<td>SOC 1101</td>
<td>Introduction to Sociology</td>
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</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td><strong>60</strong></td>
</tr>
</tbody>
</table>

* Depends on transfer institution

**Minimums only**

*** Depends on high school preparation and placement.

To complete the Associate of Arts degree in one additional semester, students should take: five credits HUM; three credits HLTH 1101; three credits PSCI 2210, NSCI 1100 or GEOG 1101; one credit PHED Activity (if not previously completed); three credits SOC SCI; four-six credits to meet MnTC Areas 8 and 9 if not previously met by HUM/SOC SCI courses. Three credits of HLTH 1110 is strongly recommended. This totals 11-24 additional credits.

*NOTE: The transfer institution of all applicants requires the Pharmacy College Admission Test (PCAT). Applications for the PCAT are available in the counseling office.*

**Physical Education, A.A.**

**Location: Worthington**

The lower division courses for these three areas of concentration are basically the same. Therefore, we have listed them under a common heading in the program of study. The student is advised to check with Minnesota West-Worthington campus counseling staff for the exact requirements for the four-year college he/she intends to attend.

Recreation/Parks Administration majors may specialize in one of several areas of concentration. The area desired should be determined while in attendance at Minnesota West in order to meet the transfer requirements. Additional credits in business courses may be in order for some receiving colleges. The curriculum requirements below meet the MnTC requirements.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL 2201</td>
<td>Human Anatomy</td>
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<tr>
<td>BIOL 2202</td>
<td>Human Physiology</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 1101</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>PHED 1101</td>
<td>Foundations of Health, Physical Education, Exercise Science, and Sport</td>
<td>3</td>
</tr>
<tr>
<td>PHED 2101</td>
<td>History of Physical Education &amp; Sports</td>
<td>2</td>
</tr>
<tr>
<td>HLTH 2220</td>
<td>Drugs, Society and the Individual</td>
<td>3</td>
</tr>
<tr>
<td>NSCI 1100</td>
<td>Issues in the Environment</td>
<td>3</td>
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<tr>
<td>PSCI 2210</td>
<td>Environmental Politics</td>
<td>3</td>
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<tr>
<td>GEOG 1101</td>
<td>Introduction to Physical Geography</td>
<td>4</td>
</tr>
</tbody>
</table>
ENGL 1102 Composition II 3  
PHED 1110 Care & Prevention of Athletic Injuries I 3  
Biology Elective 3  
Humanities Electives 9  
Math Elective 3  
Physics Electives 3  
Social Science Electives** 9  
**Total Credits 60

STSK 1110 – Freshman Seminar (1) credit required.

Fulfill a minimum of 4 credits from two of the three areas. HLTH 1101, CSCI 1102, or any Physical Education course.

* If either PSCI 2210 or GEOG 1101 is taken to meet Areas 5 and 10, deduct three credits from SOC SCI requirements.

**Plumbing Technology, Diploma**  
**Location: Pipestone**  
The Plumbing Technology degree provides graduates with a strong foundation and real-life experience in the construction and maintenance of plumbing systems. Plumbers are in high demand and are an integral part of public health and safety. Students will learn installation of fixtures, pipe threading, and plumbing tools/equipment. The students will explore different drainage systems and water supply. There will be a strong emphasis on the MN Plumbing Code. Students will become familiar with different types of copper pipe, fittings, tubing and PEX water distribution piping. The application of math skills will be applied as well as learning to read blue prints. Graduates will be ready to enter the field as apprentices.

PLMB 1101 Introduction to Plumbing 3  
PLMB 1102 Plumbing Installation and Fixtures I 4  
PLMB 1112 Code I 2  
PLMB 1122 Print Reading I 1  
PLMB 1132 Plumbing Repair and Service 3  
PLMB 1142 Materials and Fittings 2  
PLMB 1152 Plumbing Installation and Fixtures II 5  
PLMB 1162 Code II 2  
PLMB 1172 Print Reading II 2  
PLMB 1180 Water Piping and Sizing 2  
PLMB 1185 Drainage, Waste, and Venting 4  
PLMB 1190 Plumbing Technology Internship 2  
**Total Credits 32

**Heating Technology, Certificate**  
**Location: Pipestone**

PLHT 1115 Print Reading 1  
PLHT 1120 Heating & Air Conditioning Electrical Controls and Circuits 3  
PLHT 1125 Heating & Air Conditioning Fundamentals 3  
PLHT 1145 Heating & Air Conditioning Installation and Services 5  
PLHT 1150 Sheet Metal Technology 2  
**Total Credits 14

**Powerline, Diploma**  
**Location: Pipestone**

AUTO 1194 Commercial Driver License Learner Permit Preparation 1  
ELCO 1100 Electrical Circuits Fundamentals 3  
*ELEC 1235 Applied Electrical Calculations 2  
ELPL 1100 Pole Climbing & Equip. Operation 3  
ELPL 1102 Pole Climbing & Equip. Operations II 4  
ELPL 1106 Electric Distribution of Powerlines I 4  
ELPL 1116 Electric Distribution of Powerlines II 4  
ELPL 1121 Electric Distribution of Powerlines III 4  
ELUT 1101 Electrical and Rigging Safety 3  
ELUT 1105 Blueprint, Schematics and Transit 3  
ELUT 1110 Transformer Banking I 3  
ELUT 1115 Generation Transmission & Distribution 3  
ELUT 2110 Transformer Banking II 2  
ELUT 2116 Reclosures & Protective Equipment 2  
ELUT 2121 Protective Relays 2  
ELUT 2100 Electrical Metering 3  
ELUT 2126 Regulators and Capacitors 2  
EMS 1112 AHA CPR Healthcare Provider, AED First Aid Certification 1  
*General Education Electives 15  
**Total Credits 64

The 15 General Education requirements must be selected from 3 of the 10 Goal Areas of the Minnesota Transfer Curriculum.

* Any MATH Mn Transfer course from the following list may be substituted for ELEC 1235:  
  MATH 1105, MATH 1107, MATH 1111, MATH 1113, MATH 1118, or MATH 1121.


**Powerline Technology, A.A.S.**  
**Location: Granite Falls and Jackson**

The Powerline Technician major is designed to train students to become apprentices in powerline construction and maintenance. Students learn basic skills and applications in transmission and distribution. Persons trained in this field work for power companies installing and maintaining overhead and underground powerlines. They install equipment such as overvoltage and overcurrent protective devices, transformers, capacitors, and regulators. Powerline technicians are employed by investor owned power companies, consumer owned power companies, municipalities, and by electrical contractors.

AUTO 1194 Commercial Driver License Learner Permit Preparation 1  
ELCO 1100 Electrical Circuits Fundamentals 3  
*ELEC 1235 Applied Electrical Calculations 2  
ELPL 1100 Pole Climbing & Equip. Operation 3  
ELPL 1102 Pole Climbing & Equip. Operations II 4  
ELPL 1106 Electric Distribution of Powerlines I 4  
ELPL 1116 Electric Distribution of Powerlines II 4  
ELPL 1121 Electric Distribution of Powerlines III 4  
ELUT 1101 Electrical and Rigging Safety 3  
ELUT 1105 Blueprint, Schematics and Transit 3  
ELUT 1110 Transformer Banking I 3  
ELUT 1115 Generation Transmission & Distribution 3  
ELUT 2110 Transformer Banking II 2  
ELUT 2116 Reclosures & Protective Equipment 2  
ELUT 2121 Protective Relays 2  
ELUT 2100 Electrical Metering 3  
ELUT 2126 Regulators and Capacitors 2  
EMS 1112 AHA CPR Healthcare Provider, AED First Aid Certification 1  
*General Education Electives 15  
**Total Credits 64

The 15 General Education requirements must be selected from 3 of the 10 Goal Areas of the Minnesota Transfer Curriculum.

* Any MATH Mn Transfer course from the following list may be substituted for ELEC 1235:  
  MATH 1105, MATH 1107, MATH 1111, MATH 1113, MATH 1118, or MATH 1121.

ELPL 1102 Pole Climbing & Equip. Operation II 4
ELPL 1106 Electrical Distribution of Powerlines I 4
ELPL 1116 Electrical Distribution of Powerlines II 4
ELPL 1121 Electrical Distribution of Powerlines III 4
ELUT 1101 Electrical and Rigging Safety 3
ELUT 1105 Blueprint, Schematics and Transit 3
ELUT 1110 Transformer Banking I 3
ELUT 1115 Generation, Transmission and Distribution 3
EMS 1112 AHA CPR Healthcare Provider, AED First Aid Certification 1
Total Credits 38

Psychology and Sociology, A.A.

Location: Worthington
This program prepares students for entrance into four-year social work, psychology, or sociology programs. It can be altered to meet individual college and student needs. The program below meets MnTC and Associate of Arts degree requirements.

CMST 1101 Public Speaking 3
ENGL 1101 Composition I 3
ENGL 1102 Composition II 3
HLTH 2220 Drugs, Society and the Individual 3
HSER 1101 Introduction to Human Services 2
MATH 1105 Intro to Probability & Statistics 4
NSCI 1100 Issues in the Environment 3
or
PSCI 2210 Environmental Politics 3
or
GEOG 1101 Introduction to Physical Geography 4
PSCI 2202 State and Local Government 3
or
**Social Science Electives 3
PSYC 2230 Behavior Modification 3
or
PSYC 1150 Developmental Psychology 3
PSYC 1101 Introduction to Psychology 4
PSYC 2221 Abnormal Psychology 3
SOC 1101 Introduction to Sociology 3
SOC 2220 Family Life Dynamics 3
Biology Electives 3-4
Chemistry/Physics Electives 3-5
Humanities Electives 9
Total Credits 60

STSK 1110 – Freshman Seminar (1) credit required.

Fulfill a minimum of 4 credits from two of the three areas. HLTH 1101, CSCI 1102, or any Physical Education course.

Dependent on transfer institution. See an advisor for assistance in choosing electives.

** If either PSCI 2210 or GEOG 1101 is taken to meet Areas 5 and 10 of MnTC, the SOC SCI requirement is complete. Proficiency in a second language is highly recommended when seeking employment.

Radiologic Technology, A.A.S.

Location: Luverne
The Radiologic Technology program prepares students to gain knowledge and skills necessary to perform various radiologic procedures through didactic, laboratory, and clinical experiences and carries out these functions under the supervision of a Registered Radiologic Technologist.

Instruction in x-ray procedures; equipment operation; patient care; and CT imaging included.

Prerequisites do not have to be completed prior to applying to the Radiologic Technology program, however, must be completed prior to starting the program.

Prerequisites

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<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tr>
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<td>or</td>
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<tr>
<td>BIOL 1110</td>
<td>Principles of Biology I</td>
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<tr>
<td>BIOL 2245</td>
<td>Medical Terminology</td>
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<tr>
<td>BIOL 2201</td>
<td>Human Anatomy</td>
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Total Prerequisites 9

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<tr>
<td>PSYC 1150</td>
<td>Developmental Psychology</td>
<td>3</td>
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<tr>
<td>MATH 1111</td>
<td>College Algebra</td>
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<tr>
<td>ENGL 1101</td>
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<tr>
<td>HC 1290</td>
<td>Health Care and Society</td>
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<tr>
<td>RADT 1100</td>
<td>Introduction Radiography &amp; Patient Care</td>
<td>3</td>
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<tr>
<td>RADT 1110</td>
<td>Radiological Procedures I</td>
<td>4</td>
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<tr>
<td>RADT 1130</td>
<td>Radiological Exposures I</td>
<td>3</td>
</tr>
<tr>
<td>RADT 1150</td>
<td>Clinical Radiography I</td>
<td>8</td>
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<td>RADT 1120</td>
<td>Radiological Procedures II</td>
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<td>RADT 1160</td>
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<td>Radiological Exposures II</td>
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<td>RADT 2210</td>
<td>Radiological Procedures III</td>
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<tr>
<td>RADT 2250</td>
<td>Clinical Radiography III</td>
<td>8</td>
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<tr>
<td>RADT 2220</td>
<td>Radiological Equipment</td>
<td>4</td>
</tr>
<tr>
<td>RADT 2240</td>
<td>Principles of Radiobiology</td>
<td>3</td>
</tr>
<tr>
<td>RADT 2230</td>
<td>Radiological Pathology</td>
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<tr>
<td>RADT 2260</td>
<td>Clinical Radiography IV</td>
<td>8</td>
</tr>
<tr>
<td>RADT 2280</td>
<td>Board Review</td>
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</tr>
</tbody>
</table>

Total Credits 84

Recreation/Parks Administration, A.A.

Location: Worthington
The lower division courses for these three areas of concentration are basically the same. Therefore, we have listed them under a common heading in the program of study. The student is advised to check with Minnesota West-Worthington campus counseling staff for the exact requirements for the four-year college he/she intends to attend.

Recreation/Parks Administration majors may specialize in one of several areas of concentration. The area desired should be determined while in attendance at Minnesota West in order to meet the transfer requirements. Additional credits in business courses may be in order for some receiving colleges. The curriculum requirements below meet the MnTC requirements.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>BIOL 2201</td>
<td>Human Anatomy</td>
<td>4</td>
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<tr>
<td>BIOL 2202</td>
<td>Human Physiology</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 1101</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>PHED 1101</td>
<td>Foundations of Health, Physical Education, Exercise Science, and Sport</td>
<td>3</td>
</tr>
<tr>
<td>PHED 2101</td>
<td>History of Physical Education &amp; Sports</td>
<td>2</td>
</tr>
<tr>
<td>HLTH 2220</td>
<td>Drugs, Society and the Individual</td>
<td>3</td>
</tr>
<tr>
<td>NSCI 1100</td>
<td>Issues in the Environment</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSCI 2210</td>
<td>Environmental Politics</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------</td>
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</tr>
<tr>
<td>GEOG 1101</td>
<td>Introduction to Physical Geography</td>
<td>4</td>
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<tr>
<td>ENGL 1102</td>
<td>Composition II</td>
<td>3</td>
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<tr>
<td>PHED 1110</td>
<td>Care &amp; Prevention of Athletic Injuries I</td>
<td>3</td>
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<td></td>
<td>Biology Elective</td>
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<td>Math Elective</td>
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<td></td>
<td>Physics Electives</td>
<td>3</td>
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<tr>
<td></td>
<td>Social Science Electives**</td>
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<tr>
<td><strong>Total Credits</strong></td>
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</table>

STSK 1110 – Freshman Seminar (1) credit required.

Fulfill a minimum of 4 credits from two of the three areas. HLTH 1101, CSCI 1102, or any Physical Education course.

* If either PSCI 2210 or GEOG 1101 is taken to meet Areas 5 and 10, deduct three credits from SOC SCI requirements.

### Supervisory Leadership in Management, Certificate

**Location: Online**

The Supervisory Leadership in Management certificate program will help the incumbent student prepare for career growth opportunities. This certificate program will enhance career success through sound leadership skills and management practices. The Internet platform will allow students to pursue their education without leaving their facility or placing undue hardships on their current positions and/or employment status. The curriculum will provide for independent practice and virtual role-playing, and the student will be able to interact with college instruction staff via e-mail and discussion groups.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBMT 1310</td>
<td>Resolving Conflict</td>
<td>1</td>
</tr>
<tr>
<td>SBMT 1315</td>
<td>Principles of Supervisory Leadership</td>
<td>3</td>
</tr>
<tr>
<td>SBMT 1320</td>
<td>Creativity and Innovation</td>
<td>1</td>
</tr>
<tr>
<td>SBMT 1325</td>
<td>Problem Solving &amp; Decision Making</td>
<td>2</td>
</tr>
<tr>
<td>SBMT 1330</td>
<td>Interpersonal skills for Supervisors</td>
<td>1</td>
</tr>
<tr>
<td>SBMT 1335</td>
<td>Work Teams</td>
<td>1</td>
</tr>
<tr>
<td>SBMT 1340</td>
<td>Time Management</td>
<td>1</td>
</tr>
<tr>
<td>SBMT 1345</td>
<td>Finance &amp; Accounting for Non-Financial Managers</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
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</table>

**Additional 10 Credits chosen from Management and Supervision in Healthcare:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>SBMT 1400</td>
<td>Employment</td>
<td>2</td>
</tr>
<tr>
<td>SBMT 1405</td>
<td>Customer Service</td>
<td>2</td>
</tr>
<tr>
<td>SBMT 1410</td>
<td>Personnel Supervision</td>
<td>4</td>
</tr>
<tr>
<td>SBMT 1415</td>
<td>Leadership</td>
<td>4</td>
</tr>
<tr>
<td>SBMT 1420</td>
<td>Corporate Compliance</td>
<td>2</td>
</tr>
<tr>
<td>SBMT 1425</td>
<td>Finance for Healthcare</td>
<td>3</td>
</tr>
<tr>
<td>SBMT 1430</td>
<td>Healthcare Industry Trends</td>
<td>1</td>
</tr>
<tr>
<td>SBMT 1435</td>
<td>Marketing in Healthcare</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td><strong>23</strong></td>
</tr>
</tbody>
</table>

### Solar Photovoltaic Technician, Certificate

**Location: Canby and Jackson**

The Solar Photovoltaic program combines lecture and hands on training to provide the skills necessary to install solar PV systems. Graduates will develop an understanding of where PV systems started, where they are now and where they will be in the future. Under minimal supervision graduates must be able to define the solar resource and complete a site assessment. They must also develop a comfort level with the capabilities, limitations, and basic construction of all major PV system pieces. Graduates must also be able to size systems to client’s expectations, inspect, commission and maintain the systems.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ELCO 1100</td>
<td>Electrical Circuit Fundamentals AND</td>
<td>3</td>
</tr>
<tr>
<td>ELCO 1105</td>
<td>Electrical Circuit Fundamentals Lab</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELCO 1110</td>
<td>AC/DC I AND</td>
<td>3</td>
</tr>
<tr>
<td>ELCO 1120</td>
<td>AC/DC II</td>
<td>3</td>
</tr>
<tr>
<td>ELEC 1205</td>
<td>National Electric Code I</td>
<td>2</td>
</tr>
<tr>
<td>ELEC 1200</td>
<td>Residential Wiring I</td>
<td>5</td>
</tr>
<tr>
<td>ELEC 1230</td>
<td>Safety Principles and OSHA</td>
<td>1</td>
</tr>
<tr>
<td>ELEC 1235</td>
<td>Applied Electrical Calculations</td>
<td>2</td>
</tr>
<tr>
<td>SOLR 1020</td>
<td>Introduction to Solar Assessment Lab</td>
<td>3</td>
</tr>
<tr>
<td>SOLR 1030</td>
<td>Solar Energy Construction Projects</td>
<td>2</td>
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<tr>
<td>SOLR 2020</td>
<td>Advanced Photovoltaic Systems</td>
<td>3</td>
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<tr>
<td>SOLR 2025</td>
<td>Photovoltaic Systems Lab</td>
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<tr>
<td><strong>Total Credits</strong></td>
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</tbody>
</table>

### Surgical Technology , A.A.S.

**Location: Granite Falls and Luverne**

The Surgical Technology program prepares students to perform general technical support tasks in the operating room before, during and after surgery. Includes instruction in pre-operation patient and preparing surgical team, handling surgical instruments at the table side, maintaining supply inventory before and during operations, sterilization and cleaning of equipment, maintaining clean and sealed environments, following operating room safety procedures, record-keeping, and working with the surgical team. Students in the Surgical Technology program will undergo a background study as required by Minnesota law.

Students are required to be certified in CPR/BLS to participate in clinical rotations.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL 1115</td>
<td>Human Biology</td>
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<tr>
<td>CMST 1103</td>
<td>Interpersonal Communication</td>
<td>3</td>
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<tr>
<td>ENGL 1101</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>HC 1151</td>
<td>Body Structure &amp; Function</td>
<td>3</td>
</tr>
<tr>
<td>HC 1180</td>
<td>Medical Terminology</td>
<td>2</td>
</tr>
<tr>
<td>HC 1290</td>
<td>Health Care and Society</td>
<td>1</td>
</tr>
<tr>
<td>HC 2120</td>
<td>Disease Conditions</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1150</td>
<td>Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SURG 1110</td>
<td>Surgical Microbiology</td>
<td>2</td>
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<tr>
<td>SURG 1120</td>
<td>Surgical Pharmacology</td>
<td>2</td>
</tr>
<tr>
<td>SURG 1130</td>
<td>Operating Room Theory</td>
<td>4</td>
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<tr>
<td>SURG 1140</td>
<td>Operating Room Practices</td>
<td>3</td>
</tr>
<tr>
<td>SURG 1150</td>
<td>Operating Room Procedures I</td>
<td>5</td>
</tr>
<tr>
<td>SURG 1151</td>
<td>Operating Room Procedures II</td>
<td>4</td>
</tr>
<tr>
<td>SURG 1160</td>
<td>Clinical I</td>
<td>2</td>
</tr>
<tr>
<td>SURG 1170</td>
<td>Clinical II</td>
<td>12</td>
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<td>SURG 1181</td>
<td>Board Review</td>
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<td>General Education Electives</td>
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<td><strong>Total Credits</strong></td>
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</table>

### Telecommunications, A.A.S.

**Location: Granite Falls and Jackson**

The Telecommunications AAS degree includes all of the course work of the Telecommunications Certificate. This degree expands on the knowledge learned in the Telecom certificate program and is designed to be completed in four semesters. It covers advanced routing and wide area network concepts and advanced Telecommunication concepts and field experience. In addition, students will complete 15 credits of general education in the Minnesota...

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Transfer Curriculum and will be awarded an AAS or Associate of Applied Science degree. Telecommunications Technicians are responsible for high-speed communication networks and digital communication through fiber optic cables and wireless network access. Telecommunications Technicians install, maintain and repair telecommunications equipment.

CST 1101 IT Exploration 2
CST 1112 CLI/PowerShell 1
CST 1125 Operating Systems 3
CST 1190 Introduction to Networking 4
CST 1400 Telecommunications I 3
CST 1410 Broadband Technology 3
CST 1420 Convergence Technologies 3
CST 1440 Advanced Telecommunications 3
CST 1500 Routers and Switches 3
CST 2108 Structured Communications Systems 3
CST 2110 PC Maintenance & Repair Hardware 3
CST 2150 Advanced Routing 4
CST 2310 Info Technology Customer Service 2
CST 2600 Fundamentals of Wireless Networking 3
ELCO 1110 AC/DC I 3
ENGL 1101 Composition 3
Technical Electives 2

General Education (Advisor Approval Needed) 12

Total Credits 60

Telecommunications, Diploma
Location: Granite Falls and Jackson
The Telecommunications diploma includes all of the course work of the Telecommunications certificate. This degree expands on the knowledge learned in the Telecom certificate program and is designed to be completed in two semesters. It covers networking and routing concepts. Telecommunication technology includes broadband, VOIP and the Internet of things. Telecommunications Technicians are responsible for high-speed communication networks and digital communication through fiber optic cables and wireless network access. Telecommunication Technicians install, maintain, and repair telecommunications equipment.

CST 1101 IT Exploration 2
CST 1112 CLI/PowerShell 1
CST 1125 Operating Systems 3
CST 1190 Introduction to Networking 4
CST 1400 Telecommunications I 3
CST 1410 Broadband Technology 3
CST 1420 Convergence Technologies 3
CST 1500 Routers and Switches 3
CST 2108 Structured Communications Systems 3
CST 2110 PC Maintenance & Repair Hardware 3
CST 2150 Advanced Routing 4
CST 2310 Info Technology Customer Service 2
CST 2600 Fundamentals of Wireless Networking 3
ELCO 1110 AC/DC I 3

Total Credits 33

Welding, Diploma
Location: Jackson
Program description: In this two semester program students gain technical knowledge and hands-on welding skills for Shielded Metal Arc, Gas Metal Arc and Gas Tungsten Arc, Pipe Welding, Plasma and Oxy-Fuel cutting processes. Students will learn to recognize welding symbols, read and interpret welding blueprints, and practice weld shop safety. Welds will be made to industry standards using the American Welding Society D1.1 Structural Code. Upon completion of the program, students are prepared for a high demand welding career in advanced manufacturing, production, maintenance and repair, and construction.

WELD 1190 Welding Principles 3
WELD 1200 Blueprint Reading for Welders 3
WELD 1210 Oxy-Fuel/Plasma Arc Cutting 2
WELD 1220 Shielded Metal Arc Welding I 3
WELD 1230 Gas Metal Arc Welding I 3
WELD 1240 Gas Tungsten Arc Welding I 2
WELD 1260 Metallurgy and Materials 2
WELD 1270 Testing/Codes and Inspection 2
WELD 1280 Intermediate Shielded Metal Arc Welding 2
WELD 1300 Intermediate Gas Metal Arc Welding 3
WELD 1340 Welding Qualification Lab 3
WELD 1350 Pipe Welding Processes 4

Total Credits 32

Welding, Certificate
Location: Granite Falls and Jackson
The Welding Certificate is a one semester program providing technical knowledge and hands-on welding skills for Shielded Metal Arc, Gas Metal Arc, Plasma and Oxy-Fuel cutting processes. Students will learn to recognize welding symbols, read and interpret welding blueprints, and practice weld shop safety protocols. Welds will be made to industry standards using the American Welding Society D1.1 Structural Code. Upon completion students are prepared for an entry level welding position in advanced manufacturing, production, maintenance and repair, and construction.

WELD 1190 Welding Principles 3
WELD 1200 Blueprint Reading for Welders 3
WELD 1210 Oxy-Fuel/Plasma Arc Cutting 2
WELD 1220 Shielded Metal Arc Welding I 3
WELD 1230 Gas Metal Arc Welding I 3
WELD 1240 Gas Tungsten Arc Welding I 2
WELD 1260 Metallurgy & Materials 2

Total Credits 16
Management Programs

More information on Minnesota Management programs is available at http://www.mnwest.edu/training-management

Computerizing Small Business Management, Diploma

Locations: Canby, Granite Falls, Jackson, Pipestone, Worthington

Computerizing Small Business is a program designed to assist the small business owner in maximizing the effectiveness of office computerization and accounting applications. Good management requires a sound knowledge of economic principles because they are the framework for small business operation and organization. Management must understand various alternatives that can be used in decision making. This program strives to develop an entrepreneur's knowledge of economic principles and enable entrepreneurs to meet their business and family goals. A structured program is used to analyze current systems, evaluate business applications for the computer, identify the advantages of computerized systems, and examine software & hardware currently available. This program may use a combination of individualized instruction, tailored to the specific business needs, and classroom delivery. The mission of the Computerizing Small Business program is to encourage more businesses to take advantage of the cost savings and productivity improvement opportunities available through efficient office automation. This is accomplished through instruction that helps the business owner better understand and thus simplify the computerization process and use of application software.

Prerequisites:
To be eligible for enrollment in Computerized Small Business Management courses, the student must be a small business operator or manager or must secure the consent of the instructor.

CSBM 1100 Disk Operating Systems 1
CSCM 1110 General Ledger 3
CSBM 1120 Bank Reconciliation 2
CSBM 1130 Accounts Receivable 3
CSBM 1140 Accounts Payable 3
CSBM 1150 Payroll 3
CSBM 1160 Government Payroll Reporting 2
Electives 15
Total Credits 32

Farm Business Management, Diploma

Locations: Canby, Granite Falls, Jackson, Pipestone, Worthington, and southwestern Minnesota

The primary emphasis of the Farm Business Management Program is to assist farm families in meeting their business and personal goals through quality farm records and sound business decisions. This program is primarily taught through individualized instruction at the FBM office, via technology, or occasionally at the farm business location. But classroom and group instruction are also very important. Students are enrolled in the program on a continuous, part-time basis. Normal credit load is 10 credits per year, for the equivalent of 1/3 of a full-time college student. The instructor visits the student on a regular occasion in the state. The Farm Business Management Program offering consists of four certificate programs. The first three certificate programs are 30 credits in length. These three programs include Essentials of Farm Business Management, Applications in Farm Business Management, and Advanced Farm Business Management. The fourth certificate option is the Marketing Certificate, consisting of 25 credits.

Prerequisites: To be eligible for enrollment in Farm Business Management courses, the student must be a farm business operator or manager or must secure the consent of the instructor.

General Education and/or General Studies 10
FBMT 1112 Foundation for FBM 4
FBMT 1121 Preparation for Farm Business Analysis 4
FBMT 1122 Implementing the System Management Plan 4
FBMT 1131 Managing & Modifying Farm System Data 4
FBMT 1132 Interpreting & Using Farm System Data 4
FBMT 1211 Introduction to FBM 4
FBMT 1223 Using System Analysis in Total Farm Planning 2
FBMT 2141 Interpreting & Evaluating Financial Data 4
FBMT 2142 Interpreting Trends 4
FBMT 2151 Strategies Data Management 4
FBMT 2152 Financial Planning 4
FBMT 2161 Examination of the Context of Farm System Management 4
FBMT 2162 Refining Farm System Mgt. 4
Total Credits 60

Farm Business Management – Current Issues, Certificate

Locations: Canby, Granite Falls, Jackson, Pipestone, Worthington, and southwestern Minnesota

FBMT 2210 Current Issues in Farm Business Management 1-5
FBMA 2220 Directed Studies – Current Issues in Farm Business Management 1-5
FBMA 2211 Current Issues in Farm Business Mgt. 1-5
FBMA 2221 Directed Studies – Current Issues In Farm Business Management 1-5
FBMA 2212 Current Issues in Farm Business Mgt. 1-5
FBMA 2222 Directed Studies – Current Issues In Farm Business Management 1-5
Farm Business Mgt. Electives 12
Total Credits 30
Agricultural Commodities Marketing, Certificate
Locations: Canby, Granite Falls, Jackson, Pipestone, Worthington, and southwestern Minnesota

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>FBMT 1170</td>
<td>Intro to Farm Commodities Marketing</td>
<td>3</td>
</tr>
<tr>
<td>FBMT 1173</td>
<td>Directed Study – Introduction to Farm Commodity Marketing</td>
<td>2</td>
</tr>
<tr>
<td>FBMT 1180</td>
<td>Applying Commodity Marketing Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>FBMT 1183</td>
<td>Directed Study – Applying Commodity Marketing</td>
<td>2</td>
</tr>
<tr>
<td>FBMT 1190</td>
<td>Evaluating Farm Commodity Marketing Tools</td>
<td>3</td>
</tr>
<tr>
<td>FBMT 1193</td>
<td>Directed Study – Evaluating Farm Commodity Marketing Tools</td>
<td>2</td>
</tr>
<tr>
<td>FBMT 2170</td>
<td>Monitoring Farm Commodity Marketing Plans</td>
<td>3</td>
</tr>
<tr>
<td>FBMT 2173</td>
<td>Directed Study – Monitoring Farm Commodity Marketing Plans</td>
<td>2</td>
</tr>
<tr>
<td>FBMT 2180</td>
<td>Strategies in Farm Commodity Marketing</td>
<td>3</td>
</tr>
<tr>
<td>FBMT 2183</td>
<td>Directed Studies – Strategies in Farm Commodity Marketing</td>
<td>2</td>
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<tr>
<td>Total Credits</td>
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</tbody>
</table>

Advanced Farm Business Management, Certificate
Locations: Canby, Granite Falls, Jackson, Pipestone, Worthington, and southwestern Minnesota

This certificate program is designed to provide instruction for students who have completed the other programs in the Farm Business Management curriculum. Students in this program will learn about key factors in business management for the long term: Risk Management, Strategic Planning, and Business Plan development. Prior instruction in Farm Business Management lays the groundwork for continued enhancement of financial management skills for the students in this program. Students will focus on using financial trends in their business to fine-tune the focus and strategize opportunities for the long-term profitability of their business.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>FBMA 2930</td>
<td>Fundamentals of Financial Management as it relates to Risk Management</td>
<td>3</td>
</tr>
<tr>
<td>FBMA 2931</td>
<td>Applied Financial Management as it Relates to Risk Management</td>
<td>3</td>
</tr>
<tr>
<td>FBMA 3932</td>
<td>Fundamentals of Financial Management/Strategic Planning Emphasis</td>
<td>3</td>
</tr>
<tr>
<td>FBMA 2933</td>
<td>Applied Financial Management/Strategic Planning Emphasis</td>
<td>3</td>
</tr>
<tr>
<td>FBMA 2934</td>
<td>Fundamentals of Financial Management/Business Plan Emphasis</td>
<td>3</td>
</tr>
<tr>
<td>FBMA 2935</td>
<td>Applications in Financial Management/Business Plans</td>
<td>3</td>
</tr>
<tr>
<td>FBMT 2130</td>
<td>Directed Study-Decision Making</td>
<td>2</td>
</tr>
<tr>
<td>FBMT 2131</td>
<td>Directed Study-Communications</td>
<td>2</td>
</tr>
<tr>
<td>FBMT 2132</td>
<td>Directed Studies in Modern Agricultural Technology</td>
<td>2</td>
</tr>
<tr>
<td>FBMT 2133</td>
<td>Directed Studies in Farm Business and/or Family Transition</td>
<td>2</td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>25</td>
</tr>
</tbody>
</table>

FBMA 2134 Directed Study-Personnel Management 2
FBMA 2135 Directed Study-Enterprise Alternatives 2
Total Credits 30

FBMA 2134 Directed Study-Personnel Management 2
FBMA 2135 Directed Study-Enterprise Alternatives 2
Total Credits 30

Applications in Farm Business Management, Certificate
Locations: Canby, Granite Falls, Jackson, Pipestone, Worthington, and southwestern Minnesota

This certificate program is designed to provide instruction that will expand on the foundation for financial management which was learned in the Essentials of Farm Business Management certificate. Students in this program will use accounting skills to record and evaluate data related to the profitability and longevity of their business. Education is primarily delivered in an individualized setting at an FBM Office, via technology, or occasionally at the farm business location. Students will use data management, planning strategies, and a business analysis to successfully manage their farm business.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FBMT 2141</td>
<td>Interpreting and Evaluating Financial Data</td>
<td>4</td>
</tr>
<tr>
<td>FBMT 2151</td>
<td>Strategies in Farm System Data Management</td>
<td>4</td>
</tr>
<tr>
<td>FBMT 2161</td>
<td>Examination of the Context of Farm System Management</td>
<td>4</td>
</tr>
<tr>
<td>FBMT 2142</td>
<td>Interpreting Trends in Business Planning</td>
<td>4</td>
</tr>
<tr>
<td>FBMT 2152</td>
<td>Integrating System Information for Financial Planning</td>
<td>4</td>
</tr>
<tr>
<td>FBMT 2162</td>
<td>Refining Farm System Management Suggested Farm Business Management Electives</td>
<td>4</td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

FBMA 2134 Directed Study-Personnel Management 2
FBMA 2135 Directed Study-Enterprise Alternatives 2
Total Credits 30

Essentials of Farm Business Management, Certificate
Locations: Canby, Granite Falls, Jackson, Pipestone, Worthington, and southwestern Minnesota

This certificate program is designed to provide instruction that will help to build a foundation for successful financial management of the farm business. Students in this program will use basic accounting practices and goal setting to provide benchmarking information and a direction for the business. Education is primarily delivered in an individualized setting at a FBM office, via technology, or occasionally at the farm business location. Students use business records to provide information for completing a business analysis and initiate a financial trend analysis for sound decision-making.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FBMT 1211</td>
<td>Introduction to Farm Business Management</td>
<td>4</td>
</tr>
<tr>
<td>FBMT 1112</td>
<td>Foundations for Farm Business Management</td>
<td>4</td>
</tr>
<tr>
<td>FBMT 1121</td>
<td>Preparation for Farm Business Analysis</td>
<td>4</td>
</tr>
<tr>
<td>FBMT 1122</td>
<td>Implementing the System Management Plan</td>
<td>4</td>
</tr>
<tr>
<td>FBMT 1131</td>
<td>Managing and Modifying Farm System Data</td>
<td>4</td>
</tr>
</tbody>
</table>

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Lamb and Wool Management, Diploma

Location: Pipestone

The Lamb and Wool Management Program is concerned with developing the sheep enterprise operator’s ability to organize and manage resources to meet family and business goals. Good management requires a sound knowledge of economic and scientific principles because they are the framework for a profitable sheep enterprise. Good management provides a perspective that considers the relationship of all parts to the whole farm business. Good sheep management requires knowledge of sheep production practices and animal science, as well as new technology developments in the field. The Lamb and Wool Management Program is concerned with the development of a person’s knowledge of economic, management, and scientific principles and using them in a profit oriented decision making process that enables them to meet their goals.

Prerequisites: To be eligible for enrollment in Lamb and Wool Management courses, a student must be a sheep producer or must secure the consent of the instructor.

Program Delivery: Curriculum is delivered through a combination of classroom, lab, on-farm instruction and individual instruction. This option is available only for students within 125 miles of Pipestone, Minnesota or through permission of the instructor.

LWMP 1001 Introduction to Sheep Management 1
LWMP 1002 Sheep Management Concepts 2
LWMP 1003 Pasture & Grazing Management 1
LWMP 1004 Predator Control Methods 2
LWMP 1101 Sheep Genetic Concepts 2
LWMP 1102 Genetic Selection Methods 1
LWMP 1201 Sheep Behavior & Handling Methods 1
LWMP 1202 Equipment and Facilities 2
LWMP 1301 Sheep Diseases 3
LWMP 1302 Preventative Health Programs 1
LWMP 1304 Basic Lamb Care Skills 1
LWMP 1305 Basic Sheep Care Skills 1
LWMP 1401 Lamb Marketing 2
LWMP 1402 Sheep Quality Assurance 1
LWMP 1501 Nutrition Requirements 2
LWMP 1502 Ewe Ration Formulation 1
LWMP 1601 Sheep Reproduction 2
LWMP 1602 Reproductive Management 1
LWMP 1701 Wool Characteristics 2
LWMP 1702 Wool Harvesting, Marketing, and Processing 1

Total Credits 30
Customized Training and Continuing Education

CUSTOMIZED TRAINING AND CONTINUING EDUCATION provides workplace training solutions for individuals, businesses, non-profit and government organizations to enhance workplace skills, improve performance, and maintain competitiveness in a global economy.

We offer:
- Comprehensive training and curriculum development
- Continuing Education & Customized Training Programs
- Credit and Non-credit courses
- Convenient locations & flexible scheduling
- Cost effective training delivery
- Mobile training simulators and equipment
- Online and on-site training delivery

Types of training/education provided:
- Training for new employees
- Retraining for existing employees
- Technical assistance
- Research and development for new training programs
- Continuing education for individuals and professional licensure

Customized Training and Continuing Education Program Areas include:
- Health Care
- Management and Professional Development
- Manufacturing and Trades
- Public Safety
- Transportation
- Workplace Safety

HEALTHCARE:
Today’s health care personnel are challenged by increased technology and expanded levels of accountability. Programs are customized to meet the training and continuing education needs of all members of the health care team to assist in meeting these challenges.

Healthcare Continuing Education and Training offers professional healthcare skills training and continuing education programming for all members of the healthcare team to maintain compliance with Minnesota State and Federal licensing and regulatory agencies. Minnesota West CTC is an approved test site for the MN State Registry Test for Nursing Assistant and/or Home Health Aide.

Dental Continuing Education provides continuing dental education for Dentists, Hygienists and Dental Assistants. Minnesota West is an approved sponsor for dental continuing education for the Minnesota Board of Dentistry and Dental Assisting National Board.

MANAGEMENT AND PROFESSIONAL DEVELOPMENT:
Developing the capacity to enhance the performance of others through personal and professional growth is essential to effective leadership for managers, management trainees, and skilled employees. Enhancing computer skills enables an organization to maximize productivity through the use of computers and technology.

Customized Training and Continuing Education provides the training foundation for:
- Leadership and Workforce Development
- Supervisory and Human Resource Management
- EEOC Compliance Certified Harassment Training
- Customer Service
- Organizational Development
- Performance Management
- Computer & Technology Training

TRANSPORTATION:
The transportation industry is one of the largest industries in the State impacting all industry sectors and individuals while employing a diverse workforce. Safety and proper training is critical for everyone involved. Customized Training Services provides driver training, safety, and certifications including:
- Commercial Driver License Training & Test Preparation
- Pilot Car Certification
- Commercial Vehicle Recertification

MANUFACTURING AND TRADES:
Today’s manufacturing industry is a fast-paced environment requiring efficient operations and a highly skilled workforce. Customized Training and Continuing Education offers specialized skills training by industry professionals designed to meet the needs of the manufacturer’s operation and workforce needs. Manufacturing process and skills training topics include:
- Automation Skills
- Process Improvement/Lean Manufacturing
- Industrial Maintenance
- Mechanical Power Transmission
- Six Sigma Certification
- Steam & Hot Water Boiler Training
- Welding Credit & Non-Credit

PUBLIC SAFETY:
Public safety is vital to safe and healthy communities. Customized Training and Continuing Education specializes in training fire and rescue professionals, law enforcement officers and personnel, and emergency response professionals within the service area.

- Fire Safety and Rescue training provides National Fire Protection Association 1001 Fire Fighter I & II and Haz-Mat Operations and Fire Fighter continuing education courses to the fire departments and fire safety professionals in the region. Training courses and curriculum meet the NFPA and Minnesota Fire Service Certification Board standards. Minnesota West instructors certified through the Minnesota Fire Service Certification Board meeting the qualifications
of the NFPA 1001. Training delivery is highly mobile supported by classroom and hands-on learning using mobile training simulators including Confined Space, Live Burn, and Ventilation and is designed to meet specific needs of each department.

- **Law Enforcement and Personal Safety:** Minnesota West is a POST Board accredited educational institution for Law Enforcement continuing education. We take training seriously because we know training can make the difference between life and death. Law Enforcement training programs are flexible and designed to assist peace officers and other law enforcement personnel with their work. The courses and curriculum are developed in collaboration with the Minnesota POST learning objectives, are Minnesota POST Board approved and delivered by POST Board approved instructors. Training may be customized for Law Enforcement Agencies, Security Organizations, and Business and Industry.

**Workplace Safety:**

Maintaining a safe workplace is important for every business. Workplace safety education and training programs are an integral part of assuring safe practices in the workplace by minimizing the possibility of injury occurrence and limiting the exposure to liabilities. Training is provided by OSHA authorized, National Safety Council Advanced Safety Certified, and American Heart Association certified instructors. Courses meet the standards of the American Heart Association and Occupational Safety & Health Administration. Real-world safety and compliance training areas include:

- Construction Safety
- OSHA Safety for Business & General Industry
- Industrial Safety
- Hazardous Materials Emergency Response
- Electrical Safety
- First Aid/CPR/AED/Blood Borne Pathogens
- Employee Right to Know
- Industrial Truck (Fork Lift)
- Cosmetology

**Minnesota West Marshall Center/Merit Center:**

Minnesota Emergency Response & Industrial Training Center is located at 1001 Erie Road, Marshall, MN. Minnesota West partners with the City of Marshall to provide highly specialized skills training and continuing education at the MERIT Center. The MERIT Center provides a site and state of the art equipment for training emergency responders including firefighters, city and county law enforcement personnel, emergency medical service personnel, regional emergency managers, and business and industry personnel. The MERIT Center is fully staffed with Minnesota West personnel for convenient programming delivery. For more information about the training possibilities offered through Minnesota West Customized Training and Continuing Education, call the Marshall Center at 507-537-7530 or 1-800-658-2330. Check out our web site at:

www.mnwest.edu/training
<table>
<thead>
<tr>
<th>ACCOUNTANT (ACCT)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 1110 Payroll Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Payroll Accounting involves the application of various state and federal laws pertaining to the computation of payment of salaries and wages.</td>
<td></td>
</tr>
<tr>
<td>ACCT 1112 Accounting Information Systems</td>
<td>1</td>
</tr>
<tr>
<td>Accounting Information Systems applies concepts that identify, analyze, and record transactions through the completion of a business simulation project. Topics covered include the accounting cycle, accounting for a merchandising business, accounting system design, special journals, subsidiary ledgers, and work ethics.</td>
<td></td>
</tr>
<tr>
<td>ACCT 1115 Computerized Accounting Applications I</td>
<td>2</td>
</tr>
<tr>
<td>Computerized Accounting Applications I introduces the use of computers and related software used in the accounting function of the business environment. Prerequisite: BUS 2201.</td>
<td></td>
</tr>
<tr>
<td>ACCT 1120 Spreadsheet Concepts and Applications</td>
<td>2</td>
</tr>
<tr>
<td>Spreadsheet Concepts and Applications implements a computerized spreadsheet system for business applications.</td>
<td></td>
</tr>
<tr>
<td>ACCT 1122 Database Concepts and Applications</td>
<td>2</td>
</tr>
<tr>
<td>Database Concepts and Applications utilizes a database system for business applications.</td>
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</tr>
<tr>
<td>ACCT 2100 Intermediate Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>Intermediate Accounting I introduces accounting theory and concepts with an analysis of the influence on financial accounting by various boards, associations, and governmental agencies.</td>
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</tr>
<tr>
<td>ACCT 2101 Intermediate Accounting II</td>
<td>2</td>
</tr>
<tr>
<td>Intermediate Accounting II explains and examines accounting theory and concepts. Prerequisite: ACCT 2100.</td>
<td></td>
</tr>
<tr>
<td>ACCT 2110 Income Tax I</td>
<td>4</td>
</tr>
<tr>
<td>Income Tax I explains and interprets the Internal Revenue Code as applied to individual and business returns. Computerized software will be used to prepare actual income tax returns.</td>
<td></td>
</tr>
<tr>
<td>ACCT 2115 Cost Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>Cost Accounting I studies cost accounting as a management tool for planning, organizing, and controlling costs associated with the manufacturing process, whether using job costing or process accounting. Prerequisite: BUS 2202.</td>
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</tr>
<tr>
<td>ACCT 2120 Fund/Nonprofit Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Fund/Nonprofit Accounting applies generally accepted accounting principles for state and local governmental units. Prerequisite: BUS 2202.</td>
<td></td>
</tr>
<tr>
<td>ACCT 2125 Computerized Accounting Applications II</td>
<td>2</td>
</tr>
<tr>
<td>Computerized Accounting Applications II applies the use of computers and related software used in the accounting function of a business. Prerequisite: BUS 2202.</td>
<td></td>
</tr>
<tr>
<td>ACCT 2130 Intermediate Accounting III</td>
<td>2</td>
</tr>
<tr>
<td>Intermediate Accounting III applies accounting theory and concepts with an analysis of the influence on financial accounting by various boards, associations, and governmental agencies. Prerequisite: ACCT 2101.</td>
<td></td>
</tr>
<tr>
<td>ACCT 2135 Internship</td>
<td>2</td>
</tr>
<tr>
<td>Internship provides practical experience with a business utilizing skills/knowledge learned in accounting programs. Prerequisite: BUS 2202.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>ADMINISTRATIVE ASSISTANT (ADSA)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ADSA 1100 College Keyboarding I</td>
<td>3</td>
</tr>
<tr>
<td>College Keyboarding I covers basic skill development and the use of word processing software to produce various personal and business correspondence including letters, envelopes and labels, memos, reports, tables, and employment documents. Focus will also be placed on the development of touch control keyboarding technique, accuracy, speed, and proofreading skills.</td>
<td></td>
</tr>
<tr>
<td>ADSA 1105 College Keyboarding II</td>
<td>3</td>
</tr>
<tr>
<td>College Keyboarding II emphasizes the use of advanced word processing skills and formatting techniques to produce business correspondence including multi-page letters, memos, and reports, complex tables, forms, and office-related publications. Focus will continue to be placed on the improvement of keyboarding accuracy, speed, and proofreading skills. Prerequisite: ADSA 1100.</td>
<td></td>
</tr>
<tr>
<td>ADSA 1111 Office Management</td>
<td>3</td>
</tr>
<tr>
<td>Office Management covers general office principles and procedures with practical application. Topics covered include the roles and responsibilities of the administrative professional, professionalism, self-management and organizational strategies, ethics, teams, customer service, leadership, communication skills, common tasks and procedures performed in the office environment, and job seeking skills.</td>
<td></td>
</tr>
<tr>
<td>ADSA 1122 Word Processing I</td>
<td>2</td>
</tr>
<tr>
<td>Word Processing I is designed to introduce students to the concepts, terminology, features, and applications of word processing software. Topics covered include the preparation, management, formatting, editing, enhancing, and customization of documents.</td>
<td></td>
</tr>
<tr>
<td>ADSA 1123 Word Processing II</td>
<td>2</td>
</tr>
<tr>
<td>Word Processing II is designed to build on the concepts and applications learned in Word Processing I and to introduce more advanced word processing software features. Topics covered include proofing and navigation of documents, charts, references, specialized tables, building blocks, shared documents, macros, forms, outlines, master documents, and sub documents. Prerequisite: ADSA 1122.</td>
<td></td>
</tr>
<tr>
<td>ADSA 1126 Advanced Office Applications</td>
<td>2</td>
</tr>
<tr>
<td>Advanced Office Applications is a capstone course designed to integrate and reinforce the skills and knowledge learned in previous business courses in the Administrative Assistant program. Computer applications will be utilized in projects that simulate those used in an office environment. Projects will emphasize quality and meeting deadlines. Prerequisite ADSA1100 or ADSA1122. Prerequisite or Co-requisite ACCT1120 and ACCT1122.</td>
<td></td>
</tr>
<tr>
<td>ADSA 1130 Office Accounting Concepts</td>
<td>3</td>
</tr>
<tr>
<td>Office Accounting Concepts provides a basic knowledge of accounting concepts and procedures. The accounting cycle for a service business</td>
<td></td>
</tr>
</tbody>
</table>
will be covered including analyzing, journaling, and posting business transactions, and preparing a ten-column worksheet and financial statements. Accounting for cash and payroll will also be covered in the course.

**ADSA 1131**  
**Office Accounting Concepts II**  
Office Accounting Concepts II provides the opportunity to apply and reinforce basic knowledge of accounting concepts and procedures through the use of simulation and computerized accounting software. Prerequisite: ADSA 1130 or equivalent.

**ADSA 1136**  
**Desktop Publishing**  
Desktop Publishing is designed to introduce the student to the concepts, terminology, techniques, and applications of desktop publishing. The student will integrate text and graphics to produce professional-quality publications.

**ADSA 1141**  
**Customer Service for the Office Professional**  
Customer Service for the Office Professional covers the basic skills necessary to work effectively with customers. Basic customer service communication skills including telephone, technology, and writing are covered. Also included are customer retention, motivation, leadership and problem solving strategies.

**ADSA 1145**  
**Supervisory Management**  
Supervisory Management enhances participants ability to learn the skills required to effectively direct the work of others in the business world by working through people to develop and empower them. Important supervisory management concepts are stressed as well as how to apply the principles of management in the real world.

**ADSA 1190**  
**Presentation Graphics**  
Presentation Graphics covers the concepts of developing electronic slide shows using a computer application program. The keys to effective presentations are covered along with various printing techniques. This course also covers more advanced presentation techniques including animation, sound, scanning, and graphics.

**MEDICAL ADMINISTRATIVE ASSISTANT (ADSM)**

**ADSM 1120**  
**Medical Office Procedures**  
Medical Office Procedures introduces organization, technical, personal, and leadership skills critical to the integration of medical office tasks in today's fast paced healthcare environment. Topics explored include medicolegal regulations, telephone etiquette and techniques, scheduling, medical records management, word processing, accounting, banking and finance management principles. Content also includes computer security. Students will utilize a fully online integrated electronic health record system.

**ADSM 1190**  
**Healthcare Documentation**  
Healthcare Documentation introduces medical formatting and transcription skills for medical documentation. Dictation is transcribed from various specialties. The basics of voice technology will be explored. Emphasis will be in developing and improving editing and proof reading skills.

**ADSM 1200**  
**Introduction to Medical Coding, Billing and Insurance**  
Introduction to Medical Coding, Billing and Insurance provides a basic introduction to ICD-10-CM, ICD-10-PCS and CPT/HCPCS coding and coding compliance, a study of the various health insurance plans, reimbursement methodologies, and compliance strategies. Students will adhere to current regulations and established guidelines in code assignment. Students who master the material will gain sufficient understanding of coding for entry-level medical insurance specialist positions.

**ADSM 1210**  
**CPT/HCPCS Coding**  
CPT/HCPCS Coding is designed to prepare students to assign CPT (Current Procedural Terminology) coding system to code various body systems, disease processes and treatments in the outpatient settings, using exercises and medical records to develop skill and accuracy. Students will use the principles of coding to ensure proficiency in coding. Students will understand and use the current regulations and established guidelines in code assignment. Billing and insurance procedures as well as chargemaster description and maintenance will be addressed. Prerequisites: HC 1151, HC 1180 or BIOL 2245.

**ADSM 1220**  
**Diagnosis Coding**  
Diagnosis Coding will introduce the student to the ICD-10-CM classification system with an emphasis on the correct process of utilizing the alphabetic index and tabular list for code assignment. The focus will be on rules, conventions, instructions of ICD-10-CM as well as the chapter specific (pregnancy, injury, etc) including criteria for assignment of principal and additional diagnoses in various patient settings will be addressed. The impact of proper code assignment, MS-DRGs and reimbursement will also be covered. Prerequisites: HC 1151, HC 1180 or BIOL 2245.

**ADSM 1230**  
**Procedure Coding**  
Procedure Coding will demonstrate the application of principles, guidelines, and conventions of procedure coding by using the current International Classification of Diseases (ICD). Procedure Classification System (PCS) coding manual. Coding characteristics, conventions and guidelines will be applied in identifying and accurately assigning codes to procedures. Health records, manual and computerized coding methods, and coding references will be utilized in the coding process. Prerequisites: HC 1151, HC 1180 or BIOL 2245.

**ADSM 1240**  
**Introduction to Health Records**  
Introduction to Health Records provides a study that charts a path for success in the allied health field. The course focuses on how electronic health records (EHRs) and a philosophy of patient-centric care are currently impacting health information professionals in their everyday careers as well as the patients they serve. In a health information system that is becoming increasingly integrated and cross-disciplinary, health information students need to be equipped with the problem-solving skills to make important connections and to face the challenges and opportunities they will see in their careers.

**ADSM 1250**  
**Advanced Coding**  
Advanced Coding demonstrates the application, analysis and evaluation of coding principles, guidelines, and conventions from CPT, HCPCS, and ICD coding manuals. Students will use the principles of ICD-10-CM, ICD-10-PCS, and CPT/HCPCS coding to ensure proficiency in coding using actual patient charts and advanced concepts of coding. Students will apply current regulations and established guidelines in coding assignment. Students will use AHIMA Find-A-Code Encoder to apply codes and adhere to guidelines and conventions. Prerequisites: ADSM 1210, ADSM 1220, and ADSM 1230.

**ADSM 2200**  
**Board Review**  
Board review is the online capstone study and review course to sit for the certification exam for the certified coding specialist (CCS) certified coding specialist-physician based (CCS-P) and the certified professional coder (CPC) national examinations by AHIMA and AAPC. This course offers you a study plan, review of all major examination topics, mock pretest and post-test, guidance to good computer test-taking skills. Prerequisites: ADSM 1210, ADSM 1220, and ADSM 1230.
<table>
<thead>
<tr>
<th><strong>AGRICULTURE (AGRI)</strong></th>
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<tbody>
<tr>
<td><strong>AGRI 1101</strong></td>
</tr>
<tr>
<td><strong>Introduction to Animal Science</strong></td>
</tr>
<tr>
<td>Introduction to Animal Science provides students an introduction to animal science with an emphasis on the fundamental concepts of physiology, nutrition, animal breeding and management as applied to beef cattle, dairy cattle, poultry, sheep and swine production.</td>
</tr>
<tr>
<td><strong>AGRI 1102</strong></td>
</tr>
<tr>
<td><strong>Principles of Agronomy</strong></td>
</tr>
<tr>
<td>Principles of Agronomy 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.</td>
</tr>
<tr>
<td><strong>AGRI 1103</strong></td>
</tr>
<tr>
<td><strong>Introduction to Soil Science</strong></td>
</tr>
<tr>
<td>Introduction to Soil Science introduces students to the origin, formation, and classification of soils. This includes the physical, chemical, and biological properties of soils, soils as a medium for plant growth, elements, water, air, organic matter, and plant and animal life in the soil.</td>
</tr>
<tr>
<td><strong>AGRI 1110</strong></td>
</tr>
<tr>
<td><strong>Introduction to Horticulture</strong></td>
</tr>
<tr>
<td>Introduction to Horticulture emphasizes the growth process in production of fruits, vegetables, flowers, lawns, trees, and shrubs. Studies include planning, preparation and care of home grounds. Fundamental concepts in plant identification, growth, culture, landscape and design are also studied.</td>
</tr>
<tr>
<td><strong>AGRI 1115</strong></td>
</tr>
<tr>
<td><strong>Introduction to Shrimp Production</strong></td>
</tr>
<tr>
<td>Introduction to Shrimp Production provides students with an introduction to shrimp production with an emphasis on fundamental concepts of physiology, nutrition, life cycle, and management in various production methods along with history, processing, and marketing of shrimp.</td>
</tr>
<tr>
<td><strong>AGRI 1125</strong></td>
</tr>
<tr>
<td><strong>Custom Application</strong></td>
</tr>
<tr>
<td>Custom Application is designed for the student pursuing a career in crop production or agronomy services area. The student will receive hands-on instruction in the safe operation and calibration of custom sprayers and spreaders. The student will be prepared for and issued the Minnesota State Custom Application exams for categories (Core-A, Field Crop Pest- C, Seed Treatment-H) - leading to licensure in those areas.</td>
</tr>
<tr>
<td><strong>AGRI 1151</strong></td>
</tr>
<tr>
<td><strong>Farm Records &amp; Business Analysis</strong></td>
</tr>
<tr>
<td>Farm Records and Business Analysis emphasizes the maintenance and analysis of farm records. Special attention is given to the use of the Minnesota Farm Account Book and the analysis procedure. Topics include calculation of earnings, efficiency factors, total business and enterprise analysis. Computer record and financial statement software programs will be used.</td>
</tr>
<tr>
<td><strong>AGRI 1152</strong></td>
</tr>
<tr>
<td><strong>Agricultural Marketing and Prices</strong></td>
</tr>
<tr>
<td>Agricultural Marketing and Prices explores the economics of agricultural marketing, organization of markets and marketing enterprises, marketing policy, and price trends of agricultural commodities.</td>
</tr>
<tr>
<td><strong>AGRI 2201</strong></td>
</tr>
<tr>
<td><strong>Principles of Animal Nutrition</strong></td>
</tr>
<tr>
<td>Principles of Animal Nutrition covers the classification and function of nutrients, digestion, and utilization of feeds. This includes nutrient requirements for livestock and poultry, nutrient composition, and feeding standards.</td>
</tr>
<tr>
<td><strong>AGRI 2202</strong></td>
</tr>
<tr>
<td><strong>Weed Science</strong></td>
</tr>
<tr>
<td>Weed Science relates the principles of weed science to weed management situations encountered in the field. Methods of weed control, modes of action of herbicides, weed identification, and herbicide interactions will be emphasized.</td>
</tr>
<tr>
<td><strong>AGRI 2203</strong></td>
</tr>
<tr>
<td><strong>Soil Fertility and Fertilizer</strong></td>
</tr>
<tr>
<td>Soil Fertility and Fertilizer explores the chemical elements in the soil and plants. Soil testing, tissue testing, fertilizer nutrients, fertilizer products, and fertility recommendations are studied.</td>
</tr>
<tr>
<td><strong>AGRI 2204</strong></td>
</tr>
<tr>
<td><strong>Introduction to Precision Agriculture</strong></td>
</tr>
<tr>
<td>Introduction to Precision Agriculture is intended to serve as an introduction to Precision Agriculture is intended to serve as an introduction to GPS (Global Positioning Systems) and GIS (Geographical Information Systems) with an emphasis on agricultural use. Topics include precision farming, positioning systems, yield monitoring, and variable rate technology.</td>
</tr>
<tr>
<td><strong>AGRI 2205</strong></td>
</tr>
<tr>
<td><strong>Introduction to Precision Management Software</strong></td>
</tr>
<tr>
<td>Introduction to Precision Management Software is intended to serve as an introduction to several precision management software packages that are used to manage farming decisions and implement site specific crop management.</td>
</tr>
<tr>
<td><strong>AGRI 2212</strong></td>
</tr>
<tr>
<td><strong>Corn and Soybean Production</strong></td>
</tr>
<tr>
<td>Corn and Soybean Production explores practices used in corn and soybean production, variety and hybrid selection, seed bed preparation and planting, fertilizer programs, water management, weed control, harvesting, storage and marketing.</td>
</tr>
<tr>
<td><strong>AGRI 2214</strong></td>
</tr>
<tr>
<td><strong>Machinery Principles and Management</strong></td>
</tr>
<tr>
<td>Machinery Principles and Management will cover the utilization of farm equipment from the purchasing of equipment and managing the costs to the operation and maintenance of agricultural equipment.</td>
</tr>
<tr>
<td><strong>AGRI 2216</strong></td>
</tr>
<tr>
<td><strong>Introduction to Meat Science</strong></td>
</tr>
<tr>
<td>Introduction to Meat Science evaluates the principles of conformation, quality, and finish of animal carcasses. A comprehensive look at the meat industry. Studies include muscle structure, composition of meat animals, product identification, microbiology of meat, nutrient values, pricing and marketing.</td>
</tr>
<tr>
<td><strong>AGRI 2220</strong></td>
</tr>
<tr>
<td><strong>Building Construction Technology</strong></td>
</tr>
<tr>
<td>Building Construction Technology introduces instructional and laboratory exercises in light frame Building Construction Technology introduces instructional and laboratory exercises in light frame building construction. The course provides competence in skill areas including site layout, foundations, plumbing, insulating, sheathing, roofing and electrical wiring. The units are arranged in a logical sequence as to the order in which the various phases of construction are performed. Special emphasis is placed on safety and the use of modern tools, materials, and prefabricated components.</td>
</tr>
<tr>
<td><strong>AGRI 2222</strong></td>
</tr>
<tr>
<td><strong>Current Technical Competencies</strong></td>
</tr>
<tr>
<td>Current Technical Competencies introduces instructional and laboratory experiences to learners that are preparing for a career as an Agricultural Education teacher. The course will include laboratory experiences building basic mechanical and technological competence in manufacturing and workshop mechanics. Students will be expected to gain competence in a wide variety of skills including, but not limited to welding, small engines, fluid power, hydraulics and pneumatics. Teaching and learning strategies will demonstrate research based best practices that are proven effective in teaching manufacturing and mechanical technologies to high school students.</td>
</tr>
<tr>
<td><strong>AGRI 2235</strong></td>
</tr>
<tr>
<td><strong>Special Topics in Agriculture</strong></td>
</tr>
<tr>
<td>Covers a wide range of issues of current interest. Topics will be chosen to meet the needs of students. The class may be retaken for credit if the topic varies.</td>
</tr>
</tbody>
</table>
AGRI 2251 4
Principles of Farm and Ranch Management
Principles of Farm and Ranch Management emphasizes utilization of land, labor, capital and management in the organization and operation of a farm. Includes the organization of a farm and the decision-making processes involved in establishing a farm business. Analyzing, budgeting, and using principles of economics are considered in the decision making process.

AGRI 2252 2
Economic Principles of Agricultural Marketing
Designed for students to explore the macro marketing system in agriculture. Studies include market models, marketing functions, market utility, International markets, price discovery, supply & demand, and futures markets.

AGRI 2297 2-8
Agriculture Production Management Internship
Agriculture Production Management Internship places students on a farm operation to gain further experience in agricultural production management under the supervision of the agriculture department staff.

AGRI 2299 2-8
Agri-Business Internship
Agri-Business Internship places students in an agriculture related business to gain practical experience in agricultural sales and service and agricultural business management.

ART (ART)

ART 1101 3
Beginning Drawing
Beginning Drawing introduces a wide range of basic drawing approaches and materials. Students will experiment with traditional and contemporary styles to complete tasks in perspective and composition

ART 1103 1
Display and Exhibition
Display and Exhibition exposes the student to the organization, management and design and hanging of gallery displays. Students will be responsible for the pre-organization and arrangement of exhibitions. The course will cover both theoretical and practical experience with gallery management.

ART 1114 3
Foundations of Art 2D
Foundations of Art 2D introduces a visual vocabulary and tools essential for two-dimensional representation. Students will investigate the basic principles of composition, realism, and abstract expressionism through a variety of techniques and media.

ART 1115 3
Beginning Painting
Beginning Painting introduces traditional and contemporary painting techniques and materials. Students will explore formal and abstract elements to compose their own visual style.

ART 1118 3
Foundations of Art 3D
Foundations of Art 3D introduces a visual vocabulary and tools essential for three-dimensional representation. Students will utilize a variety of media and studio production methods to develop creative thinking and investigate the basic principles of art.

ART 1120 3
Art Appreciation
Art Appreciation investigates the creative process as it exists for the artist, the art historian, and the viewer. Students will be exposed to the history of art, the technical aspects of art, and to the creative mental process which takes place in both the making and viewing of art.

ART 1124 3
Introduction to Ceramics
Introduction to Ceramics will teach students to create clay objects using the potter's wheel and hand building techniques. Students also learn to operate a kiln and apply glaze finishes.

ART 1224 3
Investigations in Raku
Investigations in Raku will investigate the history and methods of Raku ceramics. There is an emphasis on glazes and firing techniques.

ART 2201 3
Intermediate Drawing
Intermediate Drawing deepens understanding of a wide range of drawing approaches and materials. Students will refine their application of traditional and contemporary styles to complete tasks in perspective and composition.

ART 2215 3
Intermediate Painting
Intermediate Painting deepens understanding of traditional and contemporary painting techniques and materials. Students will utilize formal and abstract elements to refine their own visual style. Prerequisite: ART 1115.

ART 2224 3
Intermediate Ceramics
Intermediate Ceramics reinforces beginning design experiences by combining methods of construction. Greater emphasis will be placed on glazing and finishing. Prerequisite: ART 1124.

ART 2230 3
Computer Graphics
Computer Graphics exposes students to photographic manipulation and applied illustrative techniques using Photoshop. Some topics to be covered are: raster vs. vector images, scanning and editing photographs, using a digital camera, designing and manipulating text to communicate ideas, and drawing basic objects for the purposes of illustration.

ART 2232 3
Advanced Computer Graphics
Advanced Computer Graphics explores the creative Photoshop techniques of image blending, shadows, image enhancement, type, and background effects. We will also focus on Web applications such as: Interface design, slicing, rollovers, animations and optimization.

ART 2240 3
Art History I
Art History I provides an overview of the history of painting, sculpture and architecture from the Stone Age to the Early Renaissance.

ART 2245 3
Art History II
Art History II provides an overview of the history of painting, sculpture, photography and architecture from the Renaissance to the contemporary era.

AMERICAN SIGN LANGUAGE (ASL)

ASL 1121 3
American Sign Language I
American Sign Language I will teach students basic ASL communication strategies used by the Deaf. Course includes expressive and receptive sign activities, sign vocabulary, finger spelling and numbers, and aspects of Deaf culture. This course is offered on-line only.

ASL 1122 3
American Sign Language II
American Sign Language II continues to teach basic ASL, grammatical structure, fingerspelling and numbers, conversational strategies and Deaf history and culture. ASL Levels one-four are designed for students interested in becoming certified sign language interpreters. Prerequisite: ASL 1121.
**AUTOMOTIVE TECHNOLOGY (AUTO also see TRAN)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTO 1120</td>
<td>Air Conditioning</td>
<td>3</td>
</tr>
<tr>
<td>AUTO 1126</td>
<td>Steering/Suspension/Alignment</td>
<td>3</td>
</tr>
<tr>
<td>AUTO 1131</td>
<td>Brakes</td>
<td>3</td>
</tr>
<tr>
<td>AUTO 1136</td>
<td>Engine Technology and Lab</td>
<td>4</td>
</tr>
<tr>
<td>AUTO 1194</td>
<td>Commercial Driver License Learner Permit Preparation</td>
<td>1</td>
</tr>
<tr>
<td>AUTO 1195</td>
<td>Commercial Drivers License</td>
<td>2</td>
</tr>
<tr>
<td>AUTO 2107</td>
<td>Automatic Transmissions</td>
<td>3</td>
</tr>
<tr>
<td>AUTO 2108</td>
<td>Introduction to Hybrid Electric Vehicle</td>
<td>3</td>
</tr>
<tr>
<td>AUTO 2113</td>
<td>Manual Drivetrain and Axles</td>
<td>3</td>
</tr>
<tr>
<td>AUTO 2121</td>
<td>Engine Performance II</td>
<td>5</td>
</tr>
<tr>
<td>AUTO 2122</td>
<td>Engine Performance III</td>
<td>5</td>
</tr>
<tr>
<td>AUTO 2146</td>
<td>Body Computer Controlled Electrical Systems</td>
<td>4</td>
</tr>
<tr>
<td>AUTO 2155</td>
<td>Intro to Diesel Electronics</td>
<td>4</td>
</tr>
<tr>
<td>AUTO 2190</td>
<td>Summer Internship</td>
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</table>

**BIOLOGY (BIOL)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Goal Area</th>
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</thead>
<tbody>
<tr>
<td>BIOL 1100</td>
<td>Survey of Biological Science</td>
<td>3</td>
<td>03</td>
</tr>
<tr>
<td>BIOL 1110</td>
<td>Principles of Biology I</td>
<td>4</td>
<td>03</td>
</tr>
<tr>
<td>BIOL 1111</td>
<td>Principles of Biology II</td>
<td>4</td>
<td>03</td>
</tr>
<tr>
<td>BIOL 1115</td>
<td>Human Biology</td>
<td>3</td>
<td>03</td>
</tr>
</tbody>
</table>

**Prerequisite:** TRAN 1100
function of healthy human body systems and investigate numerous abnormalities and disease states. Additional topics will include human development, aging, human genetics, DNA technology, genetic engineering, biotechnology, and ecological interactions. This course includes a lab. Prerequisite: STSK 0090 or placement by multiple measures.

Biol 2100 Ecology 3
Ecology introduces the student to the study of inter-relationships between organisms and their environment. Topics include fundamental principles of ecology at the levels of individual, population, community, and ecosystem, as well as flow of energy, organism-level interactions, and community ecology with an emphasis on applied ecology. Field and laboratory activities will support selected lecture topics. Prerequisite: BIOL 1110.

Biol 2201 Human Anatomy 4
Human Anatomy covers structures of the human body from the cellular to organ system level. This course includes study of the human body organization, cellular structure, tissues and the following human organ systems: integumentary, skeletal, muscular, nervous, endocrine, respiratory, urinary, digestive, and reproductive. Laboratory exercises are designed to reinforce and support the lecture and include hands-on dissections that coincide with the organ systems covered in the lecture topics. Prerequisite: BIOL 1110 or BIOL 1115 is recommended.

Biol 2202 Human Physiology 4
Human Physiology covers an applied and systematic approach to the physiology of the cells, tissues, organs, and organ systems of the human body. Laboratory exercises support the lecture and include hands-on exercises that coincide with the systems covered in the lecture topics. Prerequisite: BIOL 2201.

Biol 2230 Plant Biology 4
Plant Biology covers the fundamental concepts of botany, including plant diversity; taxonomy, morphology, physiology, development, and reproduction. Other topics which will be covered include: viruses, bacteria, and fungi. Laboratory exercises deal with plant, bacteria, and fungi structure and function. Prerequisite: BIOL 1110.

Biol 2240 Genetics 3
Genetics covers the fundamentals of plant and animal genetics and includes the study of modes of inheritance, mechanisms of gene action, human genetics, and the behavior of genes in populations. Lecture and lab included. Prerequisite: BIOL 1110.

Biol 2245 Medical Terminology 2
Medical Terminology provides students in any of the health science disciplines or pre-professional studies with working knowledge of the terminology used in the health professions and/or biology. Prerequisite: STSK 0090 or placement by multiple measures.

Biol 2270 Microbiology 4
Microbiology covers the fundamentals of the science of microbiology, microscopy, structure and function of cells, metabolism, microbial growth and control, genetics, and recombinant DNA technology. Also covered is a survey of the microbial world including bacteria, viruses, and pathogenic fungi, protozoa and multi-cellular organisms. The interaction between the microbe and its host is covered as well as environmental and applied or industrial microbiology. Laboratory exercises are designed to reinforce lecture material and provide an opportunity for students to (1) master microbiological techniques, (2) develop critical thinking skills, and (3) learn to analyze and present data. Prerequisite: BIOL 1110, CHEM 1101 or CHEM 1150 is recommended.
BUS 2105
Introduction to Entrepreneurship
Introduction to Entrepreneurship engages students in starting a new business, developing a business plan, buying an existing business, and understanding the realities of the entrepreneurial lifestyle. Entrepreneurial issues involved in managing and growing an entrepreneurial venture will be covered in a separate class. This course is intended for all students at Minnesota West regardless of their major.

BUS 2201
Principles of Accounting I
Principles of Accounting I teaches the basic concepts that are the prerequisites for all other courses in accounting. Included is an introduction to the accounting system, the processing of accounting data, the purposes and construction of different types of financial statements, and the development of financial accounting.

BUS 2202
Principles of Accounting II
Principles of Accounting II develops accounting as a planning, analysis, and control tool facilitating the decision-making process of management. The course examines cost and managerial accounting principles and practices, including cost accounting, budgeting, performance measurement, and cost-volume-profit analysis.

BUS 2221
Principles of Management
Principles of Management studies the general principles of management planning, organizing, staffing, directing and controlling the establishment. Course emphasis is placed on the development of goals, policies, and systems necessary to coordinate all resources of an organization to achieve objectives. The importance of adequate managerial communication and motivation in accomplishing specific purposes, and the decision-making and the problem-solving process are emphasized.

BUS 2230
Principles of Marketing
Principles of Marketing analyzes the role and importance of marketing as a directing force in a business organization and its relationship to our society. Emphasis is placed on principles, methods, and problems involved in the marketing operations of the firm, including development, pricing, marketing channels, and promotion.

BUS 2232
Professional Selling
Professional Selling emphasizes the role and nature of professional selling and the total marketing and promotional effort in accomplishing the objectives of a business enterprise. The principles, practices, and psychology of salesmanship are stressed with a study of customer buying/behavior/motivational theories.

BUS 2233
Advertising
Advertising studies the role of advertising and its relationship to the total promotional and marketing efforts of any organization selling goods/services/ideas. Emphasis is placed on selecting the right appeals, layout, and media in reaching the target market. The total communication process is studied in light of various consumer psychology/behavioral theories.

BUS 2241
Business Law
Business Law will provide a basic understanding of the American legal system and its processes, and an enhanced understanding of the modern global business environment. It examines the legal framework within which business is transacted, not only by business and professional people but also by consumers. Topics include origin of law, ethics, contracts, sales, bailments, negotiable instruments, secured transactions, bankruptcy, real and personal property, product liability, dispute resolution, principal and agent relationships, and business organizational structures.

BUS 2242
Business Communications
Business Communications covers theory and offers practice in the fundamentals of good business communications. Emphasis is placed on the construction of effective (and positive) business letter writing. Resume writing, cover letters, interviewing techniques, memos and reports are also integral parts of the course.

BUS 2275
Human Resources Management
Human Resources Management provides an analysis of the importance of personnel management in accomplishing the established objectives of a business. Utilization of human resources is emphasized. Management of proper relationships with labor unions, government authorities, and the total community is studied.

BUS 2297
Internship
Internship offers students paid or unpaid work experience closely related to their academic and career pursuits. Activities are closely supervised by college instructors and on-the-job supervisors.

CHEMISTRY (CHEM)

CHEM 1100
Introduction to Chemistry
Introduction to Chemistry introduces fundamental theories and applications of chemistry including measurement, atomic theory, bonding theory, nomenclature, chemical quantities, chemical reactions, states of matter, solutions, acids and bases, and nuclear chemistry. This course is for students with no recent background in chemistry and is intended for non-science majors and students preparing for General Chemistry I. This course includes a lab. Prerequisite: High school algebra (or) MATH 1107 (or) placement by multiple measures.

CHEM 1101
General Chemistry I
General Chemistry I provides an in-depth introduction to fundamental theories and applications of chemistry including measurements, matter, chemical quantities, thermochemistry, atomic theory, bonding theory, and gases. This course is for students considering a major in science, pre-engineering, or pre-health (medicine, pharmacy, veterinary medicine, four-year nursing). This course is the first semester in a two-semester general chemistry sequence. This course includes a lab. Prerequisites: High school chemistry or CHEM 1100 or CHEM 1150. High school algebra (or) MATH 1107 (or) placement by multiple measures.

CHEM 1102
General Chemistry II
General Chemistry II continues CHEM 1101 with emphasis on liquids, solids, solutions and solubility, kinetics, equilibrium, acids and bases, thermodynamics, electrochemistry, coordination compounds, and nuclear chemistry. This course is for students considering a major in science, pre-engineering, or pre-health (medicine, pharmacy, veterinary medicine, four-year nursing). This course includes a lab. Prerequisite: CHEM 1101.

CHEM 1150
Survey of Chemistry
Survey of Chemistry introduces key concepts of general, organic, and biological chemistry including measurement, matter, nomenclature, chemical quantities, chemical reactions, solutions, acids and bases, organic compound families and reactions, and macromolecules of biological importance such as carbohydrates, lipids, proteins, and nucleic acids. This course is for pre-health, medical science, and liberal arts students, and no recent background in chemistry is required. This course includes a lab. Prerequisite: High school algebra (or) MATH 1107 (or) placement by multiple measures.

CHEM 2201
Organic Chemistry I
Organic Chemistry I covers the structure, classification, and fundamental reactions of carbon compounds. Specific topics include molecular structure, nomenclature, isomerism, reaction mechanisms, and reaction classes including proton transfer, nucleophilic substitution, elimination, and alkene addition. This course is for students majoring in
CHEM 2202 5
Organic Chemistry II
Organic Chemistry II continues CHEM 2201 with emphasis on multistep organic synthesis, orbital interactions, structure determination, and reaction classes including addition, nucleophilic addition-elimination, aromatic substitution, pericyclic reactions, free radical reactions, and polymerization. This course is for students majoring in science, pre-engineering, or pre-health (medicine, pharmacy, veterinary medicine). This course includes a lab. Prerequisite: CHEM 2201.

CMHW 1100 3
Health Communication, Teaching, and Capacity Building
Health Communication, Teaching & Capacity Building will introduce concepts of verbal and non-verbal communication required for the CHW to effectively interact with clients, their families, and healthcare providers of all backgrounds. Application of active listening and motivational interviewing techniques will be practiced. Emphasis will be given to the CHW’s role as teacher to help increase the capability of the community and the client's ability to access the health care and social services system. Materials will emphasize empowering clients to become self-sufficient in achieving personal health goals within the role of a CHW. Co-requisite: CMHW 1000.

CMHW 1200 3
Documentation, Legal & Ethical Issues in Community Health Work
Documentation, Legal & Ethical Issues in Community Health Work focuses on the legal and ethical dimensions of the Community Health Worker (CHW) role. Professional boundaries, agency policies, confidentiality, liability, mandatory reporting and cultural issues that influence legal and ethical responsibilities will be introduced. Documentation of client visits that meets legal and agency requirements in an appropriate, accurate, thorough manner will be introduced and practiced. Prerequisite: CMHW 1100.

CMHW 1250 2
Health Promotion I
Health Promotion I focuses on the role of the Community Health Worker (CHW) in health promotion and disease prevention management strategies related to the topics of trauma informed care, mental health issues, social determinants of health, and health equity/literacy. Cultural navigation skills and connecting clients to resources and support systems will be practiced. Prerequisites: CMHW 1100. Co-requisites: CMHW 1200 and CMHW 1300.

CMHW 1300 3
Health Promotion II
Health Promotion II explores the role of the Community Health Worker (CHW) in health promotion and disease prevention management strategies related to the topics of sexuality and reproductive health, pregnancy, infant nutrition and feeding, child development, chronic disease, infectious disease, communicable disease, diabetes, heart disease and stroke, cancer, oral health, asthma, healthy aging. Cultural navigation skills and connecting clients to resources and support systems will be practiced. Co-requisite: CMHW 1200 and CMHW 1250. Prerequisites: CMHW 1100.

CMHW 1400 2
Community Health Worker Internship
Community Health Worker Internship is a supervised practical experience (72-80 hours) allowing the CHW student to explore opportunities for independent work in the Community Health Worker role. The student may choose to do all internship hours at one organization (All sites and supervisors must be approved by the instructor prior to student participation). Prerequisite: CMHW 1200, CMHW 1250, and CMHW 1300.

CMST 1101 3
Public Speaking
Public Speaking develops students experience in the basic fundamentals of effective public speaking. Students will prepare and deliver a variety of speeches as well as critique them.
Irish stories shared in the class firsthand while in Ireland. Students will experience the places and culture they have read about through the classroom portion of the course, relating to Ireland, and perform and write their own story. After the course, students will study the different types of stories, read different stories and explore the importance storytelling has across cultures, specifically in Ireland. Storytelling in Ireland will develop students understanding of the impact of storytelling on culture shock and communication competency.

CMST 1120
Intercultural Communication
Meets Goal Areas: 07, 08
Intercultural Communication develops an awareness about the importance of intercultural communication and how our own unique cultural experiences affect our communication choices. Listening, nonverbal communication, and other topics relating to intercultural communication like culture shock and communication competency will be explored.

CMST 1130
Small Group Communication
Meets Goal Area: 01
Small Group Communication develops students understanding of how the group communication process works. Students will also develop knowledge on specific group communication terms and skills while participating in small groups.

CMST 1140
Topics in Communication: Puerto Rican Culture
Meets Goal Areas: 07, 08
Topics in Communication: Puerto Rican Culture will teach students how to be effective intercultural communicators by learning about various aspects of communicating across cultures. After completing the classroom portion of the course, students will have the opportunity to travel to Puerto Rico to experience another culture firsthand and apply the intercultural communication skills that they have learned in the course. Students will experience the vibrant local heritage of Puerto Rico as they explore and celebrate traditional customs with locals.

CMST 1150
Exploring Mass Media
Meets Goal Areas: 05, 09
Exploring Mass Media develops media-literate citizens through the examination of various aspects of mass communication. Emphasis will be placed on developing a critical awareness of mass media, convergence, strategic communication, media ethics, and the societal impact of media.

CMST 1160
Basic Media Writing
Meets Goal Areas: 01, 09
Basic Media Writing develops skills in media writing, reporting and editing. The focus of this class will be writing which will be done through various skill-building exercises and written assignments for various media formats and audiences which could include broadcast, print, online, and social media.

CMST 1170
Public Relations
Meets Goal Area: 09
Public Relations explores the principles, practices and ethics of strategic communication used in public relations historically and in the modern world of communication. By using an active learning approach, students will research, create and evaluate public relations messages.

CMST 2210
Oral Interpretation
Meets Goal Area: 06
Oral Interpretation focuses on interpretation of short fiction, poetry, drama, and children's literature for oral presentation. The student will examine selected texts and incorporate body and voice control techniques in performance.

CMST 2235
Special Topics: Storytelling in Ireland
Meets Goal Area: 06
Storytelling in Ireland will develop students understanding of the importance storytelling has across cultures, specifically in Ireland. Students will study the different types of stories, read different stories relating to Ireland, and perform and write their own story. After the classroom portion of the course, students will travel to Ireland to experience the places and culture they have read about through the Irish stories shared in the class firsthand while in Ireland.

COSMETOLOGY (COSM)

COSM 1100
Preclinic Introduction
Preclinic Introduction will examine the field of Cosmetology which includes hair, nail and skin care. Areas of study will include professional image, Minnesota laws and rules, safety, cleaning and disinfection, anatomy, electricity, and chemistry as related to the profession. This course will contribute 96 hours towards licensure.

COSM 1105
Preclinic Hair Care
Preclinic Hair Care will examine the basics elements of all hair care services. Topics will include trichology, shampooing, conditioning, cutting, and hair design. Students will demonstrate styling skills that meet the needs of a varied clientele. This course will contribute 96 hours towards licensure.

COSM 1110
Preclinic Nail Care
Preclinic Nail Care will examine nail care theory and practical experiences involving manicures, pedicures, and artificial enhancements. This course will contribute 112 hours towards licensure.

COSM 1115
Preclinic Color and Texture
Preclinic Color and Texture will examine coloring and chemical texture services. Provides an understanding of temporary, semi-permanent, demi-permanent, and permanent color as well as lighting and corrective coloring techniques. Texture services, such as permanent waving, soft-curl perm, and hair relaxing will also be performed. This course will contribute 112 hours towards licensure.

COSM 1120
Preclinic Skin Care
Preclinic Skin Care will examine dermatology and skin care services which include skin analysis, facial massage, makeup application, and waxing. This course will contribute 112 hours towards licensure.

COSM 1130
Advanced Hair Care
Advanced Hair Care enables students to examine opportunities to develop the practical skills necessary for entry-level salon work concentrating on advanced techniques in chemical hair control, safety procedures and sanitation, hair coloring formulations and applications. This course will concentrate on hair color theory, advanced haircutting techniques and methodologies, communications skills and retail operations. This course will contribute 80 hours toward licensure. The State of Minnesota mandates the hours to go toward the hour requirements. Prerequisites: COSM 1100, COSM 1105, COSM 1110, COSM 1115, COSM 1120 or permission from instructor.

COSM 1135
Salon Preparation
Salon Preparation facilitates the development of practical skills necessary for entry-level salon work by concentrating on safety procedures and sanitation, business structure and organization, technical writing and creation of a professional resume, interview techniques and preparation, retail operations, and the required skill readiness to perform salon services. This course will contribute 80 hours toward licensure. The State of Minnesota mandates the hours to go toward the hour requirements. Prerequisite: Instructor Permission Required.

COSM 1140
Clinic I
Clinic I will assist students to develop the practical skills necessary for entry-level salon work concentrating on nail structure and growth, nail diseases and disorders, as well as advanced techniques for manicuring, pedicuring, and artificial nail applications. This course will contribute 112 hours toward licensure. The State of Minnesota mandates the hours to go toward the hour requirements. Prerequisites: COSM 1100, COSM 1105, COSM 1110, COSM 1115, COSM 1120 or by permission from instructor.

COSM 1145
Clinic II
Clinic II serves to develop the practical skills necessary for entry-level salon work. This course will also provide lecture hours concentrating on salon management, Minnesota Cosmetology Laws and Rules, communication skills, and retail operations. This course will contribute 112 hours towards licensure. The State of Minnesota mandates the hours to go toward the hour requirements. Prerequisite: Instructor Permission Required.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSM 1150</td>
<td>Clinic III</td>
<td>4</td>
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<tr>
<td>COSM 1155</td>
<td>Clinic IV</td>
<td>3</td>
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<tr>
<td>COSM 1160</td>
<td>Clinic V</td>
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<tr>
<td>COSM 1165</td>
<td>Clinic VI</td>
<td>3</td>
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<tr>
<td>COSM 1170</td>
<td>Clinic VII</td>
<td>3</td>
</tr>
<tr>
<td>COSM 1175</td>
<td>Clinic VIII</td>
<td>3</td>
</tr>
</tbody>
</table>

**COSM 1150 Clinic III**
Clinic III will facilitate development of the practical skills necessary for entry-level salon work concentrating on nail tip enhancement, application, and artificial eyelash extension and enhancement application methodologies. Estheticians will also focus on the completion of the quizzes needed to conclude their Minnesota requirements, as well as review for the esthetician's state board written and practical exams. This course will contribute 112 hours toward licensure. The State of Minnesota mandates the hours to go toward the hour requirements.

**COSM 1155 Clinic IV**
Clinic IV will apply practical skills necessary for entry-level salon work. Cosmetologists and Estheticians will concentrate on safety procedures and sanitation, plan and perform specialty facial services to enhance skin, perform advanced facial and body hair removal procedures, and artificial eyelash extension and enhancement application methodologies. Estheticians will also focus on the completion of the quizzes needed to conclude their Minnesota requirements, as well as review for the esthetician's state board written and practical exams. This course will contribute 80 hours toward licensure. The State of Minnesota mandates the hours to go toward the hour requirements. Prerequisite: Instructor permission required.

**COSM 1160 Clinic V**
Clinic V facilitates students to explore opportunities to develop the practical skills necessary for entry-level salon work concentrating on hair and scalp analysis, manual texture manipulations including braiding and twisting, application and customization of wigs and hair additions/extensions, safety procedures and sanitation, and fulfillment of state mandated service quotas for licensure. This course will contribute 96 hours toward licensure. The State of Minnesota mandates the hours to go toward the hour requirements. Prerequisites: COSM 1100, COSM 1105, COSM 1110, COSM 1115, COSM 1120 or by permission from instructor.

**COSM 1165 Clinic VI**
Clinic VI gives students the opportunity to develop the practical skills necessary for entry-level salon work concentrating on understanding and implementation of Minnesota State Board of Cosmetology Laws and Rules, preparation for state written and partial skills assessments, and fulfillment of state mandated service quotas for licensure. This course will contribute 96 hours toward licensure. The State of Minnesota mandates the hours to go toward the hour requirements. Prerequisites: Preclinic courses COSM 1100, COSM 1105, COSM 1110, COSM 1115, COSM 1120 or by permission from instructor.

**COSM 1170 Clinic VII**
Clinic VII enables students to examine opportunities to develop the practical skills necessary for entry-level salon work concentrating on advanced techniques in chemical texture control, haircutting, safety procedures and sanitation, hair coloring formulations and applications, fulfillment of state mandated service quotas for licensure, and implementation of soft skills with an emphasis on client consultation and effective professional communication. This course will contribute 96 hours toward licensure. The State of Minnesota mandates the hours to go toward the hour requirements. Prerequisites: COSM 1100, COSM 1105, COSM 1110, COSM 1115, COSM 1120 or by permission from instructor.

**COSM 1175 Clinic VIII**
Clinic VIII enables students to examine opportunities to develop the practical skills necessary for entry-level salon work concentrating on advanced techniques in chemical texture control, haircutting, safety procedures and sanitation, hair coloring formulations and applications, fulfillment of state mandated service quotas for licensure, and implementation of soft skills with an emphasis on client consultation and effective professional communication. This course will contribute 96 hours toward licensure. The State of Minnesota mandates the hours to go toward the hour requirements. Prerequisites: COSM 1100, COSM 1105, COSM 1110, COSM 1115, COSM 1120 or by permission from instructor.

**COSM 1181 License Preparation for Cosmetology I**
License Preparation for Cosmetology I prepares the student for the Minnesota State Board written and practical examinations, as well as licensure in alternate states. Students will review Minnesota Statutes and Rules in preparation for the required skills readiness tests and salon experience. This course will provide students with an opportunity to develop the practical skills necessary for entry-level salon work, concentrating on safety procedures and sanitation. This course prepares students for licensure and entry level salon employment. This course will contribute 48 hours toward licensure. The State of Minnesota mandates the hours to go toward the hour requirements. Prerequisites: COSM 1100, COSM 1105, COSM 1110, COSM 1115, COSM 1120 or by permission from instructor.

**COSM 1182 License Preparation for Cosmetology II**
License Preparation for Cosmetology II prepares the student for both their Minnesota State Board written and practical examinations. Students will review Minnesota Statutes and Rules in preparation for the required skills readiness tests and salon experience. This course will provide students with an opportunity to develop the practical skills necessary for entry-level salon work, concentrating on safety procedures and sanitation. This course will cover basic anatomy and physiology, skin structure, skin disorders and diseases, as well as the basic components of cosmetic chemistry. This course will contribute 48 hours toward licensure. The State of Minnesota mandates the hours to go toward the hour requirements. Prerequisites: COSM 1100, COSM 1105, COSM 1110, COSM 1115, COSM 1120 or by permission from instructor.

**COSM 1220 Salon Operations VIII**
Salon Operations VIII provides additional hours for licensure in other states along with additional hours needed to complete the Nail Technician program and prepare for licensure. This course may also be used to fulfill the hour requirements for the Cosmetology and Esthetics programs. Students will apply and practice safety/sanitation procedures along with operational requirements. Students will have an opportunity to develop the practical skills necessary for entry level salon work pertaining to the program area of study, whether it is Cosmetology, Nail Tech or Esthetics. Prerequisite: Completion of Minnesota required hours in Cosmetology, Nail Tech, or Esthetician course.

**CARPENTRY (CRPT)**

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<tr>
<th>Course Code</th>
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**CRPT 1101 Tool Safety, Construction Terms & Materials**
Tool Safety, Construction Terms and Materials helps the student to learn the different types of materials and terms used on all construction sites and how to maintain and use all hand and power tools.

**CRPT 1105 Floor and Wall Framing**
Floor and Wall Framing assists students in gaining hands-on experience laying out, building, straightening, bracing and leveling walls and floors. During lab activities they will lay out and erect the supporting structures for residential floor and wall components.

**CRPT 1135 Exterior Finishing Wall and Roof Covering**
Exterior Finishing, Wall and Roof Covering will cover finishing the exterior of a building which includes the door and window units and all the materials that cover the roof and exterior. They must also give weathertight protection to the roof and exterior walls.

**CRPT 1150 Site Layout and Foundations**
Site Layout and Foundations introduces students to the tools and skills necessary to lay out a building site and construction methods used to form and pour concrete footings for a building.
CRPT 1155
Building Science
Building Science will teach students about the house as a system and will include advanced topics in building shell components, air sealing, insulation, air quality and health and safety.

CRPT 1160
Roof Framing
Roof Framing will teach students the theory behind trusses, stick framing and roof loads. Students will be taught how to use a framing square and roof terminology. Students completing this class will be able to build a gable roof system, layout and cut hip and valley rafters and identify various types of roof trusses. Students will install roof truss systems, hand frame roof sections of various styles, including ceiling vaults and trays and install roof sheathing.

CRPT 1170
Applied Carpentry Calculations and Estimating
Applied Carpentry Calculations and Estimating covers the mathematical skills necessary for estimating materials, performing necessary calculations and conversions necessary for interior and exterior work. Application on linear, square and cubic measurements and their relationship to the construction trades process will be studied.

CRPT 2205
Foundations and Floors
Designed to give the student hands-on experience with laying out and squaring up foundation walls, and actual construction of various types of foundation structures for a residential home. Concrete mixes, estimating, pouring consistencies, placement and finishing techniques for vertical and flatwork concrete pours are also included.

CRPT 2215
Concrete Technology
Covers designing concrete mixes for specific uses, preparing sub-base areas and building forms, handling and placement of concrete mixes and finishing techniques.

CRPT 2235
Wall and Roof Framing
Designed for identification and assembly of all components in Western Platform framing construction in accordance with all state and local codes. Students will perform horizontal and vertical layout of interior and exterior wall assemblies. Erect, plumb and brace walls, fasten components together, and install exterior wall sheathing. Students will install roof truss systems, hand frame roof sections of various styles, including ceiling vaults and trays, install roof sheathing and apply shingles and flashings.

CRPT 2237
Exterior Finish and Shingling
Covers identification and application of all types of siding, shingles, soffet and facia covers and rain gutters. Also covers attic ventilation equipment installation. These skills will be developed by the construction of an on-site built residential home.

CRPT 2242
Deck and Porch Construction
Deck and Porch Construction will teach the students about the construction of decks, porches, and patios, the materials used in their construction, and the methods of handling a variety of materials.

CRPT 2245
Cabinet Layout and Design
Provides training to analyze cabinet needs and available spaces and design cabinets for specific uses. Drawing up of basic construction plans is an integral part of this course.

CRPT 2249
Cabinet Installation
Cabinet Installation takes the students through the process of cabinet installation methods, counter top construction and installation and finishing of areas such as kitchens and bathrooms.

CRPT 2250
Cabinet Construction
Explore the construction of a variety of kitchen, bathroom, utility, and specialty cabinets and countertops.
CSBM 1200  
Introduction to Computers for Small Business  
This course covers the basics of microcomputer systems. The student will gain an overview of DOS, Word-Processing, Database file management and Spreadsheets. This will provide a good foundation for further computer training.

CSBM 1202  
Windows Operating Systems in Small Business  
This course covers Windows as an operating system. The emphasis is on concepts and commands that will enable the student to better understand and maintain their own microcomputer system.

CSBM 1204  
Word-Processing for Small Business  
This course covers the use of word-processing software for business applications. The student will be able to create, edit, manipulate and print documents using selected software.

CSBM 1206  
Spreadsheets for Small Business  
This course covers the use of Spreadsheet software for business applications. The student will be able to create, edit, manipulate and print documents using selected software.

CSBM 1208  
Data Base Management for Small Business  
This course covers the use of database management software for business applications. The student will be able to create, edit, manipulate and print documents using selected software.

CSBM 1210  
Desktop Publishing for Small Business  
This course covers desktop publishing techniques and applications used to design professional looking documents. The student will be able to create, edit, manipulate and print documents using selected software.

CSBM 1212  
Introduction to Recordkeeping for Small Business  
This course introduces the principles and systems of accounting in a small business. Accounting records and reports are critical in management of a small business.

CSBM 1214  
Sales Order Entry for Small Business  
This course teaches the proper method of gathering and entering sales data. The student will know the difference between the sale that needs to interact with perpetual inventory, and which do not. The student will learn how sales tax affects all types of sales. Customers will be setup properly to reflect the discount, chart of account number, sales and use taxes, and pricing levels that apply, as well as customer categories for statement purposes.

CSBM 1216  
Inventory Control for Small Business  
This course teaches the correct type of inventory method that the company needs to use, FIFO, LIFO, Average Cost, or Standard Method. The student will learn to enter each inventory item, vendor product code, proper department, current cost, selling price categories, as well as the product code. The student will learn how to enter, and process purchase orders. The student will fill out, receive, post, update inventory, and convert purchase orders to accounts payable invoices. The student will learn how to utilize all aspects of manufacturing assemblies, if it applies to their company. The student will understand physical inventory, and maintain the perpetual inventory based on actual amounts, and correct prices for each item.

CSBM 1218  
Payroll Year End Close for Small Business  
This course covers the process required to close the Payroll system at the end of a calendar year. The student will be able to reconcile payroll records, print the required tax reports and prepare the system for the next year using the selected software package.

CSBM 1220  
Accounting Year End Close for Small Business  
This course covers the process required to close the Accounting system at the end of a fiscal year. The student will be able to reconcile accounting records, post year-end journal entries and prepare the system for the new year using the selected software package.

CSBM 1222  
Network Administration for Small Business  
This course introduces the student to network operating procedures. The student will be able to operate their implemented system in a multi-user environment.

CSBM 1224  
Software Upgrade for Small Business  
This course covers the process required to evaluate software upgrades. The student will develop a software efficiency model and will evaluate that model against vendor documentation to decide on the proposed upgrade.

CSBM 1226  
Software Analysis for Small Business  
This course covers the process required to evaluate software products. The student will develop a software selection model, review appropriate software products and implement a decision process.

CSBM 1228  
Hardware Analysis for Small Business  
This course covers the process required to evaluate computer hardware products. The student will develop a hardware selection model, review appropriate hardware products and implement a decision process.

CSBM 1230  
Operations Manual for Small Business  
This course covers the process of documenting the system operating procedures implemented during the installation and configuration and data entry phases. The student will assemble all documentation into an operations manual.

CSBM 1232  
Asset Management for Small Business  
This course teaches the concept of asset valuation as it relates to actual and depreciated value. The student will learn how to use standard depreciation methods to determine the current months depreciation expense, and correct offsetting accumulated depreciation for each class of fixed assets. The student will enter all company assets in the fixed asset module, when the balance sheet is setup and enter each asset properly as it is purchased during the ongoing business cycle.

CSBM 1234  
Financial Statement Analysis for Small Business  
This course teaches the generally accepted business ratios that apply to performance when compared to generally accepted industry standards. The student will learn which ratios apply, how to compute the ratios, and the importance of each ratio. The student will use company data that comes from very accurate accrual financial statement. After computing these ratios, the student will display knowledge of the importance of these trends, as they relate to the success of the business.

CSBM 1236  
System Evaluation for Small Business  
This course covers the process used to evaluate the completed system against the original project plan. The student will develop a document outlining the projects strengths, weakness, needed improvements and a future system growth path.

COMPUTER SCIENCE (CSCI)

CSCI 1100  
Microcomputer Keyboarding  
Microcomputer Keyboarding provides basic instruction on the use of the electronic keyboard. Basic touch keying is taught to develop the student's skill in rapidly and efficiently entering information into the
CSCI 1102
Computer Applications I
Computer Applications I introduces the student to basic computer concepts and basic hardware and software. Topics include: word processing, spreadsheets, databases, presentations and graphics, document integration, email best practices, introduction to programming, use of computers in the business world, cybersecurity, and computers and their impact on society as a whole.

CSCI 1110
Concepts of Coding
Concepts of Coding exposes the student to computer science foundation logic within a friendly, game-like, coding environment, using JavaScript to generate immediate interactive results.

CSCI 1150
Presentation Development
Presentation Development I presents introductory components of design and development using Microsoft PowerPoint. As well as completion of several projects, quizzes and tests per chapter, students will have an in-depth knowledge of how to create an advanced presentation for all types of uses. Prerequisite: CSCI 1102.

CSCI 2100
Computer Applications 2
Computer Applications 2 provides a comprehensive and advanced look at the use of computers in today's society. Emphasis is placed upon the integrated nature of many of today's major applications. Explores the advanced uses of and integration features of word processing documents, database files, spreadsheets and graphic presentations. Prerequisite: CSCI 1102.

CSCI 2105
Advanced Database with SQL
Advanced Database Concepts with SQL introduces a comprehensive look at SQL (Structured Query Language) which is a programming language that is used by diverse groups of programmers today. Learning of SQL commands and database design and the many uses of SQL. Prerequisites: CSCI 1102 and ACCT 1122.

CSCI 2140
Electronic Spreadsheets and Graphics
Electronic Spreadsheets and Graphics explores topics of statistical applications, managing database systems, and various graphical capabilities using integrated business simulations. Internal and external program utilities to aid in scanning, importing graphics and combining files will be introduced. Competency in statistical and logical formulas, charting techniques, database manipulation and macro design is expected. Prerequisite: CSCI 1102.

CSCI 2150
Multimedia for the Web
Multimedia for the Web explores emerging standards and futuristic trends for web site development and maintenance of text, graphics, scanned images, audio, video, dynamic and interactive elements to enhance web pages. Objects of scrolling messages, pop-up windows, applets, reaction to the state of the browser and event/response to user interventions provide dynamic content. Additional actions of the site hierarchy, security management and maintenance employed through the development of a media-enhanced website. Prerequisite: CSCI 1102.

CSCI 2170
Python Programming
Python Programming provides an introduction to Python, a programming language that allows programs to be written more quickly and with less conceptual overhead. Topics include strings, variables, selection, iteration, functions, graphics, file processing, lists, dictionaries and recursion. Prerequisite: CSCI 1102.

CSCI 2200
Visual Basic Programming
Visual Basic Programming covers user interface applications through programming in Visual Basic. Topics covered are arithmetic statements, conditional statements, looping structures, data structures, sequential files, random files, design and graphics. Uses ODE, Dynamic Data Exchange, as a way of sharing electronic data between Windows applications and emphasizes problem solving using an ODE, Object-Oriented Event-Driven, approach. Prerequisite: CSCI 1102.

CSCI 2215
Web Programming I with HTML
Web Programming I with HTML discusses current and futuristic web page technologies and trends, including responsive web design and mobile-first design strategies, incorporates audio and video into realistic case studies and promotes professional webpage development best practices by applying HTML for structure and CSS for style and layout. Prerequisite: CSCI 1102.

CSCI 2240
Fundamentals of Programming I
Fundamentals of Programming I emphasizes concepts that provide a fundamental background for continued study in the area of computer science. Involves high-level language programming and the use of abstraction in program design. Prerequisite: CSCI 1102.

CSCI 2245
Fundamentals of Programming II
Fundamentals of Programming II discusses topics including object-oriented programming techniques, essential data structures such as stacks, queues, trees, sorting and searching algorithms using a high-level programming language. Prerequisite: CSCI 2240.

CSCI 2250
Java Programming
Java Programming provides an overview of the Java programming language and special features of control structures, input/output streams, data structures and abstraction mechanisms. Concepts include creating complete Java classes, derive new classes with effective use of inheritance, and use Java to create applets. Prerequisite: CSCI 2200.

CSCI 2255
Java Programming II
Java Programming II is an intermediate to advanced study of Java as an object oriented programming language. Concepts include abstract data type with a Class, constructors, overloaded constructors, instance variable, final, superclasses, subclasses, inheritance, String class, constructors and methods, StringBuffer class, constructors and methods, Graphic Objects, Swing Components, Event Handling, Layout Managers, Exception Handling, Multithreading, Files and Streams. Prerequisite: CSCI 2250.

CSCI 2290
Technology Capstone Seminar
Technology Capstone Seminar studies a variety of current technology dependent business implementations. Examines ethical behavior and consequences related to issues of Internet use, copyright, security, ergonomics, and safety and health. Discusses state-of-the art and futuristic trends within technology development. Prerequisite: CSCI 1102 and either one CSCI application course or one CSCI programming course.

CST 1101
IT Exploration
IT Exploration investigations will gain prerequisite knowledge necessary for a career in the field of information technology. Students will be exposed to opportunities and skills needed for a career in Information Technology. Concepts covered include current business software, Internet research, data security concepts, virtualization, computer programming, networking and social media.
Introduction to Networks (ITN) covers the architecture, structure, functions and components of the Internet and other computer networks. Students achieve a basic understanding of how networks operate and how to build simple local area networks (LAN), perform basic configurations for routers and switches, and implement Internet Protocol (IP). This course is the 1st course of 3 courses to prepare for CISCO Certified Network Associate (CCNA) certification.

Network Basics teaches the fundamentals of networking. This course explores how devices communicate on a network, network addressing and network services, how to build a home network and configure basic security, the basics of configuring Cisco devices, and testing and troubleshooting network problems.

Introduction to Information Security introduces the basics of computer security with integrated hands-on labs. The course prepares students to effectively protect information assets by identifying security threats, vulnerabilities, and their countermeasures. Topics include broad range of today's security challenges, common security threats and countermeasures. This course covers most of the objectives in the CompTIA Security+ exam.

Information Security Management will introduce the student to the need for information security from a management perspective, including the ethical, legal and professional security issues. The student will assess, identify and control security risks, identify secure network design, plan for disaster recovery, setup security policies and describe secure employment practices. This is part of a series of courses designed to understand, manage and implement information security and will touch on most aspects of information security. This course helps prepare students for additional certifications in information security.

Computer Forensics is an introductory course in digital forensics, which is the study of a computer that has been compromised and the recovery of evidence or information. In this course the student will concentrate on how to recover information from a computer or network after an attack. The student will look at both disaster recovery after a hacker or virus attack and also how to get information from a system that has been used for illicit activities. The student will use a systematic approach to gather information without destroying evidence. Prerequisites: CST 1125.

Telecommunications I will provide students with a broad overview of the telecommunications industry. Including knowledge and understanding of telecommunications history, terminology, tools, cable types, wiring components, basic fiber, coaxial cable, connector types, and basic telecommunications networks. This course prepares the student to be able to identify various equipment and technology in the inside and outside telecommunications plant, including wireless and cellular networks. Some of the latest technologies, including devices associated with the Internet of things are introduced in this course. Students will look at the various careers in telecommunications and future industry trends.

Broadband Technology provides students with basic knowledge and skills. The student develops an understanding the need for transmitting more than one type of signal simultaneously by way of divided channel. Emphasis is placed on the exploration of the technology of voice and data integration, frame relay, Synchronous Optical Network (SONET), Asynchronous Transfer Mode (ATM)/cell relay, Switched Multi-megabit Digital Service (SMDS), Broadband Integrated Services Digital Network (BISDN), Digital Subscriber Line (DSL), and Virtual Private Network (VPN). This course presents and explains the many and varied techniques, solutions, principles, and challenges both carriers and end users utilize, experience, and overcome in implementing broadband and voice-over IP services.

Convergence Technology is study of telecommunications convergent technologies including telephone, LAN, WAN, wireless, voice, video, and internet protocol. This course introduces the student to Voice, Video and Integrated data (VereID) over IP networks to provide seamless and secure communications solutions to business and home technology needs. Prerequisite: CST 1190.

Advanced Telecommunications will expand on the theory and topics from the Telecommunications I class including field experience with central office equipment and cabling. Students will work with broadband communications access systems and software and deploy services over fiber- and copper-based network architectures. In addition, students will become familiar with federal and state regulations and organizations related to the telecommunications industry. Prerequisite: CST 1400.
includes wireless local area networks (WLANs) and security concepts. Students learn key switching and routing concepts. They can perform basic network configuration and troubleshooting, identify and mitigate LAN security threats, and configure and secure a basic WLAN. Prerequisite: CST 1190.

CST 2108 Structured Communication Systems 3
Structured communication systems (SCS) students will gain practical experience in implementing many concepts in SCS by installing and terminating various cabling types, configuring voice/data and fire/alarms systems, and other equipment. The student will be able to install various SCS; select and operate the appropriate test equipment to perform test procedures; perform routine maintenance; perform minor troubleshooting procedures and repairs; identify and describe industry standards, protocols and safety procedures relating to structured communication systems.

CST 2110 PC Maintenance and Repair Hardware 3
PC Maintenance and Repair Hardware introduces computer hardware components and explains how they work together to make computers functional. Also includes procedures for disassembling and reassembling different classes of computers, troubleshooting, and repair.

CST 2150 Advanced Routing Technology 4
Advanced Routing Technology the third course in the CCNAv7 curriculum describes the architectures and considerations related to designing, securing, operating, and troubleshooting enterprise networks. Students gain skills to configure and troubleshoot enterprise networks, and learn to identify and protect against cybersecurity threats. They are introduced to network management tools and learn key concepts of software-defined networking, including controller-based architectures and how application programming interfaces (APIs) enable network automation. Prerequisite: CST 1500.

CST 2215 PC Maintenance and Repair Software 3
PC Maintenance and Repair Software provides curriculum to prepare students to become A+ certified. This course covers Windows software components. Students will use software tools to repair computer issues including device drivers, system updates, loading software and removal of malicious software. Students will partake in business-like atmosphere by troubleshooting and repairing assigned computer problems. Students will maintain a portfolio of completed repair projects.

CST 2224 Windows Client/Server Administration 4
Windows Client/Server Administration will cover the setup and support of the current versions of Windows Server and the desktop client. Students will implement, administer and troubleshoot the Windows network environment. Hands-on, practical experience, and exercises will be incorporated into this course. This course helps students to prepare for Microsoft certification. Prerequisite: CST 1190.

CST 2240 Home Networking 2
Home Networking is designed to help students prepare for the CompTIA HTi certification exam. This is a practical approach to networking technologies, audio visual systems automation methods, and telecommunication techniques that converge in integrated home technology. Smart Home applications and devices will be explored.

CST 2310 Information Technology Customer Service 2
Information Technology Customer Service covers the basic skills needed to work effectively with customers face-to-face, online or at a help desk. Basic communication, listening, telephone, writing, and problem-solving skills in the field of technology are developed.

CST 2326 Web Page Concepts 2
Web Page Concepts covers topics necessary to maintain and support an existing Web site. Students will be proficient in adding lists, hyperlinks, pictures and task lists to web pages. Publishing a web site will also be covered.

CST 2350 Virtual Computing 2
Virtual Computing is a hands-on course that introduces virtual technologies used in an enterprise network environment. This course includes virtualization and storage management concepts using VMware server virtualization products. Students will install and configure a network in a virtual environment, including applications and desktop virtualization. By learning basic deployments, upgrades, virtual workloads, advanced network architectures, multitenant clouds, and back up and disaster recovery. Students will be prepared to work in a virtual technology environment. Prerequisite: CST 1190.

CST 2400 IT Project Management 3
Information Technology Project Management will apply all ten project management knowledge areas and all five process groups to information technology projects. The project management knowledge areas are project integration, scope, time, cost quality, human resource, communication, risk, procurement, and stakeholder Management. The five process groups are initiating, planning, executing, monitoring and controlling, and closing. There will be an emphasis on IT projects and use of software tools. This class will help students prepare for Project Management Institute (PMI) certifications, such as Project Management Professional (PMP®) and Certified Associate in Project Management (CAPMB®).

CST 2430 CyberOps 3
CyberOps covers knowledge and skills needed to successfully handle the tasks, duties, and responsibilities of an associate-level Cybersecurity Analyst working in a Security Operations Center (SOC). This course aligns with the Cisco Certified CyberOps Associate (CBROPS) certification. Candidates need to pass the 200-201 CBROPS exam to achieve the Cisco Certified CyberOps Associate certification. Taking certification is not mandatory requirement for this course. The CBROPS exam tests a candidate’s knowledge and skills related to security concepts, security monitoring, host-based analysis, network intrusion analysis, and security policies and procedures. Prerequisite: CST 1200.

CST 2520 Ethical Hacking 2
Ethical Hacking Ethical Hacking is designed for the student to explore the tools that hackers use to gain access to systems in order to better protect their network environment. It will look at software, hardware and social engineering schemes that hackers use. The course will also cover suggestions for protecting your system from unauthorized access. Legal and ethical hacking issues will be discussed. Prerequisite: CST 1200.

CST 2600 Fundamentals of Wireless Networking 3
Fundamentals of Wireless Networking course provides a broad survey of wireless communications including in-depth coverage of protocols, transmission methods, and IEEE wireless standards. Many hands-on exercises are included, which allow students to practice skills as they are learned.

CST 2900 Computer Technology Capstone 2
Computer Technology Capstone serves as the Capstone for the Computer Technology Program. Designed to integrate all prior learning and includes studying for and taking the appropriate assessments as determined by the computer division and advisory committees. Students will complete a technology project that can include on the job training, a technology project or technology research. Prerequisite: CST 1500.

DENTAL ASSISTING (DEN)  

DEN 1100 Oral Radiology I 3
Oral Radiology I introduces the student to fundamental principles of dental radiography. An emphasis is placed on x-ray production,
radiation safety, exposure techniques, and evaluation of radiographs. Application of principles and techniques will be performed on lab manikins. Prerequisite: Prerequisites: ENGL 0090 or placement by multiple measures. DEN 1110 may be taken concurrently.

DEN 1105 3
Oral Radiology II
Oral Radiology II gives the student the opportunity to develop and apply their skills in exposing and evaluating diagnostic radiographs with minimum exposure to the patient. This course will also cover the laws set forth by the Minnesota Department of Health in relation to exposing radiographs on patients. Prerequisite: DEN 1100.

DEN 1110 3
Dental Science
Dental Science describes the anatomy and physiology of the muscular, skeletal, circulatory and nervous systems of the head and neck regions. Specific bones, muscles, arteries, veins and nerves will be identified. The structures, functions and development of the oral cavity will be discussed. The various methods of tooth identification will also be covered. Prerequisites: ENGL 0090 or placement by multiple measures.

DEN 1115 2
Dental Health
Dental Health assists the student in making practical applications of the concepts and principles associated with diet and nutrition from the standpoint of general health as well as dental health. The course will also emphasize the nature and causes of disease in the oral cavity and the importance of prevention of this disease with practical application in instructing patients.

DEN 1120 3
Chairside Dental Assisting I
Chairside Dental Assisting I assists the student in attaining skills required to be a qualified chairside assistant. It includes instrument identification and transfer, treatment room equipment, charting of the oral structures, utilization of dental practice management software, patient communication, and oral evacuation and isolation. Prerequisites: ENGL 0090 or placement by multiple measures. DEN 1110 may be taken concurrently or with consent of instructor.

DEN 1125 4
Chairside Assisting II
Chairside Dental Assisting II is an extension of Chairside Assisting I and will provide working knowledge of general dentistry. This course will also assist the students in understanding the specialties available in dentistry. The student will be taught to identify the materials, instruments and procedures needed in general dentistry and the specialties. The student will also gain skills in assisting the dentist in performing these procedures with minimal discomfort to the patient. The course will assist students through hands on experience in the lab/clinic. Prerequisite: DEN 1110 and DEN 1120.

DEN 1130 4
Preclinical Dental Assisting
Preclinical Dental Assisting allows the students to recognize microorganisms, how they live, cause disease, spread disease and how humans protect themselves from microorganisms. Special emphasis will be placed on microorganisms that are most dangerous to health care workers. The course will also include infection control and hazardous materials principles and regulations. Additionally, the course will assist the student in understanding pharmacology as it relates to dental procedures. The students will also be prepared to recognize and assist with medical emergencies that may occur in the dental office. Prerequisite: ENGL 0090 or placement by multiple measures.

DEN 1135 2
Dental Practice Management
Dental Practice Management assists the student in identifying psychological variables that are significant in interacting and communicating with dental patients and coworkers. It will also include information relating to the function of the business office with emphasis on maintaining patient records, bookkeeping, appointment scheduling, filing, and written and oral communication. Both manual and computerized systems will be examined. Prerequisite: ENGL 0090 or placement by multiple measures.

DEN 1140 3
Dental Materials
Dental Materials covers materials used in dentistry. It will include information on properties as well as practical lab applications of the materials. Prerequisite: ENGL 0090 or placement by multiple measures.

DEN 1145 3
Expanded Functions A
Offers the student experience in mechanical polish, rubber dam application, topical applications, sealant application, gingival retraction and endodontic expanded functions. (The Minnesota Dental Practice Act has made it legal for licensed dental assistants and students enrolled in accredited dental assisting programs to perform these functions.) The student will gain Preclinical competence in these duties through the use of typodonts and clinical competence through classmates and outside patients. Prerequisite: Satisfactory progress in the dental assisting program, or special permission from the instructor. Student must be certified in CPR before taking this course.

DEN 1150 3
Expanded Functions B
Expanded Functions B will offer the student experience in taking impressions and related bite registrations, orthodontic skills, cement removal, temporization, placing and removing periodontal dressings, suture removal, and placement and removal of matrix bands. (The Minnesota Dental Practice Act has made it legal for licensed dental assistants and students enrolled in accredited dental assisting programs to perform these functions.) The student will gain Preclinical competence in these duties through the use of typodonts and clinical competence through classmates and outside patients. Prerequisites: Satisfactory progress in the dental assisting program, or special permission from the instructor. Student must be certified in CPR before taking this course.

DEN 1155 3
Extramural Clinical Experience I
Extramural Clinical Experience I is designed to assist the student in developing the skills initiated in the classroom, laboratory and clinic. This is accomplished by working under the supervision of the dentist and his/her staff as well as the dental assisting faculty. Prerequisite: Satisfactory progression in the Dental Assistant Program or permission from instructor.

DEN 1160 3
Extramural Clinical Experience II
Extramural Clinical Experience II is designed to assist the student in developing the skills initiated in the classroom, laboratory and clinic. This is accomplished by working under the supervision of the dentist and his/her staff as well as the dental assisting faculty. Prerequisite: Satisfactory progression in the Dental Assistant Program or permission from instructor.

DEN 1180 1
Dental Ethics and Jurisprudence
Dental Ethics and Jurisprudence covers the ethical and legal aspects of working in a dental office. With emphasis on the Minnesota Board of Dentistry rules. Prerequisite: Enrolled in the Dental Assistant program or permission from instructor.

DEN 1185 1
Nitrous Oxide Inhalation Administration
Nitrous Oxide Inhalation Administration provides the student with skills and knowledge needed for safe and effective administration of nitrous oxide inhalation analgesia and the management of associated complications. The course will provide didactic and supervised clinical experiences as required by the Minnesota Board of Dentistry. During the clinical portion of the course, students will administer and undergo nitrous oxide/oxygen sedation as a patient. The student must be certified in CPR before taking this course. Prerequisite: Student must be certified in CPR before taking this course.
## DIESEL TECHNOLOGY (DSL)

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<tr>
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### Requirements
- **Prerequisites:**
  - DSL 1100 or DSL 1130
  - DSL 1120 or DSL 1125
  - DSL 1135
  - DSL 1100 and DSL 1110
  - DSL 1100 or DSL 1110
  - DSL 1110 or DSL 1125
  - DSL 1135
  - DSL 1100 and DSL 1110
  - DSL 1110 or DSL 1125
  - DSL 1110 or DSL 1125
  - DSL 1100 and DSL 1110

### Course Descriptions

#### Diesel Engine Theory
Diesel Engine Theory explains the function of the diesel combustion, chamber designs, valve train operation, rings, cylinders, pistons, crankshafts, connecting rods, and components that complement basic engine theory.

#### Diesel Engine Lab
Diesel Engine Lab provides the student hands-on shop experiences. The student will disassemble, inspect, evaluate, repair and adjust, and reassemble valve, valve train components, cylinder blocks, crankshafts, bearings, sleeves, pistons, rings, and other components to make engine operational.

#### Electrical Theory
Electrical Theory discusses circuits, magnetism, wiring diagrams, principles of operation of alternators, regulators, cranking motors, and batteries.

#### Electrical Lab
Electrical Lab Requires the students to disassemble, inspect, evaluate, repair and test electrical systems and components. Concurrent enrollment with DSL 1110.

#### Powertrain Principles
Powertrain Principles explains theory of clutch, pressure plate assembly, standard transmissions, differentials, power take-off, brakes, axles, and components that compliment powertrain operations.

#### Powertrain Lab
Powertrain Lab demonstrates the disassembly, inspection, evaluation, diagnostics, repair and adjustments and reassembly of all components of the powertrain.

#### Hydraulics Theory and Application
Hydraulics Theory and Application discusses the principles and fundamentals of hydraulics. The student will work on various components and systems as related to diesel hydraulics within a laboratory environment.

#### Fuel Injection Principles
Fuel Injection Principles explains and demonstrates diesel engine operation with fuel systems, the basic repair and rebuilding of injectors and timing of the fuel system to the engine.

#### Heating and Air Conditioning Systems
Heating and Air Conditioning Systems analyzes cab heating and ventilation systems used in all types of units used in the industry today as well as servicing and repair of the system for comfort of in-cab climate. The course discusses concerns that need to be addressed when making repairs to the heating and air conditioning system.

#### Internship
Internship provides work experience in a sponsoring automotive, diesel farm equipment or diesel truck service facility. Students will intern for 200 hours over a six week period. The tasks will be consistent with previous required course work. Prerequisites: DSL 1100 or DSL 1130.

#### Diesel Welding
Diesel Welding explains and demonstrates proper oxy/acetylene cutting, using the torch to heat items, and proper welding techniques.

#### Advanced Powertrain Theory
Advanced Powertrain Theory explains the theory of operation of various power shift transmissions, power flow, and terminologies as related to various manufacturers. This course covers the theory of operation of electro hydraulic systems as well as a wide variety of power train systems from Ag equipment, industrial, and truck when and where available. Prerequisites: DSL 1120 or DSL 1125.

#### Advanced Powertrain Lab
Advanced Powertrain Lab demonstrates disassembly, inspection, evaluation, repair, reassembly, and testing of various power shift transmissions and related components. The student will work in the lab environment to diagnose and repair these various electro hydraulic systems. Prerequisites: DSL 1120 or DSL 1125.

#### Service Department Operations and Procedures
Service Department Operations and Procedures covers the operation of a service department including customer relations and business operations such as reporting forms, work orders, and warranty claims. The student will practice shop management procedures. This course allows students to place advanced theory into practical application in the laboratory setting.

#### Fuel Systems Theory
Fuel Systems Theory studies the theory of all mechanical fuel systems and introduces electronically controlled engines and fuel systems. Prerequisite: DSL 1135.

#### Fuel Systems Lab
Fuel Systems Lab applies theory in the laboratory environment. Students will disassemble, inspect, evaluate, reassemble and calibrate a mechanical pump. Prerequisite: DSL 1135.

#### Advanced Diesel
Advanced Diesel reviews the theory and operation of specialty areas of diesel engine rebuilding. This course explains different tier levels for emission-controlled engines. Prerequisites: DSL 1100 and DSL 1110.

#### Advanced Engine Lab
Advanced Engine Lab provides hands-on shop experiences. Students will practice reconditioning of the larger and electronically controlled engines. Prerequisites: DSL 1100 and DSL 1110.

#### Diesel Engine Control Systems
Diesel Engine Control Systems explains the operation of all the different governors and electronically controlled engines.

#### Diesel Equipment Preventative Maintenance
Diesel Equipment Preventative Maintenance describes preventative maintenance on heavy duty diesel equipment, as well as strategies for continued best performance and safe operation of the equipment.

#### Computerized Diagnostic Systems
Computerized Diagnostic Systems describes and demonstrates basic Windows operations needed to operate computerized diagnostic systems, submit online warranty claims, create invoices, business cards, engine reports, and record and present images necessary for warranty reimbursement.

#### GPS Systems Operation
GPS Systems Operation explains the operation, installation, adjustment, and repair of the GPS in accordance to the system principles.
ECONOMICS (ECON)

ECON 1101 Introduction to Economics 3
Introduction to Economics explores the fundamentals of Microeconomics and Macroeconomics and the process of economic analysis. No credit if ECON 2201 or ECON 2202 has been previously completed.

ECON 2201 Principles of Macroeconomics 3
Principles of Macroeconomics studies the overall performance of the United States economy and comparative economic systems from the dimensions of full employment, price stability, and economic growth.

ECON 2202 Principles of Microeconomics 3
Principles of Microeconomics analyzes the economic decision-making process of the individual firm. Explores the microeconomic concepts of pricing and resource allocation within different market structures.

EARLY CHILDHOOD (EDUC)

EDUC 1100 Introduction to Education 3
Introduction to Education introduces students to early childhood, elementary and secondary education. Examines career opportunities, requirements, regulations, and professional ethics. The study of historical and social foundations of education, as well as schools in a diverse society will be covered. Includes 15 hours of field experience. Prerequisite: ENGL 0090 or placement by multiple measures and a Department of Human Services background study will be conducted.

EDUC 1102 Technology: Classroom Applications and Portfolio Development 2
Technology: Classroom Applications and Portfolio Development introduces the educational uses of technology by exploring computer applications as tools for their own learning as well as the ethics of electronic communications. A Teacher Education portfolio (online) will be developed. Prerequisite: ENGL 0090 or placement by multiple measures.

EDUC 1131 Autism Spectrum Disorders 3
Autism Spectrum Disorders focuses on the theory, research, and intervention in Autism Spectrum Disorders (ASD). The history of diagnosis and intervention of ASDs and how it is viewed today is a strong focus of this course. In addition, neurological, psychological, and education theories of ASD; current approaches to intervention; and educational classification are introduced.

EDUC 1132 Behavior Management 2
Behavior Management introduces students to the basic principles of behavior management as it relates to behavioral excesses and deficits, maladaptive behavior, and special needs in children. The focus will be on understanding and intervening with behavioral excesses and deficits in the educational environment.

EDUC 1240 Family and Community Relations 3
Family and Community Relations will guide students in learning how to develop positive relationships with families of varied racial, economic, and cultural backgrounds. Student will examine the importance of the family/early childhood staff relationship and study methods of effectively communicating. Community organizations and networks which support families will be studied.

EDUC 1262 Creative Activities 4
Creative Activities, students will explore varied means of developing children's creativity in art, music, and drama. Students learn to design age-appropriate activities with paints, paper, sculpture, wood, chalk, recyclables, song dance, instruments, puppets, and related materials. The course work includes lab and field experience.

EDUC 1265 Foundations of Child Development 2
Foundations of Child Development teaches how to design and use developmentally appropriate language and cognitive-growth activities, including how to encourage curiosity, exploration and problem-solving; to develop sensory and story-telling skills; how to teach concepts such as time, shape and quantity, how to provide opportunities to organize and group materials; and to verbalize their experiences. Prerequisite: STSK 0090 or placement by multiple measures.

EDUC 1266 Foundations of Child Development Lab 1
Foundations of Child Development Lab provides an overview of typical and atypical child development from prenatal to school age including physical, social, emotional, and cognitive development. It integrates theory with appropriate practice in a variety of early childhood settings. The Minnesota Department of Human Services will check the background of each applicant to ensure that there is no record of child maltreatment. This course must be taken concurrently with EDUC 1265.

EDUC 1267 Health, Nutrition & Safety 2
Health, Nutrition and Safety teaches how to promote good health, physical fitness and nutrition and to provide a safe environment for children. Topics include motor development, methods of teaching health and safety to children, recognizing symptoms of abuse, neglect, and common children's illnesses. Prerequisite: STSK 0095 or placement by multiple measures.

EDUC 1268 Health, Nutrition & Safety Lab 1
Health, Nutrition & Safety Lab examines how to provide a healthy and safe environment and provide proper nutrition to young children. It sets high-quality expectations regarding policies, procedures, healthful environments, sanitation standards, and preventative care. The emphasis is on application of theory in a variety of early childhood settings. This course also examines the responsibilities of a mandated reporter of child abuse and neglect. This course must be taken concurrently with EDUC 1267.

EDUC 1269 Guidance: Managing the Physical and Social Environment Lab 1
Guidance: Managing the Physical and Social Environment (Lab) provides an exploration of the physical and social environments that promote learning and development for young children. It includes child guidance techniques for individual and group situations. Emphasis is placed on problem-prevention strategies, positive child guidance methods, and strategies to help children develop self-control. Emphasis is on the application of guidance methods in a variety of early childhood settings. This course must be taken concurrently with EDUC 1269.

EDUC 1270 Guidance: Managing the Physical and Social Environment 2
Guidance: Managing the Physical and Social Environment teaches how to provide a secure, supportive environment for communicating both thoughts and feelings, and for fostering developmentally appropriate behavior. Emphasis is given to providing nurturing and developing realistic expectations for children's behavior, setting limits and developing self-control. Prerequisite: STSK 0090 or placement by multiple measures.

EDUC 1340 Planning and Implementing with Lab 4
Planning and Implementing with Lab examines the role of the teacher in early childhood settings for children ages 3-7. It applies knowledge of child development as it relates to individual children, communities, curriculum, and communication activities. The course work includes lab and field experience.
EDUC 1510 Internship  2-4
Internship provides an opportunity to apply knowledge and skills in an early childhood or childcare setting. Students will observe and assess children's development and behavior, implement a variety of learning experiences that are developmentally appropriate, and maintain professional relationships.

EDUC 2200 Infant and Toddler Development and Learning Experiences  4
Infant and Toddler Development and Learning Experiences provides an overview of infant and toddler development (ages birth to three years). Students will integrate knowledge of developmental needs, developmentally appropriate environments, effective observations/assessments, and planning and teaching strategies. The course work includes lab and field experience.

EDUC 2300 Childhood Poverty: Exploring the Issues  3
Childhood Poverty: Exploring the Issues will increase understanding of the impact poverty has on children and families, examine unique inherent issues, and promote respect for family strengths. Emphasis is on providing tools to work productively and in partnership with children and families.

EDUC 2510 Child Growth and Development  3
Child Growth and Development is an introduction to child growth and development from conception through adolescence with a concentration on the physical, cognitive, and social-emotional domains of development. Emphasis areas of the course include: historical foundations and theories associated with the study of child development, the research process, the implications of teaching and learning, student diversity and pertinent topics associated with the possible effects of environment and behavior on prenatal development through adolescence.

EDUC 2560 Language and Literacy Learning Experiences  3
Language and Literacy Learning Experiences provides an overview of language and literacy learning experiences in either childcare or other early childhood settings. Students integrate knowledge of child development, learning environments, and teaching methods to promote whole language, conversation, literature, literacy, and bilingualism.

EDUC 2900 Introduction to Special Education  3
Introduction to Special Education will teach students to recognize, understand, and guide children with special needs. Specific disabilities introduced in this course include Developmental Delay, Developmental Cognitive Delay, Autism, Physical and Sensory Disabilities, Learning and Behavior Disabilities. Introduction to special education services including: Federal mandates (Individuals with Disabilities Education Act), and State Due Process mandates, early intervention, parent involvement, DSM-V diagnostic criteria, assessment methods and instructional methods such as Response to Intervention (RTI). One credit field experience (15 hours) is included. Pre-requisites: STSK 0090, STSK 0095 or STSK 1100 or placement by multiple measures.

**ELECTRICAL CORE (ELCO)**

ELCO 1100 Electrical Circuits Fundamentals  3
Electrical Circuits Fundamentals describes the basic concepts of electricity from DC to AC. Calculate Ohm's law formulas. Describe series circuits, parallel circuits, capacitance circuits, and inductive circuits. Calculate series circuits, parallel circuits, capacitance circuits, and inductive circuits. Prerequisite: MATH 0092 or placement by multiple measures.

ELCO 1105 Electrical Circuits Fundamentals Lab  3
Electrical Circuits Fundamentals Lab performs practical problems on both DC and AC circuits in the lab. Calculate series circuits, parallel circuits, capacitance circuits, and inductive circuits. Perform basic meter testing on circuits. Prerequisite: MATH 0092 or placement by multiple measures.

ELCO 1110 AC/DC I  3
AC/DC I introduces students to electrical theory and practical experiences starting with DC electric circuits, electrical safety practices, and familiarization with training equipment using Ohm's law and power. Prerequisite: MATH 0092 or placement by multiple measures.

ELCO 1120 AC/DC II  3
AC/DC II introduces students to the basic concepts of AC circuits, safety practices, basic studies of resistive, inductive, and capacitive circuits, circuit analyzing, oscilloscope operations, capacitance, capacitive reactance, inductance, inductive reactance, RC and RL time constants, Transformers, and three-phase circuits. Prerequisite: ELCO 1110.

**ELECTRICIAN (ELEC)**

ELEC 1200 Residential Wiring I  5
Residential Wiring I describes electrical safety, general safety, the use and care of hand tools, the specialty tools, and equipment used for residential wiring. Apply National Electrical Codes related to residential wiring. Discuss wiring methods for residential wiring.

ELEC 1205 National Electric Code I  2
National Electric Code I provides insight into an understanding of many of the technical rules of the National Electrical Code (NEC). Topics included are Minnesota licensing laws, definitions, requirements and calculations for electrical installations, grounding conductors, branch circuits, feeders and services. Other topics also included are overcurrent protection, grounding and bonding, wiring methods, temporary wiring and conductors for general wiring.

ELEC 1210 Residential and Farm Wiring II  5
Residential and Farm Wiring II introduces blueprint reading for residential wiring. Describe electrical safety and general safety. Discusses National Electrical Code articles on branch circuits, feeders, grounding, services, and overcurrent protection for residential and farm wiring. Prerequisite: ELEC 1200.

ELEC 1215 National Electric Code II  2
National Electric Code II National Electric Code II (NEC) covers requirements for cabling, conduit, raceways, wireways, boxes, switches, and panelboards. Also included are the requirements for equipment such as cords, cables, fixtures and fixture wire, appliances, fixed space heating, motors and motor circuits, refrigeration equipment and transformers. Prerequisite: ELEC 1205.

ELEC 1220 Conduit Installation  4
Conduit Installation describes the raceway types used to conceal wiring, learn to bend, install, support, and calculate raceway size and number of wires permitted in a conduit, hand and hydraulic Benders are introduced, and identify fittings and other materials used in installing a Raceway system. Prerequisite: ELEC 1200.

ELEC 1225 Electric Motors  3
Electric Motors describes the difference in alternating current (AC) and direct current (DC) motors, generators, and alternators. Compute motor calculations. Determine the load characteristics and connections of AC and DC motors, generators, and alternators. ELCO 1100 or ELCO 1110.
Prerequisite: ELEC 1220.

ELEC 1235
Applied Electrical Calculations
Applied Electrical Calculations performs basic math necessary for solving electrical circuits. Read word problems and decide what they are asking for. Calculate math problems. Calculate Ohm's law formulas.

ELEC 1240
Commercial Wiring
Commercial Wiring investigates the material and design aspects of commercial wiring. Read commercial blueprints. Perform voltage-drop calculations, motor calculations and service installations. Apply requirements of the N.E.C. as it relates to commercial wiring. Prerequisite: ELEC 1200.

ELEC 2200
Low Voltage
Low Voltage investigates low voltage circuits and controls along with data, phone, CATV, fire alarm and home security methods and materials. This course will also cover the rules and regulations of installation and termination of communication wire and components. Prerequisite: ELCO 1100 or ELCO 1110.

ELEC 2205
Electric Motor Controls I
Motor Controls I instructs students in the use of electrical tools, instruments, safety equipment, electrical symbols, line diagrams, AC manual contactors and motor starters, AC magnetic contactors and motor starters, time delay logic and control devices. Prerequisite: ELEC 1100 or ELEC 1110.

ELEC 2210
National Electric Code III
National Electric Code III explains the importance of safe, efficient and well-designed systems for industrial, commercial, and residential locations. The course discusses material, methods, and components used in designing electrical systems. Prerequisite: ELEC 1205.

ELEC 2220
Industrial Wiring
Industrial Wiring covers components for industrial electrical installations and operations. Students will learn to design and calculate electrical loads for an industrial application. Prerequisite: ELEC 1220.

ELEC 2225
Electric Motor Controls II
Electric Motor Controls II describes electromechanical and solid state relays, photoelectric controls, proximity controls, reduced voltage starting, accelerating and decelerating methods and preventive maintenance. Prerequisite: ELEC 2205.

ELEC 2230
Programmable Logic Controllers
Programmable Logic Controllers describes how PLC's work and provide practical information about installing, programming and maintaining a PLC system. Students will be given a wide range of generic programming assignments and exercises for practice with the PLC. Prerequisite: ELEC 2205.

ELEC 2235
National Electric Code IV
National Electric Code IV examines the National Electrical Code Requirements for Commercial and Industrial installations. Determine grounding and bonding requirements. Examine definitions and installation concerns in hazardous locations. Prerequisite: ELEC 1205.

ELEC 2240
Transformers
Transformers describes basic transformer theory, construction, installation and troubleshooting of single phase and three phase transformers. Examine types of transformers including isolation, autotransformer and instrumentation transformers.

ELEC 2250
Heating and Air Conditioning Controls
Heating and Air Conditioning Controls introduces basic heating and cooling system installation, control and troubleshooting.

ELEC 2265
Alternative Energies
Alternative Energies introduces traditional and alternative energy sources. This class will explore the basic principles of traditional energy with an emphasis on alternative energy. Students will develop a basic understanding of solar, biofuels, wind, geothermal and hydro energy sources.

ELPL 1100
Pole Climbing and Equipment Operation
Pole Climbing and Equipment Operation covers climbing techniques, with fall arrest. Students will also learn installation and removal of pole hardware, setup and safe operation of digger derricks, bucket trucks, hydraulic systems, and truck driving operations. Also included in the course is the operation of elbow and squat boots, safety checkout and use of the lifting jib.

ELPL 1102
Pole Climbing and Equipment Operations II
Pole Climbing and Equipment Operations II covers two of the techniques used by powerline workers to elevate themselves to a safe working position for the installation, maintenance or removal of electrical equipment on powerlines. The techniques are pole climbing and safe operations of digger and basket trucks. This course is a continuation of Pole Climbing and Equipment Operations. Prerequisite: ELPL 1100.

ELPL 1106
Electrical Distribution of Powerlines I
Electrical Distribution of Powerlines I covers the care and maintenance of personal tools, nomenclature and use of company tools, nomenclature and installation of pole line hardware, setting and aligning poles, stringing single phase and three phase wires, installation of armor rods, hand ties, and preform ties. The course also covers the change-out of single phase and three phase transformers, overhead secondaries and offers instruction in elementary knots and the use of different types of slings.

ELPL 1116
Electrical Distribution of Powerlines II
Electrical Distribution of Powerlines II covers the application, care, and use of rubber goods, insulated coverup use, and the use of bucket trucks. This course also covers pole top insulator change outs, pole replacements, and conductor transfers all simulating the line being 'Hot'. Prerequisite: ELPL 1106.

ELPL 1121
Electrical Distribution of Powerlines III
Electrical Distribution of Powerlines III covers the function, operation, and types of fuses, circuit breakers, oil circuit reclosures and sectionalizers. Working with and around electrical equipment, and apparatus in substations will also be covered. Students will learn about the characteristics of transient voltages, types of distribution arrestors and safety. The course will also cover building overhead lines, stringing and sagging conductors, and ties and tying. Students will build OCR banks, capacitor banks, and three-phase transformer banks, work with underground distribution lines, connect sectional cabinets and pad-mounted transformers, and loop-feed URD lines. Tree trimming, and pole-top and bucket rescue will also be discussed. Prerequisite: ELPL 1116.

ELUT 1101
Electrical and Rigging Safety
Electrical Rigging and Safety includes State and Federal OSHA Rules and National Electric Safety Work Rules, regarding safety in the Electrical Field. Emphasis is on personal protective equipment, personal, and company rules of safety. Instruction in elementary knots and the use of different types of slings. Outdoor lab includes pole top
rescue, the safe practices of grounding, and the rigging and lowering of a crossarm.

**ELUT 1105**
Blueprint, Schematics, and Transit
Blueprint, Schematics and Transit covers the use and interpretation of blueprints, schematic diagrams, and the symbols and abbreviations used in them. This course also covers the fundamentals for set-up, operation and use of a transit mounted on a tripod or other base.

**ELUT 1110**
Transformer Banking I
Transformer Banking I covers the construction, purpose, uses, and calculations for distribution transformers. Emphasis will be on installation of single or three-phase banking practices that are used in the private and public sector of the electric utility industry.

**ELUT 1115**
Generation, Transmission and Distribution
Generation, Transmission and Distribution is designed to simulate the Power Industry. Through the use of laboratory projects, the student will receive background in understanding the concepts of generation, transmission and distribution of electric power.

**ELUT 1120**
Specification, Testing, and Maintenance
Specification, Testing, and Maintenance covers the procedures, specifications of testing methods, and maintenance used throughout the electrical industry for new and refurbished equipment.

**ELUT 2100**
Electrical Metering
Electrical Metering covers single-phase metering principles, meter construction, component parts and installation and testing of single-phase electric watt-hour meters. This course also includes the use of a meter test bench, test standards and an electric counter.

**ELUT 2110**
Transformer Banking II
Transformer Banking II is a continuation of Transformer Banking I. This course will look into single-phase power banks and auto transformers used in the transmission and distribution of small and large blocks of power. Prerequisite: ELUT 1110.

**ELUT 2116**
Reclosures and Protective Equipment
Reclosures and Protective Equipment covers reclosure testing, inspection and causes of malfunction. Fuse construction and coordination. Coordination scheme that provides system protection along with lightning arrestors, fault indicators and relays.

**ELUT 2121**
Protective Relays
Protective Relays is designed to give a broad understanding of simple relays that are used in the protection of high voltage lines and substations. Emphasis is on understanding design, construction, and application, performing testing, calibrating, cleaning and adjusting relays. The following relays will be studied if time allows: overcurrent induction disc, thermal overcurrent, induction disc voltage, over/under voltage, voltage restraint, percentage differential, and transformer differential relays.

**ELUT 2126**
Regulators and Capacitors
Regulators and Capacitors covers the methods used in producing a reliable power source by controlling voltage loss and power factor through the use of capacitors and/or regulators.

**WIND ENERGY TECHNOLOGY (ELWT)**

**ELWT 1100**
Wind Energy Fundamentals
Wind Energy Fundamentals introduces the student to turbine designs, types of development, current status of, and the evolution of current models and sizes offered by existing companies, the operational experience, track record, number of turbines in operation that will be evaluated, and discuss the economic, environmental, and political issues according with American Wind Energy Association (AWEA).

**ELWT 1101**
Introduction to Wind Energy
Introduction to Wind Energy discusses the economic, environmental and political issues in accordance with the OSHA, and other local and zoning codes. The course also identifies the technical rules of the National Electrical Code and explains the licensing laws, definitions, and requirements and calculations for electrical installations, grounding conductors, branch circuits, feeders, and services.

**ELWT 1102**
Hydraulics Lab
Hydraulics Lab utilizes equipment and applies advanced fundamentals of hydraulic valves. The course will also cover advanced circuits and schematics. Prerequisites: DSL 1130 or MECH 1103.

**ELWT 1110**
Mechanical Systems
Mechanical Systems provides an understanding of wind turbine drive systems (gearboxes) and associated components, introduced two different types of gearboxes and associated mechanical systems and subsystems of today's wind turbines, focus on lubrication, oil analysis, construction and preventative maintenance techniques for modern wind turbine drive systems.

**ELWT 1170**
Wind Energy OSHA Standards & Climb Lab
Wind Energy OSHA Standards & Climb Lab introduces students to turbine designs, types models and sizes offered by existing companies. Basic safety principles in the wind energy industry and a brief overview of the Occupational Safety and Health Administration (OSHA) pertaining to the climbing of wind turbines will be covered. Students will learn how to properly inspect equipment before climbing and properly store climbing equipment after each use.

**ELWT 2110**
Turbine Siting and Construction
Turbine Siting and Construction introduces students to the various aspects of wind turbine in wind farm siting, construction, and commissioning. Students will be engaged in observation and discussions on the use of heavy equipment such as cranes, rigging, tower assembly, and a wind tower production facility being brought online.

**EMERGENCY MEDICAL SERVICES (EMS)**

**EMS 1101**
Introduction to Emergency Medical Technician
Introduction to Emergency Medical Technician develops the initial foundation of emergency care and scene safety. Prepares individuals to evaluate and identify emergencies, employ their knowledge, psychomotor skills and application of those skills to provide basic life support as an Emergency Medical Technician. Includes initial patient assessment and comprehensive prehospital care as outlined by the most current educational standards identified by the Minnesota EMS Regulatory Board and the National Registry of EMT’s.

**EMS 1102**
Emergency Medical Technician Completion/Bridge
Emergency Medical Technician Completion/Bridge introduces the necessary didactic and cognitive skills to provide basic life support care as an EMT. The EMT Completion/Bridge meets the requirements outlined by the educational standards of the Minnesota EMS Regulatory Board and the National Registry of Emergency Medical Technicians for the direct employment as an Emergency Medical Technician with a basic transport service, emergency room and emergency services within law enforcement or fire departments. Students must have current American Heart Association Basic Life Support Healthcare Provider CPR card meeting the current American Heart Association standards to register for this course. Prerequisite: EMS 1101 or currently certified as an Emergency Medical Responder.

**EMS 1110**
Emergency Medical Responder
Emergency Medical Responder introduces the initial foundation of emergency care and scene safety. Prepares individuals to evaluate
and identify emergencies, employ their knowledge, psychomotor skills and application of those skills to provide basic life support as an Emergency Medical Responder. Includes initial patient assessment and comprehensive prehospital care as outlined by the most current educational standards identified by the Minnesota EMS Regulatory Board, the American Heart Association's BLS CPR for Healthcare Provider standards and DOT standards.

EMS 1112
AHA CPR Healthcare Provider, AED First Aid Certification

AHA CPR Healthcare Provider, AED, First Aid introduces skills necessary to become certified in CPR, First Aid and AED aligned with the current American Heart Association Guidelines for the CPR Healthcare Provider Certification and Certification in Automated External Defibrillation and First Aid. The student will be able to properly and safely assess a patient, recognize signs and symptoms and administer the appropriate treatment.

EMS 2101
Emergency Medical Technician Refresher

Emergency Medical Technician Refresher provides refresher training for out-of-hospital emergency medical care and transportation for critical and emergent patients for certified Emergency Medical Technicians (EMT) to maintain certification as outlined by the educational standards of the Minnesota EMS Regulatory Board and National Registry of Emergency Medical Technicians. Students must have a current Emergency Medical Technician certification or Emergency Medical Technician Certification that has not been expired by more than 12 months prior to course registration.

EMS 2103
Emergency Medical Responder Refresher

Emergency Medical Responder Refresher provides refresher training in emergency medical care for certified Emergency Medical Responder to maintain certification as outlined by the educational standards of the Minnesota EMS Regulatory Board. As the first person at the emergency scene, the first responder must be completely knowledgeable about basic principles of emergency medical care; and must know what should, as well as what should not be done. Students must hold a current Emergency Medical Responder certification of Emergency Medical Responder Certification that has not been expired by more than 12 months prior to course registration.

ENGLISH (ENGL)

ENGL 0090
Essentials of Writing I: Effective Sentences and Paragraphs

Essentials of Writing I: Effective Sentences and Paragraphs introduces students to the essentials of the English language: parts of speech, phrases, clauses, types of sentences, common sentence errors, punctuation, capitalization, and spelling. Students write sentences and paragraphs to demonstrate an understanding of contextual grammar and paragraph writing. Prerequisite: Placement by multiple measures.

ENGL 0095
Essentials of Writing II: Effective Essays

Essentials of Writing II: Effective Essays introduces outlining, thesis statements, introductions and conclusions, transitions, direct and indirect discourse, awareness of audience, and levels of formality. Students write brief essays to demonstrate an understanding of these basic skills. Prerequisite: ENGL 0090 or placement by multiple measures.

ENGL 1101
Composition I

Composition I reviews and reinforces basic essay writing principles. Emphasis is on rhetorical modes of development and writing as process. Assignments include several essays and a short research paper. Prerequisite: ENGL 0095 or placement by multiple measures.

ENGL 1102
Composition II

Composition II emphasizes research, information literacy and synthesis, critical thinking, and style development. The topics covered include research, information analysis and synthesis, advanced mechanics and editing, and argumentative writing. Writing assignments include several essays, syntheses, annotated bibliographies, and a research paper. Prerequisite: ENGL 1101.

ENGL 1103
Research Papers

Research Papers reviews and reinforces principles of writing research papers. Emphasis is on process, analysis, and formatting. Assignments include an academic research paper. Prerequisite: Instructor permission is required.

ENGL 1105
Introduction to Literature

Introduction to Literature examines the elements, forms, and content of fiction, drama, and poetry. The course aims to introduce students to various genres of literature, with an emphasis on reading strategies and reading analysis. Assignments include readings, literary reflections, and a research-based literary presentation. Prerequisites: STSK 0095 or placement by multiple measures.

ENGL 1120
Introduction to Women's Literature

Introduction to Women's Literature introduces students to women's literature and women's contributions to the literary canon. The course will examine women's roles and identities within the context of history and society as reflected by women in their literature as well as the consumption of and reactions to their works. Readings will be selected from a variety of genres - including poetry, fiction and nonfiction - and from a variety of women with diverse backgrounds - including ethnicity, class, and sexual orientation - throughout different historical periods, with an emphasis on American and British writers. This course will approach texts through gender, cultural, and historical strategies. Assignments include several brief literary analyses as well as a final research project. Prerequisite: ENGL 0095 or placement by multiple measures.

ENGL 1141
Writing and Reading Poetry

Writing and Reading Poetry introduces students to basic elements of poetry and provides instruction in using these in the students' own writing. The class is conducted in an informal workshop environment where students will participate in offering and receiving constructive criticism about each other's writing. Prerequisite: ENGL 0095 or placement by multiple measures.

ENGL 1143
Writing and Reading Fiction

Writing and Reading Fiction provides instruction and experience in composing and editing fiction. Covers elements of fiction writing through reading of published and unpublished fiction. Prerequisite: ENGL 1101.

ENGL 2120
Children's Literature

Children's Literature analyzes and surveys the history of Children's Literature while teaching methods of evaluation and organization criteria for Children's Literature (early literacy, primary, and intermediate children's books). Prerequisite: ENGL 0095, ENGL 1101 or placement by multiple measures.

ENGL 2201
Early American Literature

Early American Literature introduces prominent American writers and influential literary works that have shaped American cultural identity from the colonial period to 1865. Early American Literature takes a broad view of the traditional canon to include writers and works from many areas of America's past. Prerequisite: Instructors recommend that students complete ENGL 1105 or an advanced high school literature class before registering for this course.

ENGL 2202
Modern American Literature

Modern American Literature introduces prominent American writers and influential literary works that have shaped American cultural identity from 1865 through the present. Modern American Literature takes a broad view of the traditional canon to include writers and works from many areas of America's past. Prerequisite: Instructors recommend
that students complete ENGL 1105 or an advanced high school literature class before registering for this course.

**ENGL 2203**  
**Midwest Literature**  
Meets Goal Area: 06  
Midwest Literature introduces students to the rich and diverse body of Midwest literature through the exploration of poetry, fiction, nonfiction, and drama. The course will also address various cultural, historical, and geographical matters relating to Midwest literature, and the significance of Midwest literature, both in particular and general terms. Prerequisite: STSK 0095 or placement by multiple measures.

**ENGL 2221**  
**Early British Literature**  
Meets Goal Areas: 06, 07  
Early British Literature studies the principal British writers, their literary forms, and significant currents of thought. This course provides an introduction to early British literature and a background that will be useful in the study of other literature and cultural history. Includes works from Beowulf through 1800. Prerequisite: Instructors recommend that students complete ENGL 1105 or an advanced high school literature class before registering for this course.

**ENGL 2222**  
**Modern British Literature**  
Meets Goal Areas: 06, 07  
Modern British literature studies the principal British writers, their literary forms, and significant currents of thought. Modern British literature provides both the experience of British literary works and background information that will be useful in the study of other literature and cultural history. Includes works from the Romantics (1800) through the present. Prerequisite: Instructors recommend that students complete ENGL 1105 or an advanced high school literature class before registering for this course.

**ENGL 2231**  
**Classical Mythology**  
Meets Goal Area: 06  
Classical Mythology introduces students to Greek mythology through classical texts and contemporary criticism. In addition to studying the myths themselves, lectures will focus on the functions of myths and the continuing importance of Greek mythology.

**ENGL 2235**  
**Special Topics in Literature**  
Meets Goal Area: 06  
Introduces students to specialized areas of literature. Topics may include literature associated with specific regions, historical periods, subcultures, economic groups, business, or social movements. The class may be retaken for credit if the topic varies.

**ENGL 2243**  
**Composition: Creative Writing**  
Meets Goal Areas: 01, 02, 06  
Creative Writing reviews the skills and gives students the tools to write poems and stories. In Creative Writing, students will analyze and evaluate published works as well as the works of their peers. The textbook and lectures will provide strategies for writing and editing poems and stories. The course is conducted in an informal, workshop atmosphere. Students will write a final narrative to be published in Minnesota West’s creative journal. This course may be taken as an alternative to ENGL 1102. Prerequisite: ENGL 1101.

**ENGL 2276**  
**Composition: Technical Writing**  
Meets Goal Area: 01  
Composition: Technical Writing provides instruction and experience in composition and editing various types of professional and technical writing. Assignments include a research paper. This course is an alternative for ENGL 1102 in the Minnesota Transfer Curriculum. Prerequisite: ENGL 1101.

**ENGR 1101**  
**Introduction to Engineering**  
Introduction to Engineering introduces the study of engineering. It covers the keys to success in engineering study, a description of the engineering profession, academic success strategies, and an orientation to the engineering education process.

**ENGR 1110**  
**Auto CAD Level I**  
Introduces the student to computer-aided drafting and design utilizing the current version of AutoCAD. The AutoCad topics covered in this Level 1 course include: an introduction to AutoCAD features, starting and setting up drawings, ergonomics, point coordinate entry methods, creation of basic 2D drawing objects, layer management, linetypes and colors, selection sets, object snap modes, AutoSnap, polar tracking, object snap tracking, construction techniques, creating and managing text objects, editing geometry, display control and drawing inquiry methods. Students completing this course successfully will have the basic AutoCAD knowledge needed to begin a career in Computer-Aided Drafting and Design. This basic knowledge is needed prior to specializing in a certain area of drafting such as mechanical, civil, electrical, architectural or structural.

**ENGR 2214**  
**Engineering Mechanics - Statics**  
Includes vector resultants of force systems in two and three dimensions, equilibrium of forces, analysis of forces acting on structural and machine elements, friction, moments of inertia, and virtual work. Prerequisites: PHYS 2121 and MATH 1122 (or concurrent).

**ENGR 2215**  
**Engineering Mechanics-Dynamics**  
Includes vectorial kinematics and kinetics, absolute and relative motion, force-mass acceleration relations, potential and kinetic energy, work, power, impulse, momentum, conservation of energy and momentum. Application to particles, particle systems, and rigid bodies will be studied. Prerequisite: ENGR 2214.

**ENGR 2240**  
**Circuit Analysis I**  
Introduces electrical circuit theory, circuit variables, circuit elements, simple resistive circuits, Ohm's and Kirchoff's Laws, mesh and node circuit analysis, the use of circuit theorems, and the operational amplifier. Also emphasized are the topics of inductance, capacitance, mutual inductance, response of first-order RC and RL circuits and natural step responses to RLC circuits. The computer program PSPICE will be used for circuit simulation. Prerequisites: PHYS 2122 and MATH 1122.

**ENGR 2241**  
**Circuit Analysis I - Lab**  
Provides the laboratory to accompany Circuits Analysis I. Circuit analysis concepts are reinforced by laboratory experiments in which the theories are verified. Taught concurrently with Circuit Analysis I: ENGR 2240.

**ENGR 2250**  
**Circuit Analysis II**  
Continues Circuit Analysis I to include special topics in circuit analysis to include sinusoidal analysis, phases, sinusoidal steady-state response, average power, root-mean square values, polyphase power, complex frequency, frequency response, and two-port networks. Prerequisites: ENGR 2240, ENGR 2241 and MATH 2205.

**ENGR 2251**  
**Circuit Analysis II - Lab**  
Provides the laboratory to accompany Circuits Analysis II. Circuit analysis concepts are reinforced by laboratory experiments in which the theories are verified. Taught concurrently with Circuit Analysis II: ENGR 2250.

**ENGLISH AS A SECOND LANGUAGE (ESL)**  

**ESL 90**  
**Listening and Speaking**  
Listening and Speaking provides the ESL student the opportunity to improve listening and speaking skills. The focus is on notetaking, weekly speaking and listening exercises, increasing vocabulary, and comprehension.
For course descriptions on Farm Business Management courses (FBMA & FBMT) go to: [Course Outlines](#) and search under FBMA and FBMT

### GEOGRAPHY (GEOG)

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Prerequisites</th>
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<tbody>
<tr>
<td>GEOG 1100</td>
<td>Introduction to Geography</td>
<td></td>
<td>Introduction to Geography introduces the fundamental themes and concepts in Geography. Emphasis will be given to Cartography, Meteorology, Geomorphology, Cultural Geography, and the interrelationships between humans and their environment. Prerequisite: STSK 0090 or placement by multiple measures.</td>
</tr>
<tr>
<td>GEOG 1101</td>
<td>Introduction to Physical Geography</td>
<td></td>
<td>Introduction to Physical Geography studies the geographical distribution of the natural environment, with an emphasis on spatial data analysis, weather, climate, geological formations and the hydrosphere, to examine the relationship of people to their physical surroundings. Prerequisite: STSK 0095 or placement by multiple measures.</td>
</tr>
<tr>
<td>GEOG 2140</td>
<td>Natural Disasters and Meteorology</td>
<td></td>
<td>Natural Disasters and Meteorology studies atmospheric processes and the human and economic consequences of natural disasters due to extreme weather events such as tornadoes, hurricanes, flooding, wildfires, and other natural phenomena. Disaster analysis, storm spotter training, and preparedness and mitigation will also be addressed. Prerequisite: STSK 0095 or placement by multiple measures.</td>
</tr>
<tr>
<td>GEOG 2235</td>
<td>Special Topics in Geography: Intro to Human Geography</td>
<td></td>
<td>This course is an overview of contemporary human geography. Students will be introduced to a spatial understanding of the distribution of population, migration, culture, language, religion, and cities. Prerequisite: STSK 0090 or placement by multiple measures.</td>
</tr>
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### GENERAL STUDIES (GSC, GSCM, GSSS)

<table>
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<tr>
<td>GSC 1105</td>
<td>Job Seeking Skills</td>
<td></td>
<td>Job Seeking Skills introduces career planning techniques and explains how to apply them in an employment search.</td>
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</tbody>
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### HEALTH CARE (HC)

<table>
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</thead>
<tbody>
<tr>
<td>HC 1100</td>
<td>Nutrition</td>
<td></td>
<td>Nutrition explores the basic concepts of normal nutrition are presented with an emphasis on wellness and maintenance of a balanced state of health. These concepts are applied to human needs throughout the lifespan cycle. The emphasis is on the comprehension and application of these concepts in health care settings.</td>
</tr>
<tr>
<td>HC 1120</td>
<td>Introduction to Healthcare Careers</td>
<td></td>
<td>Introduction to Healthcare Careers prepares students for rapidly changing healthcare careers. Students will explore a wide variety of career options and develop an awareness of workplace climate and culture. Students will participate in in-depth study of medical/health science careers, career planning, employability skills, basic terminology, ethics, wellness, common diseases, and safety.</td>
</tr>
<tr>
<td>HC 1151</td>
<td>Body Structure &amp; Function</td>
<td></td>
<td>Body Structure &amp; Function introduces the study of human anatomy and physiology. A study of body organization, chemistry, cells and tissues leads into exploring the normal structure and function of each body system. Emphasis is also placed on terminology and abbreviations.</td>
</tr>
<tr>
<td>HC 1175</td>
<td>Nursing Assistant</td>
<td></td>
<td>Nursing Assistant introduces concepts of basic human needs and teaches basic nursing skills that will be demonstrated and practiced in the laboratory setting. This course focuses on personal care, nutrition/feeding, elimination, clean and safe environment, communication, vital signs, body mechanics, death and dying, and principles related to long term care. Upon successful completion of the course, students will participate in a clinical experience caring for the geriatric client. Background study checks will be conducted. Successful students will be eligible to take the Nurse Aide Competency Examination for certification and placement on the Minnesota Nursing Assistant Registry. This course meets application requirements for MN West nursing program.</td>
</tr>
<tr>
<td>HC 1180</td>
<td>Medical Terminology in Healthcare</td>
<td></td>
<td>Medical Terminology in Healthcare provides students working knowledge of medical terminology and application of the terminology within the health professions.</td>
</tr>
<tr>
<td>HC 1290</td>
<td>Health Care &amp; Society</td>
<td></td>
<td>Health Care &amp; Society provides a basis for intellectual, practical and ethical decision making. The fundamentals of bioethics, ethical codes and legislation affecting a health professional practice, patient protection issues, professional boundaries, and legal basics are explored. Cultural and spiritual perspectives are discussed.</td>
</tr>
<tr>
<td>HC 2120</td>
<td>Disease Conditions</td>
<td></td>
<td>Disease Conditions introduces basic principles of disease and includes the study of disease by body system. The signs and symptoms, etiology, diagnosis, and treatment of each disease is explored, and prevention of disease is emphasized. Medical terminology and anatomy/physiology knowledge acquired in previous courses is applied. Prerequisite: HC 1151.</td>
</tr>
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</table>

### HEALTH INFORMATION TECHNOLOGY (HIMC)

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>HIMC 1100</td>
<td>CPT/HCPCS Coding</td>
<td></td>
<td>CPT/HCPCS Coding demonstrates the application of principles, guidelines and conventions of Current Procedural Terminology (CPT) coding, including Evaluation/Management (E/M) and Healthcare Common Procedure Coding System (HCPCS) Level I and Level II. Prerequisites: HC 1151, HC 1180 or BIOL 2245.</td>
</tr>
<tr>
<td>HIMC 1110</td>
<td>Diagnosis Coding</td>
<td></td>
<td>Diagnosis Coding demonstrates the application of principles, guidelines, and conventions of diagnosis coding by using the current International Classification of Diseases (ICD), Clinical Modification (CM) coding manuals. Prerequisites: HC 1151, HC 1160 or BIOL 2245.</td>
</tr>
</tbody>
</table>
HIMC 1120  
**Procedure Coding**  
Procedure Coding demonstrates the application of principles, guidelines, and conventions of procedure coding by using the current International Classification of Diseases (ICD). Procedure Classification System (PCS) coding manual. Prerequisites: HC 1151, HC 1180 or BIOL 2245.

HIMC 1130  
**Advanced Coding**  
Advanced Coding demonstrates the application, analysis and evaluation of coding principles, guidelines, and conventions from CPT, HCPCS, and ICD coding manuals. Prerequisite(s): HIMC 1100, HIMC 1110 and HIMC 1120.

HIMC 1140  
**Introduction to Health Information Management**  
Introduction to Health Information Management demonstrates fundamental health information management concepts, including the health care system, health record, stakeholders, and the health information profession.

HIMC 1150  
**Reimbursement & Insurance in Health Information**  
Reimbursement & Insurance in Health Information will explain health insurance plans, including an introduction and application to insurance claim forms. Review compliance approaches and analysis and evaluation of the revenue cycle management process are demonstrated.

HIMC 1165  
**Health Information Law**  
Health Information Law explains, demonstrates, and analyzes health care legal topics. Focus will be on privacy and security along with the legal and ethical principles, standards, policies, and regulations associated with health information management.

HIMC 2100  
**Computerized Health Information**  
Computerized Health Information introduces students to computer use in health care and health information management. Basic concepts of electronic health information systems will be introduced and applied, including data collection, storage, retrieval, and other applications.

HIMC 2110  
**Leadership & Management in Health Information**  
Leadership & Management in Health Information introduces the basic principles and concepts of leadership, communication and relationships that are needed in a work environment and healthcare facility specifically. Budgeting, staffing and performance management are also studied.

HIMC 2115  
**Computerized Health Information II**  
Computerized Health Information II introduces health information practices in the application of concepts, methods and structures related to the health information management work setting. Various applications used in health information will be studied. Students will select and prepare for their professional practice experience. Including background studies and health history forms. Prerequisite: HIMC 2110.

HIMC 2120  
**Quality Management in Health Information**  
Quality Management in Health Information explores the theory, practice and management of quality performance and improvement through examination of peer review processes, applying quality tools, data analysis, and reporting systems.

HIMC 2125  
**Medical Coding Board Review**  
Board review is an online course for the certified coding specialist (CCS) and the certified professional coder (CPC) national examinations by AHIMA and AAPC. This course offers you a study plan, review of all major examination topics, mock pretest and post-test, guidance to good computer test-taking skills. Prerequisite(s): HIMC 1100, HIMC 1110, HIMC 1120 and instructor permission.

HIMC 2130  
**HIT Professional Practice Experience**  
Health Information Technology Professional Practice Experience integrates practical real-life applications of theories learned through previous health information technology courses. Students will complete set number of hours under the direct, external, supervision of a health information professional to gain professional practice experiences. Prerequisite: HIMC 2115.

HIMC 2135  
**HIT Seminar**  
Health Information Technology Seminar prepares students to take the Registered Health Information Technician (RHIT) exam; through preparing a study plan, review of exam content and domains, mock exams, and assisting in completing exam application.

HIMC 2140  
**Statistics in Health Information**  
Statistics in Health Information evaluates and manages medical data for statistical purposes including collecting, analyzing, and interpreting numerical data and presenting data to personnel in healthcare services and facilities.

**History (HIST)**

HIST 1101  
**United States History to 1865**  
Meets Goal Areas: 05, 07 United States History to 1865 surveys US history from early human habitation of the North American continent through the Civil War (1865), including political, economic, social and cultural developments. Prerequisite: STSK 0095 or placement by multiple measures.

HIST 1102  
**United States History since 1865**  
Meets Goal Areas: 05, 07 United States History since 1865 surveys US history from the Civil War (1865) to the present, including political, economic, social and cultural developments. Prerequisite: STSK 0095 or placement by multiple measures.

HIST 1105  
**Minnesota History**  
Meets Goal Areas: 05, 07 Minnesota History surveys the state’s history beginning with the earliest human habitation to the present, including political, economic, social, and cultural developments. Major emphasis is on the nineteenth and twentieth centuries. Prerequisite: STSK 0095 or placement by multiple measures.

HIST 1111  
**Early Western Civilization**  
Meets Goal Areas: 06, 08 Early Western Civilization surveys Western history from ancient times to the 1500s, encompassing political, economic, socio-cultural, intellectual and artistic developments. Examines the history of ancient civilizations including Egypt & Mesopotamia, Greek & Roman, Byzantine Empire, Islamic Civilization, and Medieval Europe. The course includes a consideration of the emergence of the major Western religions of Judaism, Christianity and Islam. Prerequisite: STSK 0095 or placement by multiple measures.

HIST 1112  
**Modern Western Civilization**  
Meets Goal Areas: 06, 08 Modern Western Civilization surveys Western history from the 1500s to the present, encompassing political, economic, socio-cultural, intellectual and artistic developments. Topics covered include the Scientific Revolution, the Enlightenment, Colonialism, the Industrial Revolution, World Wars I & II, and the Cold War. Prerequisite: STSK 0095 or placement by multiple measures.

HIST 1121  
**Early World History**  
Meets Goal Areas: 05, 08 Early World History is a global and cross-cultural study of the early period of world history. Empires and regions examined include ancient India, China, Greece, Egypt, Rome, the Americas, Africa, Japan and Europe. The course includes the emergence of major world religions and considers their influence in world cultures and civilizations. Prerequisite: STSK 0095 or placement by multiple measures.

HIST 1122  
**Modern World History**  
Meets Goal Areas: 05, 08 Modern World History surveys Western history from the 1500s to the present, encompassing political, economic, socio-cultural, intellectual and artistic developments. The course includes a consideration of the emergence of the major Western religions of Judaism, Christianity and Islam. Prerequisite: STSK 0095 or placement by multiple measures.
Modern World History
Modern World History is a global and cross-cultural study of the modern period of world history from 1500 to the present. Topics include imperialism and colonialism, the interactions of nations and peoples, industrialization, modernization, global conflicts, and modern political, socio-cultural, and economic developments. The course concludes with a consideration of contemporary global conditions. Prerequisite: STSK 0095 or placement by multiple measures.

HIST 2202
Modern American Wars
Modern American Wars begins with an examination of the Spanish-American War, then examines World Wars I & II, the causes and peace settlements of each, and the significance of each conflict. The course moves on to a study of the Cold War and its associated conflicts, concluding with an analysis of recent developments including the War on Terror. The course addresses social, political, and economic questions from an ethical perspective. Prerequisite: STSK 0095 or placement by Multiple Measures.

HEALTH (HLTH)

HLTH 1101
Personal Wellness
Personal Wellness focuses on individual wellness from a holistic perspective. Surveys personal health concerns within each of the five human health dimensions - physical, social, intellectual, emotional, and spiritual. Emphasizes the knowledge, attitudes, and behaviors of a positive lifestyle. Designed for anyone interested in enhancing his/her well-being. Often a required component of programs in health, human service, and education careers. Prerequisite: STSK 0095 or placement by multiple measures.

HLTH 1110
Dimensions of Community/Public Health
Dimensions of Community/Public Health introduces the field of community/public health. Acquaints students with the variety of health agencies in the public and private sectors and surveys current social health issues. Examines public health policy, health care systems in the US and abroad, epidemiology and disease prevention in communities, and health promotion in various settings/populations. A foundation course for careers in allied health, community health, and other service professions. Prerequisite: STSK 0095 or placement by multiple measures.

HLTH 1130
Stress Management and Relaxation
Stress Management and Relaxation provides a foundation for understanding the role of stress in the modern human condition. Mind/Body/Spirit interrelationships and the emerging sciences of psychoneuroimmunology and subtle anatomy will be introduced. Experiential exploration of numerous coping skills and relaxation techniques is emphasized. Prerequisite: STSK 0095 or placement by multiple measures.

HLTH 2210
Human Sexuality
Human Sexuality explores the diverse physical, social and psychological aspects of human sexuality at all life stages within the framework of solid scientific research and critical thinking. Topics include sexual anatomy and physiology, attraction and intimate relationships, gender issues, forms of healthy sexual expression and behaviors, fertility management, STIs, sexual dysfunction, atypical sexual behaviors, sexual coercion, and commercial sex. Opportunities to clarify personal values and decisions regarding one's sexual health are woven throughout. Prerequisite: STSK 0095 or placement by multiple measures.

HLTH 2220
Drugs, Society, and the Individual
Explores relationships between drugs, sociocultural influences, and individual attitudes and behaviors. With an emphasis on psychoactive chemicals, this course surveys the physiological effects and psychosocial impact of a wide array of drugs. Investigates patterns of drug use; drug laws, consequences of drug abuse; addiction, intervention, treatment, recovery, and prevention strategies from both individual and social perspectives. Prerequisite: College level reading or placement by multiple measures.

HLTH 2240
Basic Nutrition
Basic Nutrition introduces the study of food and human dietary patterns. Examines sources of nutrients, how they are processed in the body, body composition, current dietary guidelines and nutritional issues, the impact of socio-cultural factors on diet, and the impact of dietary choices on health. Prerequisite: STSK 0095 or placement by multiple measures.

HUMAN SERVICES (HSER)

HSER 2297
Human Services Generalist Internship
Human Services Generalist Internship provides supervised work experience for students in the generalist track in one or more human services agencies. Students and supervisors design the experiences to meet students' educational and career goals. Prerequisites: Internships are available only to students who have an overall GPA of 2.00 ("C"), a 2.50 in career courses, have completed the outlined courses in their first three terms, have completed a four-hour seminar in the fall semester of the second year; have completed a formal application process and have been approved following an interview with the Human Services Coordinator.

HSER 2298
Human Services Child Development Internship
Human Services Child Development Internship provides supervised work experience with children in settings such as day care, preschool, and elementary schools. Students and supervisors design the experiences to meet students' educational and career goals. Prerequisites: Internships are available only to students who have an overall GPA of 2.00 ("C"), a 2.50 in career courses, have completed the outlined courses in their first three terms, have completed a four-hour seminar in the fall semester of the second year; have completed a formal application process and have been approved following an interview with the Human Services Coordinator.

HUMANITIES (HUM)

HUM 2121
The Turbulent Sixties
Meets Goal Areas: 06, 07
The Turbulent Sixties presents an interdisciplinary (history, literature, film) and topical survey of the 1960’s. Topics will include the civil rights movement, war on poverty, Vietnam, feminism, the environmental movement and the counterculture. The course also counts as a Human Diversity course. Prerequisite: ENGL 1101.

HUM 2201
The Many Faces of Mexico
Meets Goal Areas: 06, 07
The Many Faces of Mexico explores the cultural, historical and social realities which together form contemporary Mexico. By studying about the economic and political situation, one can understand why many Mexicans are seeking work and moving their families north. Special attention is given to the impact on Minnesota communities and the challenge to welcome and to meet the needs of the growing Latino population.

HUM 2230
World Religions
Meets Goal Areas: 06, 08
World Religions examines the historical development, fundamental doctrines and beliefs, practices, institutions and cultural expressions of the world's major religions. The course also explores some of the essential differences and similarities which exist among these religious traditions and points to the uniqueness of each of them.
**INDIGENOUS STUDIES (INDS)**

**INDS 1101**
Introduction to Indigenous Nations and Dakota Studies
Meets Goal Areas: 05, 07
Introduction to Indigenous Nations and Dakota Studies (INDS) focuses on understanding the “pan-Indian” view of Indigenous people in a contemporary setting. The course materials will focus on the socio-political history of interactions between Indigenous people and settlers coming to the United States. Aspects of Indigenous epistemology, culture, and their complexities interacting in a modern-day world will be explored. There will be an emphasis on the Oceti Sakowin (7 Council Fires)-Eastern Dakota/Western Dakota/Lakota, highlighting their struggle and resistance throughout history. Sociopolitical ideas of settler colonialism, decolonization, and tribal sovereignty will be key frames of understanding throughout the course work. The coursework will benefit both Indigenous and non-Indigenous students alike -- unpacking generalizations, assumptions, and stereotypes that are continually perpetuated in mainstream society as well as providing a detailed history of the land in Mni Sota Makobe (Minnesota). Prerequisite: ENGL 0090 or placement by multiple measures.

**LAW ENFORCEMENT (LAWE)**

**LAWE 1100**
Law Enforcement Practicum
1-3
Allows students in the law enforcement program to be involved in the day-to-day operations of a law enforcement or other criminal justice agency. Expose the students to the work that is required to be performed in that agency. These internships/fielde experiences will provide the students an opportunity for practical application of learned academic content in real world settings to help develop long-term academic and career plans. Prerequisite: CJS 1101.

**LAWE 1111**
Criminal-Constitutional Law
3
Criminal Constitutional Law provides learners an appreciation and understanding of the United States Constitution and the role it plays in democracy. The historic basis and development of constitutional concepts are explored. Constitutional limitations on governmental authority over private citizens are discussed and analyzed as interpreted by Federal and State Supreme Court decisions. The 1st, 4th, 5th, 6th, and 14th Amendments are stressed.

**LAWE 1120**
Physical Fitness for Law Enforcement I
2
Introduces students to strategies for physical conditioning, good nutrition and healthy eating habits for peace officers. Students will be required to perform stretching, aerobics and conditioning exercises at the direction of an instructor as part of an overall fitness program to enhance strength, agility, flexibility, speed, and cardiovascular endurance. Students will need to meet the Minnesota Peace Officer Standards and Training Board approved law enforcement-related physical fitness test.

**LAWE 1125**
Physical Fitness for Law Enforcement II
1
Continues students’ development in performing stretching, aerobics and conditioning exercises at the direction of an instructor as part of an overall fitness program to enhance strength, agility, flexibility, speed, and cardiovascular endurance. Students will need to meet the minimum standard for the Minnesota Peace Officer Standards and Training Board approved law enforcement-related physical fitness test by the end of the course.

**LAWE 1140**
Cyber Crimes
2
Introduces the field of cyber crimes. Students will learn what different types of cyber crimes are committed including but not limited to identity theft, financial fraud, and the exploitation of children. The students will learn how to go about taking computers as evidence, how to utilize search warrants to aid in an investigation, and what is needed to bring a cyber crime through the criminal justice system.

**LAWE 1150**
Homeland Security and Terrorism
2
Studies terrorism, counterterrorism, terrorist personalities, and terrorist groups, including types, tactics, and trends on a worldwide scale as well as domestically. This course also examines the issues of prevention, civil liberties and the role and responsibilities of entry level police officers.

**LAWE 1170**
Minnesota Traffic Code
2
Covers all of the 169 Minnesota Traffic Statutes. The class includes the application, interpretation, and enforcement of motor vehicle operation, registration, insurance and safety responsibility acts, driver's license laws, rules and regulations.

**LAWE 1200**
Juvenile Justice
3
Examines the history of the juvenile justice system in the United States and Minnesota. Students will be able to distinguish the major differences between the adult and the juvenile justice system in the United States and Minnesota by examining Supreme Court rulings, laws and Minnesota statutes regarding juveniles. Additionally, students will develop an understanding of the responsibilities of federal, state and local law enforcement agencies in dealing with juveniles.

**LAWE 1210**
Communication Relations
4
Synthesizes the concepts of interpersonal communications to allow students to better understand human behavior and verbal communications. The students will develop an understanding of barriers that can occur to effective communication due to the types of situations law enforcement officers work in. Students will examine and relate ways to effectively interpret, comprehend, and deliver verbal communication in order to effectively carry out law enforcement duties.

**LAWE 1220**
Law Enforcement and Community
3
Provides the student with contemporary concepts related to law enforcement interactions with the community including models of community policing, problem-oriented policing, crime prevention and developing community relations. Instruction in professional police conduct related to officer ethics, leadership and interpersonal communication in interactions with culturally diverse populations will be examined. Student will also be introduced to privacy data practices and the expectations during internal affairs investigations.

**LAWE 1230**
Law Enforcement and Human Behaviors
3
Provides the student with contemporary concepts of impact of human behavior on the interactions between law enforcement and individuals and how that interaction affects these relationships. Students will be introduced to techniques for dealing with individuals in crisis and victimization of individuals including: domestic abuse, sexual assault, individuals with disabilities, and crimes motivated by bias or hatred. Concepts of addressing issues of gangs, drugs, terrorism and homeland security will also be discussed.

**LAWE 1240**
Police Leadership-Ethics
3
Develops the principles of leadership, consensus building, showing respect for the opinions of others, and encourage cooperation, adaptability, and conflict resolution as it relates to carrying out law enforcement duties. Students will examine the day to day ethical choices officers have to make and the consequences of making poor decisions both morally and legally. The students will demonstrate these leadership and ethical qualities by working with area criminal justice agencies on projects to address current issues in the community and working on solutions to these issues.

**LAWE 2224**
Police Report Writing
2
Develops the students understanding of legal, procedural, and need for factual reports in the criminal justice process. Students will be exposed to a variety of reports and forms used in law enforcement as well as a variety of report writing mediums including computer applications. Students will practice writing police reports in a detailed chronological order using proper formatting. Emphasis will be placed on proper spelling, grammar, punctuation, and the ability to create a clear and
LAW 2233 4
**Firearms-Tactical Management**
Examines the physiological, psychological, and emotional effects of stress on law enforcement officers in their careers and during critical incidents to allow students to recognize these effects and develop skills to deal with stress. This course will focus on familiarizing students with the safe handling, nomenclature, and proper shooting of handguns, shotgun and patrol rifles requiring students to demonstrate proficiency after receiving instruction in the handling and use of handguns, shotgun, and patrol rifles. Students will then examine and complete exercises in critical incident management and different tactical responses to situations which may occur in the course of their duties. Prerequisite: Must be formally accepted into the Law Enforcement Program.

LAW 2250 4
**Accident Investigation-Radar-Radio-DUI Enforcement**
Explains and develops students understanding of how to investigate motor vehicle crashes and driving while impaired offenses. Through instruction students will establish how to fully investigate and document both motor vehicle crashes and driving while impaired offenses and will demonstrate through reality based training exercises how to properly complete these investigations including the use of State computer applications. This course will train students how to operate both RADAR/LIDAR units and will require the students to complete the State ARMER radio course. Prerequisites: Must be formally accepted into the Law Enforcement Program.

LAW 2295 1
**POST Seminar**
Provides a program overview, with opportunities to discuss changes in the field and POST requirements.

LAW 2297 1-3
**Law Enforcement Internship**
Allows students in the law enforcement program to be involved in the day-to-day operations of a law enforcement or other criminal justice agency. Expose the students to the work that is required to be performed in that agency. These internship/field experience(s) will provide the students an opportunity for practical application of learned academic content in real world settings to help develop long-term academic and career plans. Prerequisite: CJS 1101.

LAW 2300 4
**Patrol Operations**
Introduces students to the basic principles of patrol operations. Students will develop an understanding of patrol work including responding to calls, investigations, and enforcement of various laws and the functions needed to carry out these duties by applying knowledge learned in other law enforcement courses. Students will be required to practically apply the knowledge and skills learned throughout the law enforcement program by successfully completing reality based training exercises in a patrol setting. Prerequisites: Must be formally accepted into the Law Enforcement Program.

LAW 2310 4
**Use of Force**
Identifies and examines current Supreme court cases, case law, and Minnesota State law on the application of force by peace officers while providing a variety of situations where force may or may not be authorized by providing an understanding of the concepts of reasonable use of force and report documentation. This course will focus on familiarizing students through hands on instruction with a variety of verbal commands, escorting principles, pain compliance, countermeasures, restraint, ground fighting, and baton techniques. Specific instruction on electronic control weapon (ECW) and chemical agents will be given during the course. Students will be required to demonstrate proficiency after receiving instruction in these techniques through a variety of static and dynamic testing, including reality based training exercises. Prerequisite: Must be formally accepted into the Law Enforcement Program.

LAW 2350 12
**Skills Certificate**
Provides students that have completed POST Boards approved Professional Peace Officers Education (PPOE) Academic Program with the skills requirements of the Professional Peace Officers Education Category Three: Performance of Peace Officer Duties and Tasks and Category Four: Tools, Techniques and Tactics for licensing as a police officer. This course meets the transfer pathways requirements.

LAW 2400 4
**Minnesota Statutes**
Introduces students to Minnesota Traffic Statutes, Criminal Statutes, and Selected Statutes. Students will receive instruction on the interpretation of the State statutes by identifying and analyzing the elements of each statute. Hypothetical situations will be presented to assist students with the understanding and application of State statutes. This course is part of the Minnesota State transfer pathways.

LAW 2410 3
**Criminal Investigations**
Develops the basic procedural aspects of the criminal investigative process. Through instruction, evaluation of key elements of crimes, and case evaluations students will identify the process of completing a criminal investigation from first arrival on the scene of a crime through the court process. Specific areas that will be identified during the course will be legal and procedural aspects, responsibilities, interviewing and interrogating, document preparation, and court testimony.

LAW 2420 3
**Criminal Procedures**
Provides the learner with the history of the United States Constitution and Bill of Rights and the constitutional limitations on government authority over private citizens. Key concepts will be analyzed and discussed as interpreted by Federal and State Supreme Court decisions to allow students to become familiar with the procedural handling of individuals in criminal cases, rules of evidence, forfeitures, criminal defense, and civil liability.

LAW 2500 2
**Traffic Stops**
Introduces the student to basic patrol vehicle operation and examines approaches to conducting low, medium, and high risk vehicle stops. Through instruction and coaching students will develop an understanding of the different vehicle dynamics used during vehicle stops and how to properly write and issue traffic citations. Students will be required to demonstrate proper vehicle stops through reality based training exercises. Prerequisite: Must be formally accepted into the Law Enforcement Program.

LAW 2510 2
**Crime Scene Processing**
Develops the fundamentals of crime scene investigations. Through instruction and coaching students will develop an understanding of the different phases of crime scene examination, documentation, and evidence identification and collection. Students will be required to demonstrate proper investigation and processing skills through reality based training exercises. Prerequisite: Must be formally accepted into the Law Enforcement Program.

FOR ADDITIONAL COURSE DESCRIPTIONS ON LAMB MANAGEMENT courses (LWMP) GO TO: COURSE OUTLINES AND SEARCH UNDER LWMP

LWMP 1202 2
**Equipment and Facilities**
This course will cover planning for sheep facilities; barn design; lot layout and sheep feeding equipment. Students will become aware of housing and feeding requirements and how to effectively plan for them.

LWMP 1300 2
**Introduction to Sheep Health**
Familiarizes students with management practices beneficial to healthy animal production. Sheep health is fundamental to a successful sheep enterprise. Sheep health will be studied in the following categories - Animal Behavior, Handling, Housing and Nutrition; Quality Assurance
and Bio-Security; Young Lamb Health Concerns; Metabolic Disorders; Abortion Management; Lameness Issues; Fertility Concerns in Rams; Sheep Eye Health Concerns; and Other General Health Issues.

LWMP 1502
Ewe Ration Formulation
Provides awareness of the methods used to balance rations to meet the sheep nutrient needs for each specific stage of production. The course will also cover least cost ration balancing.

LWMP 1701
Wool Characteristics and Properties
This course will provide an in-depth look at the biological development of wool fiber and the properties that make it a unique clothing fiber. In addition this course will study the factors that determine the value of wool, how these can be improved and methods to measure these qualities.

**MATH (MATH)**

MATH 0092
Essentials of Mathematics - Pre-Algebra
Essentials of Mathematics - Pre-Algebra assists students in developing a thorough understanding of basic mathematics. Intuition and sound mathematical techniques are used to analyze and solve problems in fractions, decimals, ratios, proportions and percentages. Metric geometry is also covered and an introduction to algebra. This course is NOT considered a transfer course. Prerequisite: Placement using multiple measures.

MATH 0098
Higher Algebra I - Beginning Algebra
Teaches basic algebraic concepts and skills including real number properties, algebraic expressions, solving equations and inequalities, graphs of linear equations, exponents and scientific notation. This course is not considered a transfer course. Prerequisite: MATH 0092 or placement by multiple measures.

MATH 0099
Higher Algebra II
Teaches polynomials, operations with polynomials, factoring polynomials, polynomials with several variables, rational expressions, graphs, functions and their applications. This course is not considered a transfer course. Prerequisite: High school algebra (one year), MATH 0098, or placement by multiple measures.

MATH 0100
Higher Algebra III
Teaches systems of equations in two and three variables, compound inequalities, absolute value equations and inequalities, radical expressions and equations, quadratic equations, exponential and logarithmic functions. Prerequisite: MATH 0099 or placement by multiple measures.

MATH 0111
Co-requisite with College Algebra
Co-requisite with College Algebra Supports students who qualify with additional review, just-in-time learning, deeper conceptual development, repetition over time, and learning skills and habits required to be successful with the corresponding college level MATH 1111 College Algebra Math course taken concurrently. Prerequisite: ACT Math score of 19 or placement by multiple measures.

MATH 0115
Co-requisite with Intro to Probability and Statistics
Co-requisite with Intro to Probability and Statistics supports students who qualify with additional review, just-in-time learning, deeper conceptual development, repetition over time, and learning skills and habits required to be successful with the corresponding college level MATH 1105 Intro to Probability and Statistics course taken concurrently. Prerequisite: ACT Math score of 15 or placement by multiple measures.

MATH 0117
Co-requisite with Concepts in Math
Co-requisite with Concepts in Math supports students who qualify with additional review, just-in-time learning, deeper conceptual development, repetition over time, and learning skills and habits required to be successful with the corresponding college level MATH 1107 Concepts in Math course taken concurrently. Prerequisite: ACT Math score of 11 or placement by multiple measures.

MATH 1100
Integrated Math
Focuses on using math concepts to solve applied problems in technology. These concepts include topics in algebra, geometry, and trigonometry. Prerequisite: MATH 0092 or placement by multiple measures.

MATH 1105
Introduction to Probability and Statistics
Introduction to Probability and Statistics introduces the measures of central tendency, measures of dispersion, frequency distributions, probability, sampling distributions and the central limit theorem, testing of hypotheses, analysis of variance, linear regression and correlation analysis. Prerequisite: MATH 1107 or NURS 1130 or Co-Req MATH 0115 or placement by multiple measures.

MATH 1107
Concepts in Math
Concepts in Math covers topics from various areas of mathematics showing the scope and power of mathematics and emphasizing the mathematical method. This course is for students who are not mathematics majors and who wish to acquire a basic understanding of mathematics and apply it to a specific area of study. Prerequisites: Co Req Math 0117 or placement by multiple measures.

MATH 1109
Math Skills for Elementary Education
Math Skills for Elementary Education develops mathematical skills required for Elementary Education majors by pairing various skills with a beginning discussion of pedagogy and best-practices in Elementary Math Education. This course fulfills some of the Minnesota Professional Educators Licensing and Standards Board competencies required for Elementary teachers. Prerequisites: Two years of high school Algebra, Math 0092, or placement by multiple measures.

MATH 1111
College Algebra
College Algebra reviews the fundamental operations of higher algebra integrated with a functions approach. Studies polynomial, exponential, and logarithmic functions, graphs and transformations, systems of equalities and inequalities, matrices and determinants, problem solving applications and data modeling techniques. Prerequisite: MATH 1107, MATH 1105, Co-requisite MATH 0111 or placement by multiple measures.

MATH 1113
Pre-Calculus
Pre-Calculus reviews the concepts of college algebra and then extends those ideas to trigonometry and analytic geometry. Exponential, logarithmic, and polynomial functions are emphasized in the review. The course explores rectangular coordinates and angles, solutions of right triangles, unit circles, radian measure, trigonometric functions and their inverses, trigonometric graphs, trigonometric equations and identities, complex numbers, conic sections, and other analytic geometry topics such as polar coordinates, parametric equations, sums and geometric series, and vectors. Prerequisite: MATH 1111 or placement by multiple measures.

MATH 1118
Applied Calculus
Provides a tour of differential and integral calculus in one variable. Emphasizes formulas and their interpretation and use in applications. Students in programs that call for short calculus, brief calculus or applied calculus should take this course. Engineering students should take the Calculus sequence: MATH 1121-1122. Students concerned about which courses to take should contact the instructor. Prerequisite: MATH 1113 or MATH 1111 or placement by multiple measures.
MATH 1121  4
Calculus I  
Calculus I introduces the basic ideas of differential and integral calculus. Topics include: limits and continuity, differentiation of functions, applications of derivatives, definite and indefinite integrals, numerical integration, and applications of definite integrals. Prerequisite: MATH 1113 or placement by multiple measures.

MATH 1122  4
Calculus II  
Calculus II calculates areas using definite integrals and continues to expand Calculus I concepts. Other topics include the calculus of transcendental functions, techniques of integration, applications of integration, differential equations and modeling, and infinite sequences and series, Taylor polynomials, and the Calculus of polar and parametric equations. Prerequisite: MATH 1121.

MATH 2201  4
Calculus III  
Calculus III extends applications of derivatives and integrals to three-dimensional space. This course is an orientation course designed to familiarize the student with a career in the medical field, medical terminology, certification process, professional organizations, and ethical/legal issues. The course has heavy emphasis on phlebotomy skills. The course also introduces the student to laboratory information system used in the laboratory.

MATH 2206  4
Ordinary Differential Equations  
Ordinary Differential Equations presents the theory, computations and applications of first and second order ordinary differential equations and two-dimensional systems. Prerequisite: MATH 1122.

MATH 2210  4
Linear Algebra  
Linear Algebra introduces systems of matrix linear equations, linear transformations, matrix operations, vector spaces, eigenvalues and eigenvectors, orthogonality, and applications. Prerequisite: MATH 1122.

MEDICAL LABORATORY TECHNICIAN (MDLT)  

MDLT 1100  3
Introduction to Laboratory Sciences  
Introduction to Laboratory Sciences course is an orientation course designed to familiarize the student with a career in the medical field, medical terminology, certification process, professional organizations, and ethical/legal issues. The course has heavy emphasis on phlebotomy skills. The course also introduces the student to laboratory information system used in the laboratory.

MDLT 1105  3
Medical Microbiology I  
Medical Microbiology I course introduces the student to the microbial world. The course covers the study of the materials and methods used for identification of pathogenic organisms and the study of these in relation to their disease processes in humans. The course will present microbiology within an epidemiologic, diagnostic, and clinical framework. In the laboratory, the student will learn such techniques as gram staining, microscopy, culturing, identification of microorganisms and anti-microbial susceptibility testing.

MDLT 1110  2
Laboratory Math Calculations  
Laboratory Math Calculations course begins with a review of basic math, algebra and the metric system. The student will then learn basic math as it applies to the laboratory sciences.

MDLT 1115  3
Biological Fluids  
Biological Fluids introduces the student to the practical aspects of renal physiology and the theory of urine chemical, physical and microscopic tests. In addition, analysis of other body fluids (fetal specimens, cerebral spinal fluid, seminal fluid, amniotic fluid, synovial fluid) are reviewed in the lecture portion of the class. In the laboratory, the student will perform physical, chemical and microscopic analysis on urine specimens, and analysis of other body fluids. Prerequisite: Microscopic usage is helpful.

MDLT 1120  3
Immunology  
Immunology introduces the student to a wide array of clinical laboratory techniques that are based on the concepts studied in immunology. The topics range from the very simple to the very complex procedures that are used in all areas of the clinical laboratory. Prerequisite: MDLT 1100.

MDLT 1125  3
Clinical Chemistry I  
Clinical Chemistry I consists of the students being introduced to methods used in quantitative analysis of chemical constituents of blood and other body fluids. Quality control is emphasized as integral to all aspects of laboratory medicine. Specific testing procedures for various organ systems are discussed and practiced. Prerequisite: MDLT 1100.

MDLT 1130  3
Hematology I  
Hematology I is the first part of a two-part course in Hematology, the study of diseases in the blood. Students will begin with a basic study of the blood cells called hematopoiesis. Students will study the disease processes that occur in the white blood cells of the blood with emphasis on benign white blood cell disorders, leukemia, and lymphoma. Prerequisite: MDLT 1100.

MDLT 2101  3
Medical Microbiology II  
Medical Microbiology II is the continuation of Medical Microbiology I. This course focuses on the study and identification of bacteria, parasites, viruses, and fungi. The student will be performing basic laboratory procedures in bacteria and fungi identification. The student will also be reviewing laboratory procedures that was taught in Microbiology I. Prerequisite: MDLT 1105.

MDLT 2106  3
Immunohematology  
Immunohematology (Bloodbanking) teaches the theory of red cell antigen-antibody interactions as it relates to blood grouping and typing, antibody detection compatibility testing. Blood donor screening component preparation are also discussed. In laboratory the student will perform basic blood banking procedures. Accuracy in procedure interpretation is emphasized. Prerequisites: MDLT 1100 and MDLT 1120.

MDLT 2110  2
Clinical Chemistry II  
Clinical Chemistry II is a continuation of MDLT 1125 Clinical Chemistry I. Students continue to develop skills in the performance of the chemical analysis of blood. Lectures continue to correlate laboratory results with clinical findings. Content of the course includes renal, acid/base balance, electrolytes, endocrinology & thyroid, gastric & pancreatic function, toxicology, and hormones. Prerequisites: MDLT 1100, MDLT 1125 and CHEM 1150.

MDLT 2120  3
Hematology II  
Hematology II is a continuation of MDLT 1130 (Hematology I). Student will study the disease processes that occur in the red blood cells of the blood with emphasis on anemias. This course also covers the theory and testing of the coagulation aspects of the blood. Prerequisite: MDLT 1100 and MDLT 1130.

MDLT 2200  4
Phlebotomy Externship  
Phlebotomy Technician Externship consists of 120 contact hours of supervised practice of phlebotomy at an affiliated hospital, private laboratory or clinic. Learning activities are specifically planned and implemented at the clinical affiliated site. Student clinical experience is standardized using a checklist. Fine motor skills and some mobility are required for students to successfully perform in most clinical facilities: drawing patient's blood in the inpatient and outpatient settings, processing specimens including operating mechanical and computerized equipment and performing clerical duties. Good communication skills are critical in dealing with patients, clients, physicians, nurses and other health care workers. The student will
make arrangements with the Medical Laboratory Technician Program Director regarding their externship time and site. Prerequisite: MDLT 1100 and MEDA 1135.

**MDLT 2310**
**Clinicals: Urinalysis/Biological Fluids**
Clinicals: Urinalysis and Biological Fluids consists of the student continuing their education in an affiliated hospital or clinic laboratory under the direct supervision of a qualified laboratory professional. The experience allows the students to refine laboratory techniques and apply knowledge learned in the didactic phase in an employment-like setting that offers realistic experiences unavailable in student laboratory sessions. Additionally, students acquire non-technical attributes including, but not limited to, communication, critical thinking, multitasking, and independent work skills. The student will practice and gain experience in basic medical laboratory techniques and procedures required for entry level Medical Laboratory Technicians. Prerequisites: MDLT 2106 and MDLT 2120.

**MDLT 2320**
**Clinicals: Hematology and Hemostasis**
Clinicals: Hematology and hemostasis consists of the student continuing their education in an affiliated hospital or clinic laboratory under the direct supervision of a qualified laboratory professional. The experience allows the students to refine laboratory techniques and apply knowledge learned in the didactic phase in an employment-like setting that offers realistic experiences unavailable in student laboratory sessions. Additionally, students acquire non-technical attributes including, but not limited to, communication, critical thinking, multitasking, and independent work skills. The student will practice and gain experience in basic medical laboratory techniques and procedures required for entry level Medical Laboratory Technicians. Prerequisites: MDLT 2106 and MDLT 2120.

**MDLT 2330**
**Clinicals: Medical Microbiology**
Medical Microbiology Clinical course consists of the student continuing their education in an affiliated hospital or clinic laboratory under the direct supervision of a qualified laboratory professional. The experience allows the students to refine laboratory techniques and apply knowledge learned in the didactic phase in an employment-like setting that offers realistic experiences unavailable in student laboratory sessions. Additionally, students acquire non-technical attributes including, but not limited to, communication, critical thinking, multitasking, and independent work skills. The student will practice and gain experience in basic medical laboratory techniques and procedures required for entry level Medical Laboratory Technicians. Prerequisites: MDLT 2106 and MDLT 2120.

**MDLT 2340**
**Clinical: Chemistry and Immunology**
Clinical Chemistry and Immunology course consists of the student continuing their education in an affiliated hospital or clinic laboratory under the direct supervision of a qualified laboratory professional. The experience allows the students to refine laboratory techniques and apply knowledge learned in the didactic phase in an employment-like setting that offers realistic experiences unavailable in student laboratory sessions. Additionally, students acquire non-technical attributes including, but not limited to, communication, critical thinking, multitasking, and independent work skills. The student will practice and gain experience in basic medical laboratory techniques and procedures required for entry level Medical Laboratory Technicians. Prerequisites: MDLT 2106 and MDLT 2120.

**MDLT 2350**
**Clinicals: Immunohematology**
Clinicals: Immunohematology consists of the student continuing their education in an affiliated hospital or clinic laboratory under the direct supervision of a qualified laboratory professional. The experience allows the students to refine laboratory techniques and apply knowledge learned in the didactic phase in an employment-like setting that offers realistic experiences unavailable in student laboratory sessions. Additionally, students acquire non-technical attributes including, but not limited to, communication, critical thinking, multitasking, and independent work skills. The student will practice and gain experience in basic medical laboratory techniques and procedures required for entry level Medical Laboratory Technicians. Prerequisites: MDLT 2106 and MDLT 2120.

**MDLT 2360**
**Capstone**
Capstone course will focus on further development of critical thinking and problem solving skills in all of the laboratory disciplines, as well as integration of laboratory analyses, interpretation and application. Activities include discussions, case study, interactive activities and assignments, focused reviews, and examinations. Mastery of content will be assessed through a comprehensive examination. Under the direction of faculty, students prepare a written case study and present their findings to laboratory professionals and classmates. Student will also develop resume and cover letter and discuss job interviewing.

**MDLT 2370**
**Clinicals: SIM Medical Microbiology**
SIM (Strategic Instruction Model) Microbiology Lab is a review and enhancement of medical microbiology. This is a two-week course held in the student MLT laboratory. This experience enables the students to refine microbiology laboratory techniques and apply knowledge to work in the microbiology department at an entry-level position. In addition, the student will continue their education in Microbiology in MDLT 2330 Clinical: Medical Microbiology. Prerequisites: MDLT 2106, MDLT 2110, MDLT 2120, and MDLT 2101.

**MECHATRONICS (MECH)**

**MECH 1102**
**Mechanical Power Transmission**
Mechanical Power Transmission introduces students to fundamental industrial mechanical concepts, principles, and equipment.

**MECH 1103**
**Basic Hydraulics**
Basic Hydraulics introduces the students to basic concepts, formulas and applications of hydraulic system components. Studies the use of directional, flow and pressure control devices in circuits. Also provides students with the knowledge and understanding of the operation, function, and application of hydraulic pumps and actuators.

**MECH 1105**
**1-3 Hydraulics Lab**
Hydraulics lab examines basic equipment and fundamentals of hydraulic valves of fluid power. Focus will also cover various flow controls, pumps and motors. Students will tear down, plumb and operate the various components.

**MECH 1110**
**Fluid Power Calculations**
Fluid Power Calculations applies math concepts used to calculate basic system parameters such as lifting force, pressures, horsepower, time, velocities, and conductor sizes. Students will calculate efficiencies, flow, pressure, horsepower, speed, torque and displacement for basic fluid power systems.

**MECH 1115**
**Computer Aided Design**
Introduces the skills needed to design, draw, edit, and publish various industrial schematics using CAD software. Students will demonstrate the ability to edit and design mechanical, electrical, and structural schematics. Course time will include instruction on drawing setup and commands along with hands-on lab time working with and creating drawings.

**MECH 1120**
**Pneumatic Theory**
Pneumatic Theory introduces the students to gas laws and principles, and pneumatic component identification, functions and applications. Concurrent enrollment with MECH 1131.

**MECH 1125**
**Electrical Controls I**
Electrical Controls I introduces basic electrical concepts. Students will be introduced to electrical theory, electrical safety hazards and requirements, and electrical circuit wiring and measurement. Students will learn to identify electrical control components used in an industrial environment and apply the concepts necessary for designing, wiring, troubleshooting, and operation of electrical control circuits.
MECH 1131  
Pneumatic Lab  
Pneumatic Lab provides students with skills in plumbing, troubleshooting, and operation of basic pneumatic circuits. Concurrent enrollment with MECH 1120.

MECH 1135  
Electrical Controls II  
Electrical Controls II includes the control of electromechanical devices, AC and DC motors, solid state control devices, electrical schematics used to interpret logic and circuit function. Students will design, wire, and troubleshoot electromechanical and motor starter circuits using common industrial devices and components and analyze electrical control circuits used in industrial environments.

MECH 2100  
Advanced Systems Calculations  
Advanced Systems Calculations provides students with knowledge and skills of calculating and sizing systems in both mobile and industrial fluid power applications. Prerequisites: Successful completion of year one in the Mechatronics diploma or A.A.S. degree program or equivalent work experience.

MECH 2105  
Advanced Fluid Power Systems I  
Advanced Fluid Power Systems I provides students the opportunity to design, plumb, and operate various advanced hydraulic, pneumatic, and electrical control circuits. Prerequisites: Successful completion of year one in the Mechatronics diploma or A.A.S. degree program or equivalent work experience.

MECH 2110  
Circuit Design and Control Theory  
Circuit Design and Control Theory provides student instruction in design and function of hydraulics, drives, mobile valves, pump controls, and power steering. Prerequisite: MECH 1103.

MECH 2120  
Automated Systems  
Automated Systems provides students with an understanding of and the ability to use programmable logic controllers, human machine interfaces, drives, controllers, and other hardware to control and power all phases of industrial automation. Prerequisite: MECH 2136.

MECH 2125  
Motion Control  
Motion Control examines components in a motion control system, including servo systems, motors, feedback devices, controllers, and the software used to control precise motion in industrial automation. Prerequisite: MECH 2136

MECH 2126  
Systems Analysis  
Systems Analysis provides students with the knowledge of how fluid power components interact with each other and the environment to determine causes of malfunction. Prerequisite: Successful completion of year one in the Mechatronics diploma or A.A.S. degree program or equivalent work experience.

MECH 2130  
Advanced Fluid Power Systems II  
Advanced Fluid Power Systems II provides students advanced fluid power theory and application for product specification and selection, design, service and fabrication. Prerequisite: MECH 2105.

MECH 2136  
Programmable Logic Controllers  
This course demonstrates the use of programmable logic controllers and circuits to control and power all phases of industrial automation. Prerequisite: MECH 1135.

MECH 2141  
Proportional & Servo Control Theory  
Proportional & Servo Control Theory provides students with knowledge and working skills dealing with electronic control of electro-hydraulic proportional and servo controls. Prerequisite: Successful completion of year one in the Mechatronics diploma or A.A.S. degree program or equivalent work experience.

MECH 2165  
Instrumentation and Control Lab  
Instrumentation and Control Lab provides hands-on experience to the essential elements of a process control system. It will provide plant operators and entry-level instrument mechanics, basic knowledge of common process instrumentation and control schemes. Prerequisite: Concurrent Enrollment with RNEW 1160.

MEDICAL ASSISTANT (MEDA)

MEDA 1105  
Clinical Procedures I  
Clinical Procedures I teaches the fundamentals of the clinical aspect of medical assisting, and includes learning to perform specific skills. Areas taught include communication and professionalism, basic principles of psychology, medical asepsis, the medical assistant's role in assisting with the medical exam, eye and ear procedures, physical agents that promote tissue healing, care of instruments and documentation. Prerequisite: It is recommended that BIOL 2245 or HC 1180 and HC 1151 be taken before or concurrently with this course.

MEDA 1135  
Laboratory Skills  
Laboratory Skills focuses on the role of the medical assistant in the laboratory setting. CLIA-waived testing is studied and performed in the laboratory areas of urinalysis, immunology, hematology, chemistry and microbiology. Specimen collection, quality control and documentation of test results are included. Additional topics explored include electrocardiology, respiratory testing and emergency preparedness. The class also reinforces the fundamental laboratory skills of infection control, safety and phlebotomy taught in MDLT 1100. Prerequisite: MDLT 1100.

MEDA 2110  
Clinical Procedures II  
Clinical Procedures II reinforces the fundamental aspects of clinical medical assisting taught in Clinical Procedures I and expands into surgical asepsis, minor office surgery and wound care. The specialty areas of OB/GYN, pediatrics, colon procedures and male reproductive health are explored. Dosage calculations and medication administration techniques are also taught. Included is the performance of specific skills related to each area of study. Prerequisite: MEDA 1105.

MEDA 2135  
Pharmacology  
Pharmacology introduces pharmacological concepts and drug classifications as they apply to the diseases and disorders they prevent and/or treat. The class also explores the effects of drugs on the different body systems. Prerequisite: HC 1151 or both BIOL 2201 and BIOL 2202.

MEDA 2139  
Professional Integration  
Professional Integration reinforces key curriculum components for the medical assistant student entering practicum. The class provides orientation to the practicum experience and preparation for the medical assistant certification exam. Prerequisites: Successful completion of all other Medical Assistant Diploma Program requirements (37 program credits) except for MEDA2140.

MEDA 2140  
Medical Assistant Practicum  
Medical Assistant Practicum provides on-the-job experience for the medical assistant student. The student will be assigned to work in a medical office under the supervision of clinic personnel. They will observe and perform the skills learned in the medical assistant program. Prerequisite: Students entering MEDA2140 will have successfully completed all other Medical Assistant Diploma Program requirements (38 credits).
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
<th>Meets Goal Area(s)</th>
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<tbody>
<tr>
<td>MUSC 1101</td>
<td>Fundamentals of Music</td>
<td>3</td>
<td>06</td>
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<td></td>
<td>Piano Lessons</td>
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<tr>
<td>MUSC 1102</td>
<td>Introduction to Music Technology</td>
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<td>MUSC 1105</td>
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<td>MUSC 1108</td>
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<tr>
<td>MUSC 1110</td>
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<tr>
<td>MUSC 1141</td>
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Piano Lessons provides regularly scheduled individualized instruction. Open to interested students at all levels of ability.

MUSC 1145 Vocal Lessons (Meets Goal Area: 06)
Vocal Lessons develops singing technique through a regularly scheduled program of individualized instruction.

MUSC 1146 Vocal Lessons (Meets Goal Area: 06)
Vocal Lessons develops singing technique through a regularly scheduled program of individualized instruction.

MUSC 2108 Concert Band
Concert Band prepares students for performance of concert band and wind ensemble literature. Open to all students who play band instruments. Performances are given both on and off campus. One major performance each semester. Prerequisite: Audition.

MUSC 2111 Choir (Meets Goal Area: 06)
Choir consists of a vocal ensemble, performing a wide range of musical styles. At least one major performance takes place.

MUSC 2112 Choir (Meets Goal Area: 06)
Choir consists of a vocal ensemble, performing a wide range of musical styles. At least one major performance takes place.

MUSC 2140 Piano Lessons (Meets Goal Area: 06)
Piano Lessons provides regularly scheduled individualized instruction. Open to interested students at all levels of ability.

MUSC 2141 Piano Lessons (Meets Goal Area: 06)
Piano Lessons provides regularly scheduled individualized instruction. Open to interested students at all levels of ability.

MUSC 2145 Vocal Lessons (Meets Goal Area: 06)
Vocal Lessons develops singing technique through a regularly scheduled program of individualized instruction.

MUSC 2146 Vocal Lessons (Meets Goal Area: 06)
Vocal Lessons develops singing technique through a regularly scheduled program of individualized instruction.

NATURAL SCIENCE (NSCI)

NSCI 1100 Issues in the Environment (Meets Goal Areas: 06, 10)
Issues in the Environment takes a broad look at environmental issues and explores in depth certain global, national, and local environmental problems. In addition to lecture, guest speakers, field trips, and videos may be used. Prerequisite: STSK 0090 or placement by multiple measures.

NURSING (NURS)

NURS 1100 Principles and Practices of Nursing
Principles and Practices of Nursing explores the basic needs of clients while reinforcing concepts learned in the nurse assistant course. Emphasizes nursing responsibilities and interventions utilized by the practical nurse to assist clients to meet basic needs. Topics covered include, but are not limited to the following topics: homeostasis, elimination, therapeutic communication skills, documentation, nursing process, critical thinking, psychosocial health, death and the grieving process, nutrition, and care of the geriatric patient. Performance of nursing skills are taught and evaluated in the lab setting. The key concepts of teamwork and collaboration, safety, quality improvement, professional identity/behavior, patient/relationship centered care,
used to guide learners.

NURS 1220
Nursing of the Adult II
Nursing of the Adult II introduces learners to alterations in functioning, as well as basic disease processes throughout the adult lifespan. Disruptions in the following body systems are covered: cardiovascular, respiratory, skin and sensory systems. Topics of infectious processes, diabetes mellitus, and drug therapy will be addressed. Gerontological and cultural consideration will be included. Critical thinking through the use of the nursing process, health promotion, and standards of care are used to guide learners.

NURS 1140
Nursing Skills Lab
Nursing Skills Lab introduces students to basic assessment and nursing skills to be demonstrated in the lab setting. The course will include the following skills areas: vital signs, activity/mobility, oxygenation, medication administration, injections, elimination, and assessment.

NURS 1150
Clinical Applications I
Clinical Applications I provides the learner an opportunity to apply nursing judgment using the nursing process to implement safe, patient/relationship centered care in the long-term care setting. The clinical student focuses on assessing and collecting data, implementing skills learned in the lab setting, documenting findings and reinforcing teaching plans for patients with common problems. The student develops communication and customer service skills working with individual patients, families, and team members.

NURS 1220
Nursing of the Adult II
Nursing of the Adult II introduces the learners to alterations in functioning, including basic disease processes throughout the adult lifespan. Disruptions in the following body systems are explored: renal, reproductive, gastrointestinal, endocrine, neurovascular, and musculoskeletal systems. Topics of cancer and surgical client care will be addressed. Nursing and collaborative interventions and critical thinking skills are reinforced. Pharmacological concepts, gerontological, and cultural considerations will be included. Critical thinking through the use of the nursing process, health promotion, and standards of care are used to guide the students. Prerequisites: Acceptance into the Practical Nursing Program and successful completion of NURS 1120.

NURS 1230
Pharmacology II
Pharmacology II builds on pharmacological concepts, drug classifications, and effects of drugs on the client from Pharmacology I. It prepares the learner for dosage calculations and administration of medications. Prerequisites: Acceptance into the Practical Nursing Program and successful completion of NURS 1130.

NURS 1250
Family Nursing
Family Nursing introduces the learner to the childbearing/childrearing family. Concepts included are psychosocial, normal physical, and abnormal conditions of pregnancy, the health and illness of the newborn through the adolescent, and the influence of the community on the family. Application of growth and development theory to direct patient care is emphasized. Prerequisites: Acceptance in the nursing program. Successful completion of NURS 1100 and completion of PSYC 1150.

NURS 1260
Mental Health Nursing
Mental Health Nursing focuses on the introduction of the student to mental health aspects and illness as well as the holistic care of a client with mental health disorders. This course will also look at the psychotherapeutic management in the continuum of care, milieu management and care of special populations. Prerequisites: Acceptance in the nursing program. Successful completion of NURS 1100 or NURS 1120.

NURS 1280
Clinical Application II
Clinical Application II provides the learner an opportunity to apply nursing judgment using evidence based care, critical thinking and clinical judgment to implement safe, patient/relationship centered care to patients across the lifespan. The learner reflects on the value of patient centered care, teamwork and collaboration, informatics, quality improvement, safety, managing care, and nursing judgment/evidence based care in his/her career as a LPN.

NURS 1295
PN Integration
PN Integration facilitates the transition of the learner to the role of an LPN. Concepts related to leadership and management are presented, as well as career development options that enhance career mobility. Standards of practice and the importance of practicing according to state regulations and statutes for the scope of practice for the LPN are examined.

NURS 2125
Patient Centered Care I
Patient Centered Care I will focus on nursing process and clinical judgment in the care of patients and their families. Concepts of therapeutic communication, health promotion, pharmacology, and nutrition are integrated throughout the content. Care of the patient experiencing pain, infectious disease, problems with immunity, fluid and electrolyte imbalances, acid-base imbalances, shock, cancer, and undergoing surgery will be explored. Disorders of the respiratory, cardiac, and hematologic systems will be included.

NURS 2130
Pharmacology: A Pathophysiologic Approach I
Pharmacology: A Pathophysiologic Approach I provides an opportunity to synthesize pharmacologic, basic pathophysiologic, and nursing concepts to minimize risk of harm for patients. Promotes use of current information to prevent error and support decision making related to the nurse patient relationship, body defenses, hematoepoiesis, cardiovascular function, respiratory function, urinary function, nervous function as it correlates with pharmacologic therapy. Medical Math including arithmetic, metric measuring, calculation of oral medications and basic medication administration will be included. Prerequisite: Admission to the Associate in Science nursing program.

NURS 2135
Geriatric & Psychiatric Nursing
Geriatric & Psychiatric Nursing focuses on nursing process and clinical judgment in the care of patients and their families. Concepts of therapeutic communication, health promotion, safety, pharmacology, and nutrition are integrated throughout content. Unique needs of the gerian client and individuals experiencing disruption in their mental health will be addressed. Prerequisite: Admission to the Associate in Science Nursing Program.

NURS 2145
Principles of Professional Nursing
Principles of Professional Nursing teaches the concepts of patient-centered care including holistic assessments, nursing process and patient education, therapeutic communication, and safety in care delivery are emphasized. Evidence-based practice as a foundation for sound clinical reasoning is incorporated. Prioritization, delegation and supervision as it related to client care and working with other professionals is included throughout the course. Facilitates transition of the Licensed Practical Nurse into the professional nursing role.
NURS 2150 2
Skills Lab
Skills Lab assists the student in developing safe, evidence based nursing skills. Delegated medical functions as well as physical and psychosocial assessment of adults and children are practiced. Safety in medication dosage and medication administration is practiced. Simulation will be used to integrate skills in preparation for the acute care clinical environment.

NURS 2190 2
Acute Care Clinical I
Acute Care Clinical I allows students to demonstrate safe and effective application of the nursing process with emphasis on patient/family centered care, and the demonstration of therapeutic and professional communication. Students demonstrate clinical reasoning to synthesize newly acquired cognitive and technical skills with prior knowledge, skills, and attitudes. Prerequisite: Admission to Associate in Science Nursing Program, has completed necessary preclinical documentation as required by clinical sites, CastleBranch verification is complete.

NURS 2225 3
Patient Centered Care II
Patient Centered Care II focuses on nursing process and clinical judgment in the care of patients and their families. Emphasis is placed on professional knowledge, skills, and attitudes integral to the nursing competencies of patient centered care, safety, and evidenced based practice. Concepts of therapeutic communication, health promotion, pharmacology, and nutrition are integrated throughout the course. Care of the client with endocrine, neurological, integumentary, gastrointestinal, renal, musculoskeletal, and reproductive disorders. Emergency nursing care will be explored. Prerequisite: NURS 2125.

NURS 2245 2
Health Promotion and the Role of the Professional Nurse
Health Promotion and the Role of the Professional Nurse teaches health promotion and disease prevention for self, client, families, and communities will be emphasized. Identifies management and leadership theory for transition into the professional nurse role. Coordinate care and case management for all patients. Incorporate complementary and interactive health care into the care of all patients. The learner integrates knowledge, skills, and attributes needed to care for groups of clients, nursing team management, effective resolve conflict, interprofessional collaboration, prioritization, delegation, supervision. Participation in a service learning project. Explore the malpractice and legal issues and affecting nursing. Develop a portfolio. Preparation for end-of-program requirements and NCLEX-RN exam. Prerequisites: NURS 2125, NURS 2130, NURS 2145, NURS 2150, and NURS 2190.

NURS 2255 2
Pharmacology: A Pathophysiologic Approach II
Pharmacology: A Pathophysiologic Approach II provides an opportunity to synthesize pharmacologic, basic pathophysiologic, and nursing concepts to minimize risk of harm for patients. Promotes use of current information to prevent error and support decision making pertaining to the nervous, urinary, integumentary, endocrine and gastrointestinal systems. Calculation of medication dosages for liquid injections, IV drip rates, IV calculations and dosage problems for infants and children will be addressed. Prerequisite: Admission to the Associate in Science nursing program and NURS 2130.

NURS 2260 3
Family Centered Care
Family Centered Care integrates understanding of key dimensions of patient and family centered care for children experiencing illness and obstetrical and newborn complications. Prioritization and delivery of safe, quality care incorporating patient and family preferences, values, and beliefs. Current best practice will be examined to validate incorporation of evidence-based empirical research in care for individuals and families. Prerequisites: NURS 2125 or NURS 2130.

NURS 2275 0
Nursing Preceptorship
Nursing Preceptorship provides an opportunity for skill refinement and increased self-confidence in the role of Associate Degree Nurse through working with a preceptor. The learner applies the nursing process in a realistic work setting. Concepts of accountability and professionalism are integrated from prior learning. Prerequisites: NURS 2190, NURS 2290, and NURS 2390.

NURS 2290 2
Acute Care Clinical II
Acute Care Clinical II builds on the knowledge, skills, and attitudes from NURS 2190. Refinement of assessment, communication, and technical skills is practiced in an acute care setting. The student creates and evaluates patient centered plans of care while utilizing Evidence Based Practice (EBP). Prerequisites: NURS 2125, NURS 2130, NURS 2145, NURS 2150, and NURS 2190. Maintains current requirements of clinical sites.

NURS 2390 2
Clinical in Alternate Settings
Clinical in Alternate Settings is the application of knowledge, skills, and attitudes from prior nursing courses to patients, families in alternate care settings such as nursing homes, assisted care facilities, and the community. Structured simulation scenarios to promote clinical reasoning and decision making. Prerequisites: NURS 2125, NURS 2130, NURS 2145, NURS 2150, NURS 2190, and NURS 2290.

OCCUPATIONAL THERAPY ASSISTANT (OTAC)

OTAC 1100 2
Introduction to OTA
Introduction to OTA explores the profession of occupational therapy. The history, philosophical base, educational requirements, licensure, and certification requirements of the profession are discussed. Students examine the basic concepts of occupation in context to promote health and prevention, the role of the Occupational Therapist and Occupational Therapy Assistant, professional associations, and professional relationships. Ethics and Standards of Practice will also be introduced.

OTAC 1105 2
Clinical Conditions and Abilities
Clinical Conditions and Abilities examines normal development from infancy to adulthood. Clinical conditions that commonly interrupt development in occupation throughout the lifespan will be explored with an emphasis on individual ability rather than disability. Basic theories related to remediation of body structure and function will be discussed. Independent and active learning will be explored with an emphasis on developing skills for lifelong learning. Students will be provided opportunities to work collaboratively and intra-professionally to develop and enhance professionalism as an occupational therapy practitioner.

OTAC 1110 4
Foundational Skills for the OTA
Foundational Skills for the OTA explores the skills needed to practice as an occupational therapy assistant in any setting, including telehealth. Group dynamics, group processes, teaching/learning processes, therapeutic use of self, expected roles, and student self-analysis will be key concepts integrated throughout. Basic theories related to occupational function will be introduced. Students will differentiate the roles of an occupational therapy assistant and an occupational therapist. Participation in independent and active learning will be expected with an emphasis on developing skills for lifelong learning. Evidence-based practice and occupation-based treatment ideas will be introduced. Students will be provided opportunities to work collaboratively inter-professionally and intra-professionally and will gain the skills necessary to develop professional behaviors.

OTAC 1115 2
Scholarly Writing in OTA I
Scholarly Writing in OTA I develops the necessary skills to identify appropriate resources, interpret, and apply knowledge to the practice of occupational therapy. This course focuses on scholarly skills needed to promote the use of evidence-based practice throughout the occupational therapy process. Ethical reasoning and concepts of collaboration will be introduced. Opportunities for independent and
active learning are provided through the course with emphasis on skills for lifelong learning.

**OTAC 1200** Movement of Occupations
Movement of Occupations describes muscle function, muscle strength, muscle endurance, functions of joints and bones, innovations, and the movement needed to allow people to complete their everyday occupations. Students will examine types of muscle contractions and joint movements during occupation-based activities through muscle activity assessment and analysis. Evidence-based practice treatment ideas for various health conditions that affect the neuromusculoskeletal system will be explored. Students will have opportunities for independent and active learning throughout the course with emphasis on skills for lifelong learning. Prerequisite: OTAC 1110.

**OTAC 1210** Pediatric Applications
Pediatric Applications explores occupational therapy evaluation, treatment, and implementation from birth to young adult. Normal development and interruption of functional ability will be explored. Occupation-based and evidence-based practice will be identified and implemented. The role of occupational therapy assistants and occupational therapists in the occupational therapy process is explored. Emphasis is placed on independent and active learning with a focus on developing skills for lifelong learning. This course provides an opportunity to work collaboratively inter-professionally and intra-professionally and to develop and enhance professionalism as a healthcare provider. Prerequisite: OTAC 1110.

**OTAC 1215** Scholarly Writing in OTA II
Scholarly Writing in OTA II evaluates and interprets professional resources to develop critical thinking skills. The students will utilize the skills learned in Scholarly Writing in OTA I to analyze and critique scholarly work and apply this information to occupational therapy practice. Students will be expected to apply methods and report on data learned from a marketing activity. Application of ethical principles and behavior are used in the analysis of scholarly work and the exploration of emerging practice areas in OT. Emphasis is placed on independent and active learning. Prerequisite: OTAC 1115.

**OTAC 1220** Rural and Community-Based Practice for OT
Rural and Community-Based Practice for OT explores the impact of the rural environment on individual engagement in occupations. Community-based practice models and emerging roles of occupational therapy assistants in the community are explored. Emphasis is placed on independent and active learning with a focus on developing skills for lifelong learning. Prerequisite: OTAC 1110.

**OTAC 1230** Level I Fieldwork A
Level I Fieldwork A participates in a 1 week or 35-40 hour supervised clinical experience in an OTA practice environment. Knowledge and skills learned from previous courses are applied when working with clients and staff in a clinical setting. Students are supervised by a qualified individual and will have opportunities to observe and assist with the therapeutic process. Prerequisites: OTAC 1100 and OTAC 1110.

**OTAC 1240** Documentation for the OTA
Documentation for the occupational therapy assistant explores the use of technology in practice, the common reimbursement systems for the occupational therapy practitioner, and the business aspects of practice. Students will do hands-on learning to develop and increase their documentation and communication skills. Emphasis will be placed on the intra- and interdisciplinary nature of the occupational therapy assistants’ common documentation areas and the importance of accurate communication. Prerequisite: OTAC 1110.

**OTAC 2100** Mental Health Across the Lifespan
Mental Health Across the Lifespan explores the foundations of psychosocial occupational therapy practice. Students will discover the evaluations, interventions, and techniques appropriate to use with all age groups as relates to their mental health. Emerging roles of occupational therapy assistants in this setting are explored. An emphasis is placed on independent and active learning with a focus on developing skills for lifelong learning. Prerequisite: OTAC 1220.

**OTAC 2110** Adult Applications
Adult Applications explores occupational therapy evaluation, treatment, and implementation for adult individuals. Normal development and interruption of physical function will be explored. Occupation-based and evidence-based practice will be identified and implemented. The role of occupational therapy assistants and occupational therapists in the occupational therapy process are explored. Emphasis is placed on independent and active learning with a focus on developing skills for lifelong learning. This course provides an opportunity to work collaboratively inter-professionally and intra-professionally and to develop and enhance professionalism as a healthcare provider. Prerequisite: OTAC 1200 and OTAC 1210.

**OTAC 2115** Scholarly Writing in OTA III
Scholarly Writing in OTA III promotes scholarly writing through professional development by the completion of a final project. The students will utilize the skills learned in Scholarly Writing in OTA I and II to analyze and critique scholarly work, apply this information to occupational therapy practice and its promotion, and present this information utilizing professional and ethical behavior via a final project. Emphasis is placed on independent learning to promote skills to develop students into lifelong learners. Prerequisite: OTAC 1215.

**OTAC 2120** Geriatric Applications
Geriatric Applications explores occupational therapy evaluation, treatment, and implementation for geriatric individuals. Normal development and interruption of physical function will be explored. Occupation-based and evidence-based practice will be identified and implemented. The role of occupational therapy assistants and occupational therapists in the occupational therapy process are explored. Emphasis is placed on independent and active learning with a focus on developing skills for lifelong learning. This course provides an opportunity to work collaboratively inter-professionally and intra-professionally and to develop and enhance professionalism as a healthcare provider. Prerequisites: OTAC 1200 and OTAC 1210.

**OTAC 2130** Level I Fieldwork B
Level I Fieldwork B participates in a 1 week or 35-40 hour supervised clinical experience in an OTA practice environment. Knowledge and skills learned from previous courses are applied when working with clients and staff in a clinical setting. Students are supervised by a qualified individual and will have opportunities to observe and assist with the therapeutic process. Prerequisite: OTAC 1230.

**OTAC 2140** Professional Seminar
Professional Seminar describes occupational therapy professional ethics, values, and responsibilities. The student will build personal and professional development plans and resumes. Emphasis is placed on independent and active learning with a focus on developing skills for lifelong learning. This course provides an opportunity to work collaboratively intra-professionally and to develop and enhance professionalism as a healthcare provider. Prerequisite: OTAC 1230.

**OTAC 2230** Level II Fieldwork A
Level II Fieldwork A is an eight-week supervised clinical experience in an occupational therapy setting. Knowledge and skills learned from previous courses are applied when working with clients and staff in a clinical setting. Students are supervised by an OT and/or OTA and will have opportunities to work intra and inter professionally throughout the eight-week fieldwork. Students will share their knowledge of evidence-based practice with others during their placement to promote lifelong learning. Of the two-level II fieldwork placements, one will have a mental health focus. Prerequisite: OTAC 2135.

**OTAC 2240** Level II Fieldwork B
Level II Fieldwork B participates in an eight-week supervised clinical experience in an occupational therapy setting. Knowledge and skills
learned from previous courses are applied when working with clients
and staff in a clinical setting. Students are supervised by an OT and/or
OTA and will have opportunities to work intra and inter professionally
throughout the eight-week fieldwork. Students will share their
knowledge of evidence-based practice with others during their
placement to promote lifelong learning. Of the two-level II fieldwork
placements, one will have a mental health focus. Prerequisite: OTAC
2230.

PHYSICAL EDUCATION (PHED)

PHED 1101
Foundations of Health, Physical Education, Exercise
Science, & Sport
3
Foundations of Health, Physical Education, Exercise Science, & Sport
provides an introduction to the history, philosophy, objectives, and
principles of health, physical education, exercise science and sport.
Topics included will be career opportunities and preparation;
professionalism including attitudes; ethics, and organizations. This
course designed is for persons who plan to major or minor in Health,
Physical Education, Exercise Science, or Sport.

PHED 1106
Psychology of Winning
2
Psychology of Winning studies the basic principles of psychology
related to success and motivation. Emphasizes positive-winning
attitudes, success traits, goal-setting and basic psychology principles.
This course is designed to help students recognize the strong
relationship that exists between attitudes and success in school, work,
sports, and life.

PHED 1110
Prevention and Care of Athletic Injuries I
3
Prevention and Care of Athletic Injuries I covers the modern principles
of athletic training for people involved in the health care of athletes.
This course is designed to help individuals involved in coaching,
physical education, or recreation, as well as persons interested in
athletic training or sports medicine.

PHED 1114
Physical Agility & Self Defense
2
Physical Agility & Self Defense Provides experiential learning in
techniques for self-defense as well as general fitness learning.
Techniques in handcuffing, searching, joint manipulation pressure
points and counters. Only students formally accepted into the AS Law
Enforcement Program may register.

PHED 1120
Beginning Archery
1
Beginning Archery emphasizes the basic aspects of archery for the
student wishing to learn fundamental skills and safety components of
this sport.

PHED 1125
Aerobics
1
Aerobics teaches a moderately strenuous blend of flexibility, stretch and
dance using the large muscle groups. Its aims are improving
cardiovascular fitness, promoting a multitude of positive and natural
changes in the body, enhancing general health and well being, toning
up muscles and having fun.

PHED 1126
Beginning Yoga
1
Beginning Yoga teaches methods and techniques of hatha yoga with an
emphasis on the vinyasa style. Promotes the fitness and health
benefits of mind-body awareness.

PHED 1130
Physical Fitness for Life
1
Physical Fitness for Life emphasizes aspects of physical fitness for the
student wishing to learn methods and tests of physical fitness.
Cardiovascular and respiratory fitness, as well as muscular strength
and endurance will be emphasized. The course is self-paced.

PHED 1135
Beginning Tennis
1
Beginning Tennis introduces the fundamentals of tennis as a leisure
time activity. Emphasis is on acquiring technique, knowledge, and
fitness.

PHED 1136
Racquet Sports
1
Racquet Sports introduces the fundamentals of different racquet sports
and leisure time activities. This course is designed to develop skills,
technique, sportsmanship, and knowledge of rules in racquetball,
badminton, and other indoor racquet sports.

PHED 1140
Body Conditioning
2
Body conditioning is designed to teach students basic techniques for
effective weight training, while utilizing body weight, machines and free
weights to assist students in becoming physically stronger. The student
will also be exposed to basic anatomy and physiology principles
regarding warm-up, stretching and body musculature.

PHED 1145
Bowling
1
Bowling teaches students how to bowl using the spot bowl system.
Students will learn how to keep score and select appropriate equipment
to assure that bowling can become a lifelong leisure activity.

PHED 1155
Cross-Country Skiing
1
Cross-Country Skiing introduces the student to the fundamentals of the
sport. Flat-track techniques, downhill and hill climbing techniques are
covered. Equipment provided.

PHED 1160
Beginning Golf
1
Beginning Golf is designed to introduce the student to the game of golf.
Skills for successful play include the fundamentals of the grip, stance
and swing. The course is designed to work on the fundamentals and
progress with skill development, learn the rules of the game, and
game/course management during a round of golf.

PHED 1165
Fitness for Acceleration
1
Fitness for Acceleration provides a high intensity aerobic program
focusing on sport specific movements. It aims to teach proper
mechanics to prevent injury in physical activities as well as developing
or enhancing ones quickness, pymetrics and coordination. The
program also benefits cardiovascular, muscle toning and fitness goals.

PHED 1170
Intercollegiate Football
1
Intercollegiate Football consists of intercollegiate competition in football
at the community college level. Football skills, sportsmanship,
competitiveness, and sound athletic principles are taught

PHED 1171
Intercollegiate Volleyball
1
Intercollegiate Volleyball provides credit to first year students who report
for the volleyball squad and who complete the requirements of the
course. This includes participation in Minnesota Community College
Athletic Conference competition.

PHED 1172
Intercollegiate Men's Basketball
1
Intercollegiate Men's Basketball provides credit for first year participants. The course consists of a twenty-game schedule against
other community colleges in Minnesota.

PHED 1173
Intercollegiate Women's Basketball
1
Intercollegiate Women's Basketball includes participation in
intercollegiate competition in women's basketball at the community
college level representing Minnesota West Community and Technical
College, Worthington Campus in the Minnesota Community College
Athletic Conference.
issues in the world of sports and how it relates to society. All primary

PHED 1174  
Intercollegiate Wrestling  
Intercollegiate Wrestling provides credit to first year students who report for the wrestling squad and who complete the requirements of the course. This includes participation in Minnesota Community College Athletic Conference competition.

PHED 1175  
Intercollegiate Women's Softball  
Intercollegiate Women’s Softball includes participation in intercollegiate competition in women’s softball at the community college level representing Minnesota West Community and Technical College, Worthington Campus in the Minnesota Community College Athletic Conference.

PHED 1176  
Intercollegiate Baseball  
Intercollegiate Baseball includes participation in intercollegiate competition in men's baseball at the community college level representing Minnesota West Community and Technical College, Worthington Campus in the Minnesota Community College Athletic Conference.

PHED 1177  
Intercollegiate Women’s Golf  
Intercollegiate Women’s Golf includes participation in intercollegiate competition in women's golf at the community college level representing Minnesota West Community and Technical College in the Minnesota Community College Athletic Conference and National Junior College Athletic Association.

PHED 1178  
Intercollegiate Men’s Golf  
Intercollegiate Men’s Golf provides credit to first year students who report for the golf squad and who complete the requirements of the course. Completion includes participation in the Minnesota Community College Athletic Conference.

PHED 1179  
Intercollegiate Women’s Soccer  
Intercollegiate Women’s Soccer includes participation in intercollegiate competition in women’s soccer at the community college level representing Minnesota West Community and Technical College in the Minnesota Community College Athletic Conference and National Junior College Athletic Association.

PHED 1180  
Principles of Coaching  
Principles of Coaching introduces students to the basic principles, philosophies, and theories associated with effective coaching. This course emphasizes sport pedagogy, enhanced communication and motivational skills, and coaching philosophies to become more effective teachers/coaches. Principles of Coaching will provide knowledge that should improve team relationships, risks, and self-management skills.

PHED 1189  
Intercollegiate Men’s Soccer  
Intercollegiate Men’s Soccer includes participation in intercollegiate competition in men’s soccer, that they acquired knowledge at the freshmen intercollegiate level, and represented Minnesota West Community and Technical College in the Minnesota College Athletic Conference and National Junior College Athletic Association.

PHED 2020  
Introduction to Event and Facilities Management  
Introduction to Event and Facilities Management introduces students to the study of the principles, guidelines, and recommendations for planning, constructing, using, and maintaining indoor and outdoor sport industry facilities. The introduction to grant writing for the purpose of learning funding mechanisms, when designing, maintaining, and growing of sports facilities and programs. Prerequisites: PHED 1101 and NSCI 1100.

PHED 2090  
Sport in Society  
Sport in Society introduces students to an in-depth study of the major issues in the world of sports and how it relates to society. All primary
Introducing the Mechanics of Coaches

PHED 2175  
Intercollegiate Women's Softball  
Intercollegiate Women's Softball includes participation in intercollegiate competition in women's softball at the community college level representing Minnesota West Community and Technical College, Worthington Campus in the Minnesota Community College Athletic Conference.

PHED 2176  
Intercollegiate Baseball  
Intercollegiate Baseball includes participation in intercollegiate competition in men's baseball at the community college level representing Minnesota West Community and Technical College, Worthington Campus in the Minnesota Community College Athletic Conference.

PHED 2177  
Intercollegiate Women's Golf  
Intercollegiate Women's Golf includes participation in intercollegiate competition in women's golf for a second season at the community college level representing Minnesota West Community and Technical College in the Minnesota Community College Athletic Conference.

PHED 2178  
Intercollegiate Men's Golf  
Intercollegiate Men's Golf provides credit to second year students who report for the golf squad and who complete the requirements of the course. Completion includes participation in the Minnesota Community College Athletic Conference.

PHED 2179  
Intercollegiate Women's Soccer  
Intercollegiate Women's Soccer includes participation in intercollegiate competition in women's soccer at the community college level representing Minnesota West Community and Technical College in the Minnesota Community College Athletic Conference and National Junior College Athletic Association. Prerequisite: PHED 1179.

PHED 2181  
Wrestling Theory and Coaching  
Wrestling Theory and Coaching covers the guidelines of the State and National High School League rules including rules interpretation, student academic concerns, and managing players at both the high school and college levels.

PHED 2180  
Sport Marketing  
Sport Marketing introduces students to an in-depth study of sports marketing and its influence on the accomplishment of objectives in the world of sports. It involves a thorough review of the product, be it tangible or a service, and details bringing the product to market. Topics include advertising, promotions, public relations, location, pricing, sponsorships, licensing, market segmentation, and the role of research.

PHED 2185  
Volleyball Theory and Coaching  
Volleyball Theory and Coaching covers the guidelines of the State and National High School League rules including rules interpretation, game technique, and casebook studies. Course will also cover the coaching aspects of volleyball, game tactics, scouting, recruiting, team goals, methods of conducting practice, student academic concerns, and managing players at both the high school and college levels.

PHIL 1101  
Introduction to Philosophy  
Introduction to Philosophy introduces students to five areas of philosophical inquiry and the questions basic to each: ethics (What is the nature of the good?), epistemology (What is the nature of knowledge and truth?), metaphysics (What is the nature of reality?), the philosophy of religion (What are the proofs for God's existence?), and social/political philosophy (What is the nature of a good state?) Using primary texts and class discussion, students will explore the answers philosophers such as Plato, Mill, Kant, Hume, Locke, and Nietzsche have offered. Prerequisite: STSK 0095 or placement by multiple measures.

PHIL 1102  
Philosophy of Religion  
Philosophy of Religion concerns topics relative to religion and God, including arguments for the existence of God, religious experience, faith and reason, the problem of evil, and immortality. Prerequisite: STSK 0095 or placement by multiple measures.

PHIL 1120  
Environmental Ethics  
Environmental Ethics explore moral obligations between humankind and our natural world. An introduction to ethical theory is included in the course. Topics will include such issues as the nature of our duties toward animal rights, preservation and conservation, climate change, and intergenerational justice. Prerequisite: STSK 0095 or placement by multiple measures.

PHIL 1200  
Logic  
Logic introduces students to formal and informal logic. Students will learn to identify and outline arguments in classic and contemporary texts, to determine whether an argument is deductive or inductive, and to determine an argument's validity and soundness. Students will learn
to diagram categorical syllogisms and to translate propositional statements. Students will also learn to identify and classify logical fallacies. Prerequisite: ENGL 1101. This course counts as a Mathematical/Logical Reasoning course, Area 4.

PHIL 2101 Ethics Theory and Practice Meets Goal Areas: 06, 09 Ethics Theory and Practice, will introduce students to classical and contemporary ethical theories and apply them in analyzing contemporary ethical issues. Prerequisite: STSK 0095 or placement by multiple measures.

PHIL 2201 Introduction to Ethical Theory Meets Goal Areas: 06, 09 Introduction to Ethics studies classical and contemporary ethical theories. The main purpose is to critically examine the various approaches to moral conduct through the reading of primary sources and class discussion. This course is required prior to taking any other ethics course (2202, 2203, 2204, 2223). Prerequisite: STSK 0095 or placement by multiple measures.

PHIL 2202 General Applied Ethics Meets Goal Areas: 06, 09 General Applied Ethics studies contemporary ethical issues. The main purpose is to critically examine the various approaches to moral conduct. The focus will be on the application of these theories and principles to specific contemporary issues. Prerequisite: PHIL 2201.

PHIL 2205 Business Ethics Meets Goal Areas: 06, 09 Introduces students to ethical problems in businesses and companies or corporations through presentations by local business, community and corporate leaders on moral behavior and ethical dilemmas in areas such as: medicine, international trade, profit and non-profit organizations, and education.

PHIL 2222 Medical Ethics Meets Goal Areas: 06, 09 Medical Ethics introduces students to the principles of ethics and how these apply to health care practice. Students will examine two main ethical theories, utilitarian and deontological, as they apply to questions of health care practice. Students will study the ethical principles of autonomy, nonmaleficence, and beneficence. The focus will be on the application of these theories and principles to specific cases. The course is designed for students intending to major in the field of health care. Prerequisite: PHIL 2201.

PHIL 2223 Ethics for Human Services Workers Ethics for Human Services Workers introduces students to how the principles of ethics apply in the human services field. Students will examine two main ethical theories, utilitarian and deontological, as they apply to questions of ethical practice in human services. Students will study the ethical principles of autonomy, beneficence, nonmaleficence and justice. The focus will be on the application of these theories and principles to specific issues and cases. The course is designed for students intending to major in human services. Prerequisite: PHIL 2201.

PHIL 2230 World Religions Explore various world religions through reading about the religions and reading texts from various faith traditions. Prerequisite: STSK 0095 or placement by multiple measures.

PHARMACY TECHNOLOGY (PHRM)

PHRM 1100 Pharmacy Principles and Practices I Pharmacy Principles and Practices I explores the principles of ethical thought as applied to the areas of pharmacy ethics which will include state and federal laws. Students will learn the organization and functions of retail and hospital pharmacy settings. This course will also introduce students to common uses of computers and their practical applications in a pharmacy setting. The roles and responsibilities of a pharmacy technician will be explored as well as Occupational Safety and Health Act (OSHA) and Health Insurance Portability and Accountability Act (HIPAA) requirements will be covered.

PHRM 1105 Pharmacy Principles and Practices II Pharmacy Principles and Practices II demonstrates the preparation of retail and institutional pharmacy practices. Perform advanced procedures including Intravenous (IV) drug admixture, total parenteral nutrition (TPN) and critical care IV admixture. Students will learn and demonstrate understanding of various billing systems as well as the universal medical coding system which uses numerical codes to classify medical conditions and treatments. Apply personal safety and hygiene related to pharmacy practices will be covered. Students will demonstrate knowledge and skill in filling prescriptions in a lab setting and develop communication skills associated with pharmacy technicians. Prerequisite: PHRM 1100.

PHRM 1110 Pharmaceutical Calculations Pharmaceutical Calculations teaches students to demonstrate proficiency in specific calculation methods and principles related to pharmacy tasks. Students will utilize basic arithmetic principles in completing tasks associated with a pharmacy technician. Throughout this course basic math skills will be reviewed that are necessary for the required calculations that become more advanced as students’ progress through the course. Students will also demonstrate understanding of various measurement systems and various dosage calculations. Prerequisite: PHRM 1100.

PHRM 1115 Pharmacology for Technicians I principles of pharmacology. Drugs are discussed in the context of drug classes, mechanics of action, disease types, and body systems. The goal is to provide pharmacy technicians with sufficient background information so that they will be able to play a key role in avoiding dispensing errors. Although emphasis will be given to the approximately 200 most commonly prescribed drugs, many more drugs will be discussed during the semester.

PHRM 1120 Pharmacology for Technicians II Pharmacology for Technicians II introduces pharmacy technician students to the general principles of pharmacology. Drugs are discussed in the context of drug classes, mechanics of action, disease types, and body systems. The goal is to provide pharmacy technicians with sufficient background information so that they will be able to play a key role in avoiding dispensing errors. Although emphasis will be given to the approximately 200 most commonly prescribed drugs, many more drugs will be discussed during the semester. Prerequisite: PHRM 1115.

PHRM 1130 Hospital Externship Hospital Externship provides students the ability to perform skills in a hospital pharmacy setting under the direction of the pharmacist and pharmacy technicians. This course prepares the student for entering the Pharmacy Technician career field and provides information on career opportunities. Students will apply skills, knowledge, and abilities acquired in the classroom and laboratory settings in a practical work-based pharmacy training environment. Prerequisites: PHRM 1100, PHRM 1105, PHRM 1115, PHRM 1120.

PHRM 1135 Retail Externship Retail Externship allows students to perform skills in a retail pharmacy setting under the direction of the pharmacist and pharmacy technicians. This course prepares the student for entering the Pharmacy Technician career field and provides information on career opportunities. Students will apply skills, knowledge, and abilities acquired in the classroom and laboratory settings in a practical work-based pharmacy training environment. Prerequisites: PHRM 1100, PHRM 1105, PHRM 1115, and PHRM 1120.
PHYSICS (PHYS)

PHYS 1100 3
Survey of Physics  Meets Goal Area: 03
Survey of Physics includes a general survey of conceptual physics. Topics include a basic introduction to Newton's Laws of motion, gravitation, physical mechanics, properties of matter, heat, sound, electricity, magnetism, light and nuclear physics. This is mainly a lab activity course for students who have not had high school physics. Prerequisite: Equivalent of MATH 1107, placement by multiple measures, or instructor permission.

PHYS 1150 3
Survey of Astronomy  Meets Goal Area: 03
Survey of Astronomy covers a general overview of the science of astronomy. Topics include the history of astronomy, the nature of science, celestial motion, phases of the moon, gravity, Kepler's Laws, light and spectroscopy, the Solar System, stars, galaxies, and cosmology. There will be lab activities to accompany many of the topics. Prerequisite: MATH 1107, placement by Multiple Measures, or instructor permission.

PHYS 1201 4
Fundamentals of Physics I  Meets Goal Area: 03
Fundamentals of Physics I develops a foundation for future studies in fields not requiring calculus, using laboratory and lecture with calculator and computer based instruction. Develops a foundation in physics for liberal arts, premedical, or pre-pharmacy students. Topics include one and two dimensional motion, forces and acceleration, applications of Newton's Laws, momentum, gravitation, collisions, work and energy, rotational motion, angular momentum, harmonic motion and sound. This course includes a lab. Prerequisite: MATH 1107, placement by multiple measures, or instructor permission.

PHYS 1202 4
Fundamentals of Physics II  Meets Goal Area: 03
Fundamentals of Physics II continues PHYS 1201. Topics include Temperature and Heat transfer, Laws of Thermodynamics and heat engines, electric fields, electricity of direct circuits, electronics, magnetism, electromagnetism, optics, modern physics, and radioactivity. This course includes a lab. Prerequisite: PHYS 1201 or permission of the instructor.

PHYS 2121 5
General Physics I  Meets Goal Area: 03
General Physics I teaches the fundamentals of physics using calculus and vectors. Uses laboratory centered instruction with calculator and computer based investigations. Topics include kinematics, Newton's Laws of motion, forces, collisions, momentum, work, and energy, energy conservation, rotational motion, angular momentum, torque, harmonic motion, oscillations, and fluids. This course includes a lab. Prerequisite: MATH 1121 (can be taken concurrently).

PHYS 2122 5
General Physics II  Meets Goal Area: 03
General Physics II continues Physics 2121. Calculus and vectors are used throughout. Uses laboratory-based instruction. Topics include heat and thermodynamics, heat engines, electric charges and forces, electric potential, electric fields, Gaus's Law, direct and alternating current circuits, capacitors and RC circuits, electronics, magnetism and magnetic fields, modern physics, and radioactivity. This course includes a lab. Prerequisite: PHYS 2121 and MATH 1121, with MATH 1122 being taken concurrently or before.

PLUMBING (PLMB)

PLMB 1101 3
Introduction to Plumbing  Introduction to Plumbing Introduces students to the tools and equipment of the plumbing trade, the necessity of safety in the workplace and methods described in the Minnesota Plumbing Code. Students will study plastic piping. Plastic piping will involve the joining of drainage, waste and vent, water supply and distribution lines. Students will become familiar with the different types of copper pipe, fittings and tubing. PEX water and heating distribution piping will be discussed and utilized. Students will also explore water pumps.

PLMB 1102 4
Plumbing Installation and Fixtures I  Plumbing Installation and Fixtures I expands on PLMB 1101 to begin construction systems for residential and light commercial structures. Safe methods of handling and installing piping in accordance with Minnesota State Plumbing Code and general industry accepted standards will be emphasized. Both copper and plastic materials will be utilized in installations. Common fixtures, faucets and valve selection and installation will be included in lab activities. Proper structural support will be included.

PLMB 1112 2
Code I
Code I provides an understanding of many of the technical rules of the Minnesota Plumbing Code. Topics included are Minnesota licensing laws, plumbing industry definitions, basic plumbing principles and general regulations, requirements and calculations for plumbing installations, potable water distribution systems, Drain, Waste and Vent (DWV) systems, and various requirements for plumbing fixtures.

PLMB 1122 1
Print Reading I
Print Reading I introduces students to fundamental print reading skills. Students will read building plans and pipe diagrams, interpret floor plan elevations, draw isometric views and sketch working drawings.

PLMB 1132 3
Plumbing Repair and Service
Plumbing Repair and Service will teach how to fix and repair all piping and fixtures in a residential setting.

PLMB 1142 2
Materials and Fittings
Materials and Fittings introduces the materials and fittings used in the plumbing trade, including copper, plastics, brass, Pex, Galvanized, cast iron and black iron. The application of these material types will be covered, as well as fitting names and their uses.

PLMB 1152 5
Plumbing Installation and Fixtures II
Plumbing Installation and Fixtures II expands on PLMB 1101 for more complex construction systems for residential and light commercial structures. Installation, service and repair of common fixtures, faucets, water treatment, water heaters installation will be included in lab activities. Students will be provided more complex projects and develop solutions to complete system installations, various piping installations applying code requirements.

PLMB 1162 2
Code II
Code II builds on knowledge learned in PLMB 1101 and apply this information to gain thorough understanding of Minnesota Plumbing Code. Course includes pipe sizing of residential homes, plumbing license requirements and practical testing to achieve the journeyman license.

PLMB 1172 2
Print Reading II
Print Reading II teaches students how to read building plans and pipe diagrams, interpret floor plans, elevation views, draw isometrics and sketch detailed work drawings. Students will develop skills in estimating plumbing cost for basic residential installations and remodels. Building on these skills, the student will gain knowledge of complex residential pipe diagrams and isometric drawings. Prerequisite: PLMB 1122.

PLMB 1180 2
Water Piping and Sizing
Water Piping and Sizing will familiarize the learner with water supply and distribution. The course will include Minnesota Plumbing Code rules for the sizing a water supply system. Drawing isometrics will be introduced.

PLMB 1185 4
Drainage, Waste and Venting
Drainage, Waste and Venting will familiarize the learner with the different types of drain, waste and vent systems. The course will include
the Minnesota Plumbing Code rules for sizing, Drain, Waste and Vent systems.

**PLMB 1190 2**
Plumbing Technology Internship
Plumbing Technology Internship will teach the student how to apply theory concepts and lab skills in a plumbing business. Prerequisite: Satisfactory completion of all Plumbing courses.

**POLITICAL SCIENCE (PSCI)**

**PSCI 1101 3**
Introduction to Political Science  Meets Goal Areas: 05, 08
Introduction to Political Science acquaints students with the fundamental concepts, institutions, principles and procedures of the discipline of political science. The course will provide a brief background in classical political theory through some exposure to the ideas of past political philosophers (such as Aristotle, Machiavelli, Hobbes, Locke, Marx and others). The course also introduces the study of comparative systems through consideration of the governments of Great Britain, France, and Canada. PSCI 1101 is viewed as a general introductory course. The course also counts as a Global Perspective course. Prerequisite: STSK 0095 or placement by multiple measures.

**PSCI 1201 3**
American Government and Politics  Meets Goal Areas: 05, 09
American Government and Politics presents a general survey of the history, philosophy, functions and performance of American national political institutions and processes. This course also emphasizes ethical and civic responsibility. Prerequisite: STSK 0090 or placement by multiple measures.

**PSCI 2202 3**
State and Local Government  Meets Goal Areas: 05, 09
State and Local Government presents a general survey of the history, philosophy, functions and performance of American state and local political institutions and processes. Minnesota, Nobles County and the City of Worthington will be examined. This course also emphasizes ethical and civic responsibility. Prerequisite: STSK 0095 or placement by multiple measures.

**PSCI 2210 3**
Environmental Politics  Meets Goal Areas: 05, 10
Environmental Politics examines the political nature of environmental problems and surveys American political institutions and public policies that deal with these problems. The course will also assess and critique current environmental policies. While the major emphasis will be national environmental concerns, certain local and global environmental problems will also be addressed. Prerequisite: STSK 0095 or placement by multiple measures.

**PSCI 2280 0**
Field Experience - Political Science  Meets Goal Areas: 05, 10
Field Experience - Political Science offers students paid or unpaid work experiences closely related to their academic and career pursuits. Assists students in gaining skills and realism about job demands and future educational choices. Activities are closely supervised by college instructors and on-the-job supervisors.

**PRACTICAL NURSING (PRNU)**

**PRNU 2295 1**
IV Skills for Practical Nurses
IV Skills for Practical Nurses is designed to enhance the knowledge of established IV nursing standards of practice and to qualify the licensed practical nurse to initiate and administer IV therapy to adults and adolescents. Information and hands-on practice for the safe insertion, care and maintenance of a peripheral IV catheter will be provided. Administration of IV therapy via a peripheral site will also be discussed.

**PSYCHOLOGY (PSYC)**

**PSYC 1101 4**
Introduction to Psychology  Meets Goal Areas: 05, 07
Introduction to Psychology provides an overview of contemporary psychology. Topics include the biological basis of behavior, sensation and perception, motivation, learning, memory, development, personality theory and disorders. This psychology course emphasizes biological, ability, age, gender, personality, and ethnic diversity. This course is a prerequisite for other psychology courses and is a required course for many degree programs. Prerequisite: STSK 0095 or placement by multiple measures.

**PSYC 1111 3**
Psychology of Adjustment  Meets Goal Areas: 05, 07
Psychology of Adjustment uses a cognitive-behavioral approach to achieve personal growth and manage common problems of daily living. Topics include development of self-esteem and assertiveness, health and wellness, relationships, loneliness and solitude, anger management, and handling death and loss. Prerequisite: PSYC 1101 or consent of instructor.

**PSYC 1150 3**
Developmental Psychology  Meets Goal Areas: 05, 07
Developmental Psychology describes the ongoing processes in the biobehavioral, cognitive, and psychosocial domains of human development through the lifespan. Analysis of major developmental events from psychoanalytic, learning, cognitive, and humanistic perspectives are included. Contributions from and applications of research is a core component across all topics. Prerequisite: STSK 0095 or placement by multiple measures.

**PSYC 2210 3**
Basic Counseling Skills  Meets Goal Area: 05
Basic Counseling Skills teaches individual interviewing and helping techniques, including attending skills, reflection of content, feeling and meaning, asking questions, giving information, challenging, and action planning. Students record sessions in a lab setting. Prerequisite: PSYC 1101 or consent of instructor.

**PSYC 2221 3**
Abnormal Psychology  Meets Goal Areas: 05, 07
Abnormal Psychology provides students with historical and current views of the major patterns of behavior disorders. Examines the etiology of disorders, their symptom patterns, assessment and classification, their prevention and treatment, and current issues in the mental health field. Attention is given to how social variables such as race/ethnicity, gender, and socioeconomic status affect the determination of abnormality. Prerequisite: PSYC 1101 or consent of instructor.

**PSYC 2225 3**
Addictive Behavior  Meets Goal Areas: 05, 07
Addictive Behavior provides a comprehensive overview of psychological models to understanding addiction. Presents the process of addiction as a sequence which includes: initiation, maintenance, dependence, and change. Also addressed is the prevention of addiction. Describes the biological, social, emotional, and psychological consequences of addictions for the individual and society. Although concentrating on substance-based behaviors (alcohol and drugs) other addictions such as gambling, eating disorders, and compulsive sexual behavior will be considered. Prerequisite: PSYC 1101 or consent of instructor.

**PSYC 2230 3**
Behavior Modification  Meets Goal Area: 05
Behavior Modification introduces basic principles of behavior modification and their application to the modification of maladaptive behavior and the development of adaptive behavior. Development of skills to adapt these principles to address problems of daily living is emphasized. Prerequisite: PSYC 1101 or consent of instructor.

**PSYC 2260 3**
Social Psychology  Meets Goal Areas: 05, 07
Social Psychology provides students with the scientific studies of individual behaviors as influenced by other people and in social contexts. Specific emphasis will be placed on social psychological
Theories and research findings on such areas as the self-concept, social cognition, attribution theory, social influence, group processes, prejudice and discrimination, interpersonal processes, aggression, attitudes, stereotypes, the relation of self and culture/multicultural. Prerequisite: PSYC 1101 or consent of instructor.

PSYC 2280  2-4  
Field Experiences - Psychology
Field Experiences - Psychology offers student paid or unpaid work experiences closely related to their academic and career pursuits. Assists students in gaining skills and realism about job demands and future educational choices. Activities are closely supervised by college instructors and on-the-job supervisors.

Radiologic Technology (RADT)

RADT 1100  3  Introduction to Radiography & Patient Care
Introduction to Radiography & Patient Care provides the basic concepts of patient care in radiography as well as an introduction to radiology, radiology as a career, radiologic technologist roles, and radiologic technology education. The role of the radiographer will be identified as well as basic information regarding making radiographic exposures.

RADT 1105  1  Radiographic Basics
Radiographic Basics provides the student with an overview of radiography and its role within the health care delivery system. A radiographer's responsibilities will be outlined. Students will be oriented to personnel in diagnostic imaging and to the profession. Basic x-ray equipment design and types of diagnostic imaging examinations performed will be introduced.

RADT 1110  4  Radiological Procedures I
Radiological Procedures I provides the student with the knowledge necessary to perform radiographic procedures relative to the upper extremities, lower extremities, shoulder and pelvic girdle. Emphasis will be on radiographic terms, anatomy, positioning, manipulation of radiographic equipment and accessories, and related patient care considerations.

RADT 1120  3  Radiological Procedures II
Radiological Procedures II provides the student with the knowledge necessary to perform radiographic procedure relative to the urinary system, the bony thorax, skull, vertebral column and arthology. Emphasis will be on radiographic terms, anatomy, positioning, manipulation of radiographic equipment and accessories, and patient care considerations related to radiography of the urinary system, bony thorax, vertebral column, and arthology. Basic techniques in venipuncture, contrast media types, intravenous medication and emergency response will also be included. Prerequisites: RADT 1110.

RADT 1130  3  Radiological Exposures I
Radiological Exposures I provides the student with the knowledge of factors that govern and influence image quality. The course emphasis is on image quality through the discussion of factors that affect density, contrast, recorded detail, and distortion. Complex mathematical problems reflect the effect of change in exposure factors and radiographic devices on image quality. Prerequisites: RADT 1100 and MATH 1111.

RADT 1140  3  Radiological Exposures II
Radiological Exposures II is the implementation of radiological exposure compensations as well as the effects of each compensation on image quality and the knowledge and ability to process and evaluate radiographic images will be emphasized. Requirements will focus on digital imaging, digital imaging system components and the ability to identify and recognize diagnostic quality. The principle and operation of automatic exposure control is also presented. Advancement in examination difficulty and complexity of mathematical applications will be reflected. Prerequisite: RADT 1130.

RADT 1150  8  Clinical Radiography I
Clinical Radiography I applies and analyzes previously learned concepts and theories in radiologic procedures. Focus will be on performance of competency based radiologic procedures, patient care, and demonstration of professionalism during day to day activities within the radiology department. Clinical practice will be designed to allow the student to evaluate and perform diagnostic exams on live patients with follow up critique of images. An emphasis on manipulation of radiologic equipment and accessories will also be evaluated. Prerequisites: RADT 1100 and RADT 1110.

RADT 1160  7  Clinical Radiography II
Clinical Radiography II applies and analyzes previously learned concepts and theories in radiologic procedures. Focus will be on performance of competency based radiologic procedures, patient care, and demonstration of professionalism during day to day activities within the radiology department. Clinical practice will be designed to allow the student to evaluate and perform diagnostic exams on live patients with follow up critique of images. An emphasis on manipulation of radiologic equipment and accessories will also be evaluated. Prerequisites: RADT 1100 and RADT 1110.

RADT 2210  3  Radiological Procedures III
Radiological Procedures III examines previously learned radiographic procedures to provide the student with the knowledge necessary to adapt radiographic procedures relative to traumatic injury, surgical and portable radiography. In addition the student will be introduced to the specialized modalities of radiography as well as cross-sectional imaging. Prerequisite: RADT 1120.

RADT 2220  4  Radiological Equipment
Radiological Equipment provides the student with a basic understanding of radiation physics including the structure of matter, electromagnetic energy, electricity, magnetism, electromagnetism, x-ray emission and x-ray production. This course is designed to establish a strong understanding of radiographic equipment including the x-ray tube, x-ray circuit, fluoroscopy, and computed tomography. The content will also provide a basic knowledge of quality control.

RADT 2230  2  Radiological Pathology
Radiological Pathology is designed to introduce theories of disease causation and the pathophysiologic disorders that compromise health systems. Etiology, pathophysiologic responses, clinical manifestations, radiographic appearance and management of alterations in body systems will be presented. Prerequisites: RADT 1140 & BIOL 2202.

RADT 2240  3  Principles of Radiobiology
Principles of Radiobiology 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, healthcare 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. Prerequisites: RADT 1140 & BIOL 2202.

RADT 2250  8  Clinical Radiography III
Clinical Radiography III applies and analyzes previously learned concepts and theories in radiologic procedures. Focus will be on performance of competency based radiologic procedures, patient care, and demonstration of professionalism during day to day activities within the radiology department. Clinical practice will be designed to allow the student to evaluate and perform diagnostic exams on live patients with follow up critique of images. An emphasis on manipulation of radiologic equipment and accessories will also be evaluated. Student independence on previously learned exams will be stressed. Prerequisite: RADT 1160.
RNEW 1100  Process Dynamics  3
Process Dynamics introduces concepts which deal with physical forces and their relationship to energy through temperature and pressure and are frequently encountered in an operation plant environment. An explanation and understanding of a plant system is crucial to this course. The scientific principles of flow, temperature, pressure heat, gasses, liquids, solids, fluid systems, process dynamics and heat transfer are covered in detail. The curriculum of this course encompasses basic physics and science.

RNEW 1101  Ethanol Process Fundamentals  2
Ethanol Process Fundamentals covers the history, rationale, and overall fundamental process of ethanol production. A Process Flow Diagram (PFD) of a typical dry mill ethanol plant will be used to examine the sequence of operation, including residence time, pressures, and temperatures seen in various stages of production. This course will explain the rationale for feedstock and additives used in ethanol processing as well as product and co-product production and use.

RNEW 1102  Biodiesel Process Fundamentals  2
Biodiesel Process Fundamentals provides detailed information regarding the overall fundamental process of biodiesel production. The course will include a review of biodiesel chemistry, process engineering, post reaction processing, fuel specification and properties, feedstock, preparation, treatment and recovery of side streams, fuel transportation storage and general plant operations.

RNEW 1107  Industrial Safety  2
Industrial Safety introduces workplace safety concepts as they are related to federal and state agencies and regulations. Topics covered in the course include recognition and identification of safety issues, governing agencies and industry organizations, and details about voluntary standards.

RNEW 1110  Low & High Pressure Boiler Systems  1
Boiler Systems covers fuel combustion principles, steam boiler types and their components. Students will gain an understanding of the equipment, its operation and maintenance to ensure safe and efficient procedures that are in line with regulations and codes.

RNEW 1115  Mechanical Fundamentals for Process Controls  3
Mechanical Fundamentals for Process Controls covers the basic functions of equipment such as drive components, pumps, compressors, valves and basic electrical equipment. It explores various methods and the importance of equipment lubrication. Additional topics covered in this course include material handling equipment and procedures. Mechanical Fundamentals explains how equipment is used in systems such as piping systems, heat exchangers, cooling towers, refrigeration, furnace and boiler systems. Startup, shutdown, operation and troubleshooting procedures of various mechanical systems will be explained.

RNEW 1125  P & ID & PFD Reading  1
P & ID and PFD Reading covers the symbols and diagrams commonly used on Piping and Instrumentation Diagrams (P & ID) and Process Flow Diagrams (PFD). Focus will be on identifying the types of diagrams, identifying instrument symbols and line symbols used on P & ID’s, understanding the types of information typically found on a legend, using a P & ID to locate the components of a system, and reading a PFD to trace the flow paths of a system.

RNEW 1130  Pollution Control Fundamentals  2
Pollution Control Fundamentals covers the fundamentals of pollution control in a process plant. Identification of the major sources of pollution, explanation of control devices used to minimize polluting emissions; the importance of reducing emissions and keeping in compliance with State and Federal regulations will be discussed. The state and federal regulatory agencies overseeing permitting and their enforcement procedures will also be covered.

RNEW 1160  Instrumentation & Control  3
Instrumentation and Control builds on Mechanical Fundamentals and Process Dynamics. This course will cover the essential elements of a process control system. It will cover common types of electrical and pneumatic signals used for data collection while exploring devices used to measure flow rate, pressure, temperature, level and analytical control. This course will compare fundamental control concepts such as on/off and PID. It will explain how control concepts are used in various control loops of feedback, cascade, ratio and feedforward.

RNEW 1175  Industrial Water Treatment  2
Industrial Water Treatment covers the basic understanding of primary water treatment systems and chlorination. Students will be able to describe problems that can be caused by impurities in the water and explain how they can be removed physically and chemically. This course will also familiarize students with the basic concepts of treating industrial wastewater so it can be reused or discharged into the environment.

RNEW 1195  Biodiesel Technologies and Regulatory Issues  2
Biodiesel Technologies and Regulatory Issues investigates the underlying research and reaction processes that are used to produce biodiesel. Studying feedstock options coupled with past and present technologies provides foundational knowledge about the industry. The course includes an in-depth review of the ASTM Standard for biodiesel and the regulatory issues that can arise from non-compliance.

RNEW 1300  Introduction to Traditional and Renewable Energy  3
Introduction to Traditional and Renewable Energy introduces students to various forms of energy stemming from both renewable and non-renewable sources. Students will study many sources of energy
including solar thermal power, solar photovoltaics, bioenergy, hydroelectricity, tidal power, wind energy, wave energy, geothermal energy and fossil fuels. The First Law of Thermodynamics is studied along with conversion and efficiency of various forms of energy. The economics, potential and environmental impact will be covered for each topic.

SBMT 1220 3
Marketing Management
In this course the business owner or manager will study the 5 Ps of marketing, product, pricing, presentation, promotion, and packaging. The business owner or manager will apply them to their business entity. They will also use these concepts to design a marketing strategy to create the desired business image.

SBMT 1315 3
Principles of Supervisory Leadership
Assists the student to become better acquainted with realistic problems, which must be confronted along with practical advice for solutions. The focus will be an explanation and translation of management principles and theories into tools that can be used in the everyday practice of supervision.

SBMT 1320 1
Innovation and Creativity
Provides learners with an opportunity to explore the essential concepts of accelerated learning. Learners will be exposed to research on “how to learn”, as well as examine the process of non-linear thinking. With this information learners will be able to utilize processes for finding business opportunities within their organization.

SBMT 1321 2
Marketing Management
Studies the basics of planning an advertising schedule. Topics include budgeting and designing advertisements for specific media. The student will construct both an advertising plan and a budget for the business. Prerequisite: SBMT 1312.

SBMT 1325 2
Problem Solving and Decision Making
Provides learners with an opportunity to explore the essential concepts of problem solving and decision-making. Learners will learn how thinking differently can help them solve problems and make decisions. Learners will break complex problems into workable components and will learn to go beyond preconceived limitations when developing solutions.

SBMT 1330 1
Interpersonal Skills
Designed to assist learners in improving their one-on-one communication skills. The learner will analyze the variables common to interpersonal communication and learn techniques to overcome barriers to effective communication.

SBMT 1335 1
Teamwork
Addresses the context, which contributes to the growth of team based work systems, the essentials for conducting effective meetings and skills necessary for participating in and leading successful teams.

SBMT 1340 1
Time Management
Provides learners with an opportunity to explore the essential concepts of time management. The learner will explore ways of dealing with the daily challenge of successfully juggling multiple priorities, which require a clear understanding of individual time management strengths and weaknesses and a well-practiced self managed strategy. The learner will analyze their time management habits and development improvements plans to become a time master.

SBMT 1345 3
Finances for the Non-Financial Manager
Provides learners with an opportunity to explore the essential concepts of financial analysis and improve their decision-making skills. This course is for students who have little experience in the field of finance. The students will explore the financial activities practiced by nonfinancial managers who are responsible for resources and interested in improving the financial performance and destiny of their organization.
Sociology (SOC)

SOC 1101 3
Introduction to Sociology
Meets Goal Area: 05
Introduction to Sociology familiarizes the student to basic sociological concepts. Topics include sociological theory, research, culture, socialization, groups, social stratification, social class, gender, race, and family. Secondly, a comprehensive study of society, with analysis of group life, and other forces shaping human behavior. Sociology is the scientific study of human society and social interaction. Prerequisite: STSK 0090 or placement by multiple measures.

SOC 1102 3
Social Problems
Meets Goal Areas: 05, 07
Social Problems offers students the opportunity to examine societal impact and process of identification; use critical thinking skills for analysis of causation and exploration of potential solutions to present day problems in contemporary societies such as crime and delinquency, discrimination and racism, education, familial issues, government, physical and mental health, poverty, roots of group inequality, war and environmental issues. Explores the significance and current policies of action.

SOC 2100 3
Introduction to Solar Assessment
Meets Goal Area: 09
Introduction to Solar Assessment introduces students to basics of solar energy and solar site assessment for solar photovoltaic and thermal systems. Students will measure the solar window with a solar Pathfinder (TM) and estimate the effects of climate, system design, and vegetation growth (and removal) on energy production. Using industry-standard hardware, mounting options and equipment, students will propose system designs, model economic and environmental cost and benefits, and report their findings.

SOLR 1030 2
Solar Energy Construction Projects
Solar Energy Construction Projects will cover the National Electrical Code (NEC) specifics concerning photovoltaic installation Article 690 and introduces students to basic construction skills installing photovoltaic systems along with safely and carefully works with roofing, how to plan and assemble racking, how solar modules and panels are mounted, and how the remaining solar components are incorporated. Residential systems and ground mount systems will be covered.

SOLR 2020 3
Advanced Photovoltaic Systems
Advanced Photovoltaic Systems will introduce photovoltaic (PV) systems design, installation, operation, and maintenance for residential and commercial applications. Students will collect and interpret data. They will apply this data to the design and configuration of grid-tied and standalone system designs. Prerequisites: ELCO 1100 or ELCO 1110.

Spanish (SPAN)

SPAN 1101 4
Spanish I
Meets Goal Areas: 06, 08
Spanish I assists students in developing proficiency in listening, speaking, reading and writing Spanish, mastering fundamental grammatical concepts, and integrating the culture of the Spanish-speaking world. The course is designed for students with little or no prior language study. Prerequisite: STSK 0090 or placement by multiple measures.

SPAN 1102 4
Spanish II
Spanish II continues to increase proficiency in listening, speaking, reading and writing Spanish, mastering of more complex grammatical concepts and integrating the culture of the Spanish-speaking world. Prerequisite: SPAN 1101, one-two years of high school Spanish, or consent of instructor.

SPAN 1150 1-3
Conversational Spanish
Conversational Spanish provides students with the opportunity to use Spanish for specific communicative goals. The situational approach will focus on words and phrases needed to cope with every day, survival situations and will vary according to class need. This course is designed for students with little or no prior language experience. This course could be taken more than once as the topics change. Survival Spanish for Probation Officers; Survival Spanish for Paramedics and EMT's; Survival Spanish for Law Enforcement Officers; Emergency Spanish for Firefighters; Survival Spanish for Correctional Staff; Spanish for Dental Staff; Survival Spanish for School Administrators, Teachers, & Support Staff; Office Spanish for Office Personnel; Doing Businesses in Latin America; Spanish for the Physician's Office; Spanish for Nursing; and other professions are available.

SPAN 2201 4
Spanish III
Meets Goal Areas: 06, 08
Spanish III provides for a review of grammar and vocabulary study and allows for practice of the more difficult grammatical concepts in Spanish. Interactive activities using authentic text materials, various literary genre, videos in the target culture, thematic cultural units, and written exercises help students to increase proficiency in the four language modalities: listening, speaking, reading and writing.
Introduction to Digital Literacy introduces students to the basic elements of Digital Literacy as they develop the technology proficiency, information literacy, and media literacy necessary for safe use of digital technologies vital for success in post-secondary settings as well as the 21st Century workforce. Prerequisite: Students will need to have access to a reliable Internet connection and access to a device which will enable them to use various technologies.

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<thead>
<tr>
<th>SKILL</th>
<th>Credits</th>
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<tbody>
<tr>
<td>STSK 0090 Reading Improvement I</td>
<td>2</td>
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<tr>
<td>STSK 0091 Basic Math Skills</td>
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<tr>
<td>STSK 0096 Increasing College Vocabulary</td>
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<tr>
<td>STSK 1105 Critical Reading</td>
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<td>STSK 1110 Freshman Seminar</td>
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<tr>
<td>STSK 1135 Introduction to Digital Literacy</td>
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STSK 2202 Spanish IV Meets Goal Areas: 06, 08 Spanish IV integrates the mastery of structural concepts with the study of authentic text materials on a variety of cultural topics, various literary genre, and provides for developing proficiency in the four language modalities. Prerequisite: SPAN 2201, three or four years of high school Spanish, or consent of instructor.

**Surgical Technology (SURG)**

<table>
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<tr>
<th>COURSE</th>
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<tbody>
<tr>
<td>SURG 1110 Surgical Microbiology</td>
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<tr>
<td>SURG 1120 Surgical Pharmacology</td>
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<tr>
<td>SURG 1130 Operating Room Theory</td>
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<td>SURG 1140 Operating Room Practices</td>
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<td>SURG 1150 Operating Room Procedures I</td>
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<tr>
<td>SURG 1151 Operating Room Procedures II</td>
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<tr>
<td>SURG 1160 Clinical I</td>
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</table>

**Introduction to Digital Literacy**

Surgical Microbiology will enable you to recognize how you can prevent the spread of disease and promote wound healing. You will study the structure and function of microorganisms, pathogenic microorganisms and their diseases along with the methods of transmission. The concept of standard precautions will be explored. Various methods of sterilization and disinfection will be discussed. You will study the wound healing process and classifications in conjunction of the body’s defenses against disease.

Surgical Pharmacology will enable you to assist in the preparation of drugs used in the operating room. You will study the uses, routes of administration, equipment needed and possible side effects of these drugs. The metric and apothecary systems of measure will be studied. You will convert standard time to military time, do temperature conversions, and study how to prepare a solution. Emphasis will be placed on the legal and safety aspects of drug administration. Prerequisites: SURG 1110 and SURG 1130.

Operating Room Theory will enable students to function as an essential part of the medical team providing surgical care to patients in an operating room setting. Students will study the total operating room environment, which includes preoperative, intraoperative, and postoperative care. The principles of electricity, physics, Lasers, computers, and Robotics will be covered. Emphasis will be placed on principles of aseptic technique.

Operating Room Practices will facilitate students in development of fundamental operating room skill, to identify instruments and to prepare necessary supplies for surgical case management. Included will be a basic knowledge of electricity, physics and robotics. Emphasis will be placed on demonstrating the principles of aseptic techniques as they apply skills inherent in the role of the surgical technologist. The students will observe, practice and demonstrate these skills in a lab setting. Prerequisites: SURG 1120 and SURG 1130.

Operating Room Procedures I enables students to understand the various types of surgical procedures. Students will relate the knowledge learned in previous theory courses to specific surgical procedures. Students will study diagnostic procedures and surgical cases to include General Surgery (gastrointestinal, hernia repairs, breast surgery, thyroid & parathyroid, liver & biliary tract), OB/GYN, Ophthalmic, Otorhinolaryngologic, Oral & Maxillofacial, and Plastic & Reconstructive surgeries. The areas of anatomy, diagnostic testing, patient positioning, instrumentation, equipment and supplies necessary to complete a surgical procedure and the actual sequence of the procedure will be analyzed. Prerequisites: SURG 1110 and SURG 1130.

Operating Room Procedures II enables students to understand various types of surgical procedures. Students will relate the knowledge learned in previous theory courses to specific surgical procedures. The types of cases to be studied will included Genitourinary, Orthopedic, Cardiothoracic, Peripheral Vascular surgeries, and Neurosurgery. The areas of anatomy, diagnostic testing, patient positioning, instrumentation, equipment and supplies necessary to complete a surgical procedure and the actual sequence of the procedure will be analyzed.

Clinical I provides supervised occupational experience in the clinical setting. It applies knowledge acquired in the classroom and laboratory to the development and performance of competencies associated with...
Clinical II provides supervised occupational experience in the clinical setting. It applies knowledge acquired in the classroom and laboratory to the development and performance of competencies associated with operating room policy and procedure. Prerequisites: SURG 1120, SURG 1150.

**SURG 1170 Clinical II** 12
Clinical II provides supervised occupational experience in the clinical setting. It applies knowledge acquired in the classroom and laboratory to the development and performance of competencies associated with operating room policy and procedure. Prerequisites: SURG 1140, SURG 1151, and SURG 1160.

**SURG 1181 Board Review** 2
Board Review is designed to prepare students to take the National Board certification exam by the National Board of Surgical Technologist and Surgical Assistants. A review of all course work presented in the program with an emphasis on Certification exam specifications will be presented. Prerequisites: SURG 1140, SURG 1151, and SURG 1160.

**SOCIAL WORK (SWRK)**

**SWRK 1101 Introduction to Human Services: Social Work** 3
Introduction to Human Services: Social Work introduces students to the field of Social Work, from its historical background to current trends and issues affecting vulnerable populations. Emphasis is given to professional values and ethics. Offers students an opportunity to explore the wide range of roles and areas of specialization unique to the profession, including case management, direct services, counseling, child welfare, community-based mental health, health care, criminal justice, youth work, forensic social work and generalist social work. Prerequisite: STSK 0095 or placement by multiple measures.

**SWRK 2250 Pre-Field Practicum: Social Work** 3
Pre-Field Practicum: Social Work provides supervised work experiences in the field of social work. Students, in consultation with field supervisor, select practicum placement in social service agencies under the supervision of a social worker. Prerequisite: Second year students only. Completion of learning outcomes contract; confidentiality contract; placement agreement; and DHS background check.

**THEATER (THTR)**

**THTR 1101 Introduction to Theater** 3
Introduction to Theatre introduces theater as a collaborative art form. This course is intended to give students a background in theatre history, text analysis, and cultural context, with particular attention to the roles of playwrights, directors, actors, designers, producers, critics, and the audience. Prerequisite: STSK 0090 or placement by multiple measures.

**THTR 1102 Acting for Everyone** 3
Acting for Everyone is an introductory course in the practice of acting for the stage. Using the techniques of the actor, the class is designed to help you develop communication skills and confidence that you can carry with you into everyday life. This course is recommended for education majors and anyone who desires a basic introduction to acting.

**THTR 1104 Survey of Musical Theatre** 3
Survey of Musical Theatre will expose students to the path of the form from its birth to the Broadway shows of today. These works will include operas, operettas, vaudevilles, reviews, and Broadway Musicals. Significant time will be spent studying major works and songs of the American Musical. Prerequisite: STSK 0090 or placement by multiple measures.

**THEATRE PRODUCTION (THTR)**

**THTR 1105 Theatre Production** 1-3
Theatre Production provides students with the opportunity for participation in major productions as actors or technical crew members.

**THTR 1106 Theatre Production** 1-3
Theatre Production provides students with the opportunity for participation in major productions as actors or technical crew members.

**THTR 2105 Theatre Production** 1-3
Theatre Production provides students with the opportunity for participation in major productions as actors or technical crew members.

**THTR 2106 Theatre Production** 1-3
Theatre Production provides students with the opportunity for participation in major productions as actors or technical crew members.

**THTR 2122 Introduction to Film** 3
Introduction to Film reviews the technical, historical, dramatic, and ethical elements of modern film.

**AUTOMOTIVE TECHNOLOGY (TRAN also see AUTO)**

**TRAN 1100 Intro to Transportation** 2
Intro to Transportation will define and demonstrate the correct procedures for servicing and maintaining vehicles. Shop safety, use of service manuals and bulletins, writing repair orders, and parts requisitions will also be addressed.

**TRAN 1111 Electrical Fundamentals** 3
Electrical Fundamentals defines the basic fundamentals of electricity and electronics also identifying sources of electricity. Circuits, magnetism, resistance, coils, capacitance, instruments, diodes, and solid-state devices will be introduced. Emphasis is placed on the testing and repair/replacement of the electrical systems, starter motors, and alternators. Students will identify parts, system operation, and component testing.

**TRAN 1145 Engine Performance I** 2
Engine Performance I identifies the proper techniques necessary to diagnose and repair OBDI computer systems using diagnostic equipment. This course also covers fuel system components testing and repair.

**WELDING (WELD)**

**WELD 1190 Welding Principles** 3
Welding Principles provides the student with details of welding and cutting processes, terminology, joint design, related areas of shop math, measurement, and reading technical drawings.

**WELD 1200 Blueprint Reading for Welders** 3
Blueprint Reading for Welders presents a thorough foundation for understanding the symbols, practices, and concepts used in prints created for manufacturing. It will present information on blueprint reading using a step by step process to enable students to visualize and interpret blueprints used in industrial settings.

**WELD 1210 Oxy-fuel/Plasma Arc Cutting** 2
Oxy-fuel/Plasma Arc Cutting provides the student with basic knowledge and skills in oxyacetylene cutting and welding and plasma arc cutting.
WELD 1220 3
Shielded Metal Arc Welding I
Shielded Metal Arc Welding provides the student with a thorough technical understanding of arc welding, welding safety, arc welding power sources, electrode classifications and selection. It also provides training to develop the skills necessary to make quality shielded metal arc welds on mild steel.

WELD 1230 3
Gas Metal Arc Welding I
Gas Metal Arc Welding I provides the student with a thorough technical understanding of Gas Metal Arc welding, welding safety, equipment and set-up, wire and shielding gas classifications and selection. It also provides training to develop the skills necessary to make quality gas metal arc welds on mild steel.

WELD 1240 2
Gas Tungsten Arc Welding I
Gas Tungsten Arc Welding I provides the student with a thorough technical understanding of Gas Tungsten Arc welding, welding safety, equipment and set-up, rod and shielding gas classifications and selection. It also provides training to develop the skills necessary to make quality gas tungsten arc welds on non-ferrous metals.

WELD 1260 2
Metallurgy and Materials
Metallurgy and Materials evaluates the basic elements of metallurgy and weld-ability as it pertains to commonly welded materials. Instruction will be provided on the weld ability of metals, the effects of welding on metals, mechanical properties of metals, alloys and their properties, applications of various types of metals, metal classification systems, and procedures for welding hard-to-weld metals.

WELD 1270 2
Testing Codes & Inspection
Testing Codes and Inspection describes the different types of destructive and non-destructive weldment testing. Emphasis will be placed on major national welding codes that govern the welding industry specifically the American Welding Society Structural Code D1.1 along with the American Welding Society Codes.

WELD 1280 2
Intermediate Shielded Metal Arc Welding
Intermediate Shielded Metal Arc Welding will have students perform horizontal, vertical, and overhead welding in accordance with American Welding Society procedures. Common joint types in various thicknesses are welding using various electrodes. Some sheet metal will be welded.

WELD 1300 3
Intermediate Gas Metal Arc Welding
Intermediate Gas Metal Arc Welding will teach students to perform Gas Metal Arc Welding in the horizontal, vertical, and overhead positions in accordance with American Welding Society procedures. Operate power supplies that use shielded gases, short-arc and spray discharge. Identify wire types and sizes, common joint types in various thicknesses are welded.

WELD 1340 3
Welding Qualifications Lab
Welding Qualifications Lab teaches students how to determine the requirements of welding codes and specifications for welding qualifications. Emphasis will be placed on the American Welding Society and ASME tests and procedures for ferrous and non-ferrous metals. Performance will be evaluated using visual and destructive testing.

WELD 1350 4
Pipe Welding Processes
Pipe Welding Processes provides an introduction to pipe welding processes in accordance with the American Welding Society 1G & 2G standards. Students will learn basic pipe layout and preparation techniques including bevel, quarter mark, cut, fit, and weld basic pipe joints in various positions from hand drawn templates. Cutting techniques will concentrate on manual Oxy-Fuel cutting pipe joints for accurate fit-up. Each pipe joint will be welded and inspected to meet visual inspection criteria. Hands-on welding techniques for Pipe processes using Shielded Metal Arc Welding, Gas Metal Arc Welding and Gas Tungsten Arc Welding of carbon steel pipe in the 1G & 2G position.
ADMISSIONS INFORMATION

Minnesota West Community & Technical College maintains an open-door policy for admissions to the College. If you have graduated from high school or have obtained a General Education Development (GED) Certificate, have scores on the High School Equivalency Test (HiSET) Exam or Test Assessing Secondary Completion (TASC) exams that you are eligible for admission.

If you do not have a high school diploma or General Education Development Certificate, or do not meet the test score requirements on the HiSET or TASC exams, you may be admitted at the discretion of the College. Admission to Minnesota West does not guarantee admission to college-level courses nor to specific programs. New students are required to take an assessment evaluation in Reading, Writing, and Math.

When applying for admission, an application and official transcripts are required. Official high school, GED, HiSET or TASC score reports and college transcripts must be submitted to the campus resource specialist. Departments may have additional requirements for admission to their programs. Admissions staff will also assist with the application for admissions, information for prospective students, and tours of the campus.

The campus resource specialist provides services pertaining to reciprocity forms, high school enrollments, applications for programs, and transcripts received from previous institutions. Students may apply to programs which lead to:

- Certificate
- Diploma
- Associate of Arts degree
- Associate in Science degree
- Associate in Applied Science degree

Students may be classified as non-diploma or non-degree seeking applicants.

- Part-time students
- Concurrent high school students
- English as a Second Language student (ESL)

If students have attended another college, an official sealed copy of a transcript must be received by the admissions office. Electronic transcripts will be accepted when sent from a secured, verified sender. Students should submit an unofficial copy of their transcript to use in meetings with advisors or instructors.

To Apply to the College
To apply to the College: You must complete the Minnesota West online application for admission. If you do not have access to a computer, you can complete the Minnesota State universal application form. This form can be obtained by contacting the Minnesota West Communication Center at 800-658-2330, any Minnesota West campus, or your local high school counselor.

Admission of Transfer Students
Transfer students must submit the application form and official transcripts from all institutions previously attended directly to the admissions office. Transcripts do not need to be requested from any college that is part of the Minnesota State system. Those transcripts can be retrieved electronically by our admissions office. Students are also required to provide a high school transcript or GED test scores.

Admission of International Students
If you are an international student (non-immigrant, non-refugee, a resident of another country holding a valid student visa), you must apply to Minnesota West using these instructions for the International Admissions application.

The following items are required for you to be considered for admission and must be submitted to the college three months before you plan to arrive:

1. International Student Application for Admission
2. Complete the Certification of Financial Responsibility form. You must come fully prepared to meet all financial obligations for the entire course of study as a student including tuition, fees, books, medical insurance and all other personal expenses in the United States. The CFR must be completed with supporting documentation attached. It is estimated that you will need $12,000 per year for tuition and living expenses. Minnesota West does not provide financial aid for International students.
   If your native language is not English, you must present proof of English proficiency in the form of test scores on the Test of English as a Foreign Language (TOEFL). A minimum score of 500 on the paper based test, 173 on the computer-based test or 61 on the Internet based test is required for acceptance. The TOEFL may be secured from the American Consulate in your country or it may be taken by applying directly to:
   Educational Testing Service
   Rosedale Road
   Princeton, NJ 08541 USA
   609-921-9000
   http://www.ets.org/toefl
   Official transcripts of your entire academic record in secondary school and college, including grades received each year of study, degree certificates, and examination certificates. Photocopies are not acceptable. Transcripts must be translated in English, and a certified copy of the translation must be attached.
5. Health Insurance Requirements.
All international students are required to purchase the Minnesota State international student accident and illness insurance plan, unless they can provide written verification that their government or sponsoring agency accepts full responsibility for any medical claims that might occur.

6. Required immunization form found on Student Forms. All students born after 1956 are required by Minnesota Law to provide proof that they have been vaccinated against diphtheria, tetanus, measles, mumps, and rubella.

Submit all application materials and correspondence to:
Minnesota West Community & Technical College
International Student Office
1450 Collegeway
Worthington, MN 56187

Admissions for New Immigrants
Potential students who are new immigrants must be able to demonstrate English language proficiency before enrolling in programs or courses at Minnesota West. All students must take the placement tests including new immigrants. Results of those tests will determine placement in either the regular English sequence or the developmental English courses. The Accuplacer assessment or a similar assessment will be used for appropriate course placement.

Senior Citizens
A Minnesota resident who is 62 years of age or older (Senior Citizen) is entitled to enroll in a credit bearing course for an administrative fee of $20.00 per credit plus fees, on a space available basis.

A Senior Citizen may also enroll in any non-credit open enrollment courses on a space available basis at no charge or may audit a credit bearing open enrollment course on a space available basis at no charge. However, senior citizens auditing a class will be required to pay fees as allowed by MS135A.52. A Senior Citizen enrolled in a closed enrollment contract training or professional continuing education course must pay the regular tuition charge for the course.

In all cases, senior citizens are required to pay for any materials and personal property for the course.

Readmission to the College
Students who have left the College for one or more semesters may re-enter Minnesota West as returning students. Students who have been out of Minnesota West Community & Technical College for two (2) or more years must resubmit an application and any transcripts since enrolled at Minnesota West.

Academic Renewal
Academic Renewal gives an undergraduate student who has been away from Minnesota West Community & Technical College at least five calendar years a one-time opportunity to establish a new grade point average. The policy will not apply if a student has earned a degree, diploma, or certificate from Minnesota West for the period in which they are asking for a fresh start. Students who seek a fresh start must meet the following conditions:
- The student must not have been enrolled at Minnesota West for a minimum of five consecutive years prior to the point of the fresh start.
- Upon readmission, the student must successfully complete 15 credits at Minnesota West with no grades below C prior to applying for the fresh start.
- If approved, the fresh start will be indicated on the transcript. All prior grades and credits will not apply to academic GPA, credits attempted and credits earned, but will be used for calculating Satisfactory Academic Progress, Grade Point Average, and completion percentage for financial aid purposes. The student’s record will reflect all original courses attempted by the student.

Special Student Status
Special students are all students not working on a degree program and not accepted into the College. Special students are frequently part-time students. A student may earn no more than eight credits without making application to the College.
- Special student registration should be completed prior to the first day of scheduled classes each term.
- Special students are encouraged to register with an advisor to assist them with their program.
- All credits earned in the special student classification will be maintained as a permanent record of the College and will be considered for application toward a diploma or degree program upon admission to the College.

Visiting Student Status
Visiting students are all students who are not seeking a degree at Minnesota West, but are currently admitted as degree-seeking students at another college that is part of the Minnesota State system. Visiting students will not be required to apply for admission, but must comply with all course restrictions, such as a course prerequisite, placement test score, or major.

Post-Secondary Enrollment Options (PSEO)
The Post-Secondary Enrollment Options Program is a state-sponsored program that allows qualified sophomores, juniors and seniors to take college-level courses that apply to both high school graduation
requirements and a college degree. It is intended to increase the range and depth of academic options for high school students.

**Registration Dates**

- Fall semester registration opens on April 1 for PSEO students
- Spring semester registration opens on November 1 for PSEO students

High school students should carefully consider their participation in this program before applying for admission. Students should discuss participation in the PSEO program with their parents and high school counselor/principal. **Students should notify their high school by May 30th of their intent to enroll in PSEO for the upcoming school year.**

For eligibility and admissions refer to our website PSEO: Admissions

**Immunization Policy**

Minnesota Law (MS135A.14) requires that all students born after 1956 or who graduated from a Minnesota High School prior to 1997 and enrolled in a public or private post-secondary school in Minnesota must be immunized against diphtheria, tetanus, measles, mumps, and rubella. The student will provide proof of immunization by completing the Immunization Record for Students Attending Post-Secondary Schools form prior to registering for classes. This form can be obtained from the campus resource specialist.

**Exceptions:**
This form need not be completed by students who are enrolled for only one class during the full academic semester or for extension, correspondence or online courses only. Students may also be exempt for medical or conscientious reasons.

Transfer students from a different Minnesota college are exempt if transcripts or other information from the previous school indicate that the student has met immunization requirements.

**Assessment/Placement**

Minnesota West is committed to institutional improvements and assisting all students in realizing their potential. For this reason, student assessment is part of the College's educational program. Students participate in a series of assessment tests and surveys designed to assist college personnel in accurate advisement and course placement and to gather information on student satisfaction with college programs and services.

Minnesota West uses multiple measures to determine placement in courses with reading, English, and math requirements. New students are required to complete the Accuplacer, to assess their readiness to function effectively within college level curriculum, unless the need is waived by other measures. Other measures used to meet assessment standards include qualifying college coursework, ACT, MCA, or SAT scores and high school GPA. Minnesota West will not require an individual to take a remedial, noncredit course in a subject area if the individual has met the qualifying college ready standards in that subject area.

Students will be given reasonable time and opportunity to review materials provided by the college covering the material to be tested. This material will include a sample test. An individual who is required to take a remedial, noncredit course as a result of a test given by a Minnesota West will be given an opportunity to retake the test at the earliest time determined by the individual when testing is otherwise offered. Minnesota West will provide an individual with study materials for the purpose of retaking and passing the test.

**Orientation**

A New Student Orientation is available in D2L/Brightspace and should be completed prior to attending an Advising/Registration event or meeting with an Advisor. Students will receive information on advising and topics related to registration and academic and student life at Minnesota West. Student advising/registration sessions are held for new students prior to the beginning of each term. Contact the Communication Center, campus, or go to our website for Advising/Registration dates and times.

**Registration**

**Time of Entrance**

Students may have multiple opportunities for entrance to Minnesota West Community & Technical College. Check with the program or major of choice for admission requirements. It is recommended that high school seniors make application for admission during their senior year and include with their high school transcript a current schedule of classes.

Registration refers to the process of signing up for classes. The registration procedures vary depending upon whether a new or continuing student is in a degree, diploma or certificate program or is taking classes but not pursuing a degree, diploma or certificate.

New students who have completed the application for admission process will be scheduled for an orientation/advising session. During orientation/advising, advisors will meet with students to assist in selecting
appropriate courses. At the conclusion of this session, registration begins.

**State Residency Requirement**

Classification as State Residents. Students who meet one or more of the following conditions on the date they apply for admission to a state college or university shall be classified as residents of Minnesota.

a. Students must have resided in Minnesota for at least one calendar year immediately prior to applying for in-state tuition or are dependent students whose parents or legal guardian resides in Minnesota at the time the student applies. Residence in Minnesota must not be merely for the purpose of attending college.

b. Students are Minnesota residents and can demonstrate that they were temporarily absent from the state without establishing residency elsewhere.

c. Students moved to the state for employment purposes and, before moving and before applying for admission to a public postsecondary institution, accepted a full-time job in the state, or students who are spouses or dependents of such persons.

**Procedure**

**Domicile** is a person's true, fixed and permanent living place. Domicile is the place to which a person intends to return after temporary absences. A person may have only one domicile at a time.

1. **Demonstration of Domicile and Factors to be Considered.** In order to be reclassified as a Minnesota state resident, a student must first demonstrate the establishment of domicile in Minnesota as described in this part.

2. **Required Period of Residence.** A student must have resided in Minnesota for a continuous period of one calendar year immediately prior to applying for reclassification, and residence in Minnesota during this period of time must not have been solely or primarily for the purpose of attending a college or university.

3. **Other Factors.** Each of the following additional facts and circumstances may be considered in the evaluation of a petition for a change in state residency, and other factors not listed may also be considered. The existence of any one of these factors is neither necessary nor sufficient to form the basis for a decision. It is the student's responsibility to provide documentation or evidence of any factors to be considered in the reclassification decision.
   a. Continuous presence in Minnesota between academic terms or other periods when not enrolled as a student.
   b. Registration as a voter in Minnesota.
   c. Ownership of a home in Minnesota.
   d. Domicile of the student's spouse in Minnesota.
   e. Registration of the student's automobile in Minnesota.
   f. For a dependent student, domicile in Minnesota of the student's parent or legal guardian.
   g. Evidence of the intention to acquire a domicile in Minnesota.
   h. Sources of the student's financial support are generated within Minnesota.
   i. An offer of employment in Minnesota to begin after the student's projected date of college or university graduation.

4. **Decision.** A student's petition for reclassification (this should be a hyperlink that links to the college's petition form) shall be considered and a decision made within one week of receipt of petition and all necessary documentation. A student whose residency is changed to that of a Minnesota resident shall be charged the resident tuition rate effective at the beginning of the term of enrollment following the date the petition was submitted. Classification of a student as a Minnesota resident shall apply to all Minnesota State colleges and universities.

5. **Appeal.** Students may appeal a decision not to reclassify a student as a Minnesota resident by requesting their initial petition be forwarded to the college provost for additional review. The provost's decision shall be final.

**Tuition and Fees**

Tuition and fees for credit bearing courses at Minnesota West are established by the Minnesota State Board of Trustees. Future and current students are encouraged to visit the College web site for the most current tuition and fees information.

**Reciprocity**

For students who live in a state that has a reciprocity agreement with Minnesota, tuition and fees will be based on their home state's negotiated rate. Students from Wisconsin and North Dakota need to apply to their home state to ensure the negotiated tuition rate. Students from South Dakota need to complete an application and submit it to the campus they plan to attend. Contact the Campus Resource Specialist for assistance.

**Paying Tuition & Fees**

It is the students' responsibility to check their account online through the e-Services Student Account. Statements will not be mailed to students.
Students may choose one of the following options for paying:

**Pay Online**
Online payments are accepted through e-services student account. Students may make full or partial payments using a major credit card, debit card or e-check.

**Pay in Installments**
Set up a tuition payment plan with Nelnet Campus Commerce.

**Pay by Mail**
Students may pay by mail by including their student ID number on their check or money order.

**Pay in Person**
Payments are accepted at the campus business office during regular business hours. Payments may be made with a credit or debit card, check or cash.

**Third-Party Billing**
When a student’s tuition, fees and/or bookstore purchases are billed directly to an outside agency or organization, the process is termed “third-party billing.” The College agrees to defer the appropriate college costs and collect payment directly from the agency or organization on behalf of the student. The College must receive authorization from the sponsoring agency or organization before third-party billing can be processed. Students are ultimately responsible for all college costs incurred.

**Registration Cancellation for Non-Payment**
Students who have not paid their tuition and fees by the payment deadline will have their class registrations cancelled unless one of the following conditions is met:

- Student has made a down payment of 15% or $300.00, whichever is less.
- Student has an active Nelnet tuition payment plan.
- Student has completed the financial aid application and has an ISIR on file with the College (completed FAFSA using the Minnesota West code of 005263)
- Student has provided the College with scholarship or third party authorization for payment of tuition.
- Student is a PSEO student.

Limited circumstances could allow a student to have tuition and fees deferred for a short period of time. Students who believe they have extenuating circumstances that could be considered for deferment must contact the business office. Deferment criteria are well defined. Not all requests for deferments will be granted.

**Late Fee**
A $30.00 late fee will be assessed to accounts that are not paid by the 25th day of the semester. No late fees will be charged if the payment plan has been implemented by that date. The late fee will also apply to resale activity.

**Non-payment**
Non-payment of the account will result in submission of the outstanding balance to the Minnesota Department of Revenue Collection Division for further action. Students having outstanding accounts with the College will not be permitted to register for a subsequent term. Students should not rely on the College to drop them from courses.

**Schedule Adjustments - Drop/Add**

**Terms three weeks or greater in length:**
Minnesota West students may drop courses within the first five days of a term without obligation. For purposes of this policy a term is defined as fall semester, fall late start, spring semester, spring late start, summer session I and summer session II. Students must drop/add through eServices. A 100% refund of tuition and fees shall be provided to a student who drops on or before the fifth day of a term. Students will be obligated for any courses dropped after the fifth day of a term.

**Courses less than three weeks in length:**
Students are entitled to have the opportunity to attend one class session without obligation. Students who are registered for courses which are less than 3 weeks in length will have one business day after the first class meets in which to drop courses without obligation. A 100% refund of tuition and fees shall be provided to a student who drops a course less than three weeks in length on or before one business day after the first class meets. Students will be obligated for any course dropped after the first business day following the first class session.

**Financial Aid Implications:**
If a student is eligible for federal financial aid (Title IV) and he/she completely withdraws from school during a period of enrollment, he/she is entitled to aid based on the percentage of the period of enrollment he/she attended. When a student withdraws from all courses prior to completing 60% of the semester, the school is required to determine the amount of the federal financial aid the student has earned. If a student has been
disbursed unearned aid, he/she must repay it. If a student has earned aid which has not been disbursed, he/she is eligible to receive those funds as a post-withdrawal disbursement. If any funds are remaining after the return of Title IV aid, they will be used for repayment obligations for Minnesota West Community & Technical College funds, State funds, and other private sources. If an unpaid balance exists, all aid sources will be repaid before any funds are returned.

Refunds of Institutional funds less any federal Title IV aid funds are subject to be returned to State and Local aid programs which require a return of funds. The funds are returned according to the ratio of the aid program award to the total Non-Title IV Aid package.

Late Registration
Registration for classes will be allowed through the first five instructional days of a term. For purposes of this policy, a term is defined as fall semester, fall late start, spring semester, spring late start, summer session I, and summer session II. Registration for courses which are less than 3 weeks in length will be allowed through one business day after the first class meeting date. Registration after these deadlines will require consent of the instructor, providing space is available.

Withdrawals
Students may withdraw from a course through the date on which eighty percent (80%) of the days in the academic semester have elapsed. For courses not on a standard academic semester schedule, the final date for official course withdrawal shall be the date on which eighty percent (80%) of the instructional days for the course have elapsed.

Students withdrawing from the college after registering for classes must officially withdraw with the campus registration office or online through eServices. A course from which the student withdraws will appear on their academic transcript with a W and will count against their completion percentage for Satisfactory Academic Progress.

Minnesota West will refund tuition and fees for students who totally withdraw in accordance with the following schedule:

<table>
<thead>
<tr>
<th>Class Day Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st to 5th class day</td>
<td>100%</td>
</tr>
<tr>
<td>6th to 10th class day</td>
<td>75%</td>
</tr>
<tr>
<td>11th to 15th class day</td>
<td>50%</td>
</tr>
<tr>
<td>16th to 20th class day</td>
<td>25%</td>
</tr>
<tr>
<td>After the 20th class day</td>
<td>0%</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Class Day Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st to 5th class day</td>
<td>100%</td>
</tr>
<tr>
<td>6th to 10th class day</td>
<td>50%</td>
</tr>
<tr>
<td>After the 10th class day</td>
<td>0%</td>
</tr>
</tbody>
</table>

Terms less than three weeks in length:

<table>
<thead>
<tr>
<th>Class Day Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st class day of term</td>
<td>100%</td>
</tr>
<tr>
<td>2nd and 3rd class day</td>
<td>50%</td>
</tr>
<tr>
<td>After the 3rd class day</td>
<td>0%</td>
</tr>
</tbody>
</table>

Financial Aid Implications
Federal regulations state that students who withdraw after receiving federal financial aid may be required to return a portion of the aid received. Students considering withdrawing from the college should consult an advisor or financial aid specialist before withdrawing from the college. The Minnesota State Grant recalculates throughout the term and may result in a student either receiving an increased or a decreased Minnesota State Grant award. Any student considering withdrawing from a course or courses should speak with their campus financial aid specialist to determine both the academic and financial effects of a withdrawal.

Students in attendance after the 60% point of the term will be considered to have earned all financial aid.

Administrative Withdrawals
The College reserves the right to administratively withdraw students for non-attendance. Notification will be sent students who are administratively withdrawn. There will be no reduction in tuition and fees.

Alternative Methods of Earning Credit
Students may be granted credit toward program completion for prior work, education, and life experiences, which are deemed equivalent to the program requirements.

Earning credit may be achieved through one of the following options: Advanced Placement (AP), College Level Examination Program (CLEP), Competency Based Education (CBE), or Course Test Out.

1. Credits received through alternative methods count toward graduation requirements but are not counted in Grade Point Average or minimum semester credit completion calculations and are not counted for financial aid status.

2. Responsibility for possessing and retaining the content knowledge and skills required by course requirements for which alternative credit is granted rests with the student.

3. Alternative Methods of Earning Credit procedures do not supersede the time frames for drop/add, withdrawal, or any refund of tuition.

4. Credits earned by these alternative methods may or may not be accepted by other institutions.

- Advanced Placement (AP)
It is the policy of Minnesota West Community & Technical College to award college credit to students who attend Minnesota West Community & Technical College and have achieved a score of 3, 4, or 5 on the Advanced Placement (AP) examination(s). Credit may be given for a specific college course if a test covers substantially similar material. If the test material does not match an existing course, students may be given elective credits. Students are provided information on AP examination policies and procedures in the college catalog and on the college website. The college policy and procedure for Advanced Placement can be found on the Minnesota West Policies page.

Advanced Placement equivalency charts are available at Transferology to assist students in their educational planning. There is no limit to the total number of credits a student may earn through AP examinations. Credits earned through AP examinations are not resident credits and may not be used to satisfy resident credit requirements for graduation.

1. The student requests an official AP score report from the College Board be sent to Minnesota West Community & Technical College. Minnesota West Code: 6945
2. The AP scores are received and reviewed by an advisor.
3. An equivalency credit form is completed and transcribed for each student.
4. The appropriate signatures are obtained on the equivalency credit form.
5. The student is notified of the number of credits that will be granted upon enrollment at Minnesota West.
6. AP credits will be recorded on a transcript once the student has registered for classes at Minnesota West.

- College Level Examination Program (CLEP)

It is the policy of Minnesota West Community & Technical College to award college credit to students who attend Minnesota West Community & Technical College and have achieved the minimum required score as outlined in the equivalency chart on Transferology. Credit may be given for a specific college course if a test covers substantially similar material. If the test material does not match an existing course, students may be given elective credits. Students who have enrolled in a comparable class at Minnesota West or another institution are not eligible to receive credit through CLEP for the same course. Students are provided information on CLEP examination policy and procedures in the college catalog and on the college website.

An equivalency chart for CLEP credit is available at Transferology to assist students in their educational planning. There is no limit to the total number of credits a student may earn through CLEP examinations. Credits earned through CLEP examinations are not resident credits and may not be used to satisfy resident credit requirements for graduation. The Minnesota West - Worthington Campus is a National Test Center for CLEP. Students can contact Student Services at the Worthington Campus for cost information and to schedule a test. More information on other test centers and CLEP tests can be found at http://clep.collegeboard.org/.

1. The student requests an official CLEP score report from the College Board (www.collegeboard.com) to be sent to Minnesota West Community & Technical College. Minnesota West Code: 6945
2. The CLEP scores are received and reviewed by an advisor.
3. An equivalency credit form is completed and reviewed by an advisor.
4. The appropriate signatures are obtained on the equivalency credit form.
5. The student is notified of the number of credits that will be granted upon enrollment at Minnesota West.
6. CLEP credits will be recorded on a transcript once the student has registered for classes at Minnesota West.

- Competency Based Education (CBE)

Competency Based Education refers to learner-demonstrated knowledge, skill, and ability to perform a task or function. The learner uses prior experiences to support course competencies.

There is a $200 initial fee that includes career planning, development of an academic plan, and the application. Thereafter, regular tuition per credit will be assessed.

Students may be eligible to earn up to 44 credits for prior learning from work, volunteer services, conferences, workshop attendance, in-service training, and a vocational interest.

- Course Test Out

Students who can demonstrate competence in specific disciplines may earn college credit by testing out of college courses with Minnesota West Community and Technical College. Students must initiate the Course Test-Out process by working with appropriate instructors and then completing a Course Test-Out Award Recommendation Form. Students should check with an advisor, instructors, and campus registrars to see if Course Test-Outs are available. Course Test-Out is not an option for all courses.

1. A fee of $40 per lecture credit and $65 per lab credit payable to Minnesota West Community & Technical College is required prior to completing a Course Test-Out exam. This fee is nonrefundable even if
examinees do not pass exams and do not receive credit for the course.

2. Course Test-Outs must be completed at least ten days prior to the start of the semester or after the fifth day of the semester; however, the President or designee has the authority to allow a faculty member to grant a Course Test-Out at any time if circumstances warrant.

3. Testing out is not an option for students who desire to earn credit for courses previously attempted. Course Test-Outs cannot be used to improve grades for courses previously completed.

4. Students who fail a Course Test-Out exam must complete the course to fulfill graduation requirements. Failing Course Test-Out grades will not be recorded on transcripts.

5. Course Test-Out exams are instructor-generated to reflect the objectives of the course. Only grades of "C" or higher will be recorded as credit (CR).

6. Credits earned by the Course Test-Out option are not computed in a student's GPA, nor will they count towards the enrollment figures of the college. Financial Aid is not available for Course Test-Out credits.

7. Course Test-Out credits will not be recorded on a transcript once the student has registered for classes at Minnesota West.

**School to Work Articulated Courses**

Minnesota West Community & Technical College participates in the school to work program and has entered into agreements with several area high schools. Students enrolling in articulated high school courses and successfully meeting specific criteria for each course may be eligible to receive credit at the College. Credit will be granted for competency mastered within the preceding two years at a skill level of "B" or better on a grade scale of "A-F". Credit will only be awarded for articulated high school courses in which the student has met the criteria after the student has enrolled in and successfully completed 15 credits at the College.

**International Baccalaureate Credit**

It is the policy of Minnesota West Community & Technical College to award credit for the International Baccalaureate (IB) programs completed by students who subsequently attend Minnesota West Community & Technical College. The examination for the diploma covers six subjects, three or four of which must be at a higher level and others at the subsidiary level. Students may present a full IB diploma or a certificate recognizing specific higher level or subsidiary level test scores. Those students completing a standard level course of 150 hours will earn three (3) or four (4) credits as appropriate. Students completing a higher level course of 240 hours will receive six (6) or eight (8) credits as appropriate. Students are provided information on IB examination policies and procedures in the college catalog and on the college website.

An equivalency chart for International Baccalaureate (IB) is available at Transferology to assist students in their educational planning. There is no limit to the total number of credits a student may earn through IB examinations. Credits earned through IB examinations are not resident credits and may not be used to satisfy resident credit requirements for graduation.

1. The student requests an official IB score transcript from the International Baccalaureate Organization be sent to Minnesota West Community & Technical College.
2. The IP scores are received and reviewed an advisor.
3. An equivalency credit form is completed for each student.
4. The appropriate signatures are obtained on the equivalency credit form.
5. The student is notified of the number of credits that will be granted upon enrollment at Minnesota West.
6. IB credits will be recorded on a transcript once the student has registered for classes at Minnesota West.

**Other Nationally Recognized Examination Programs**

It is the policy of Minnesota West Community and Technical College to consider awarding credit for nationally recognized examination programs such as Dantes Subject Standardized Tests (DSST), Thomas Edison College Examination Program (TECEP), Excelsior Examinations, New York Foreign Language Proficiency, and National Occupational Competency Testing Institute (NOCTI). Credits earned through a nationally recognized examination are not resident credits and may not be used to satisfy resident credit requirements for graduation. Official score report or transcript for each of the above nationally recognized examination programs is required for transfer evaluation.

1. The student requests an official score report from the appropriate testing service be sent to Minnesota West Community and Technical College.
2. The score reports are received and reviewed by appropriate college staff.
3. An equivalency credit form is completed and transcribed for each student.
4. The appropriate signatures are obtained on the equivalency credit form.
5. The student is notified that credit has been granted.
6. Credits granted will be recorded on a transcript once the student has registered for classes at Minnesota West.

**Military Training**
It is the policy of Minnesota West Community and Technical College to consider awarding college credit from the student’s military transcript using the “ACE Guide to the Evaluation of Experiences in the Armed Forces.” The Minnesota West transfer policy will apply to military training transcripts. See Minnesota West Policies.

1. The student requests an official military transcript through the Joint Services Transcript (JST) system or the Community College of the Air Force be sent to Minnesota West Community and Technical College.

2. The student’s declared degree goal will be used as the transfer evaluation base. If the student changes his/her degree goal, the student is responsible for seeking information on the application of credits toward the new degree goal.

3. The student should make an appointment with the program advisor.
   a. A copy of the official transcript should be present when meeting with the program advisor.
   b. The student’s assigned program advisor will review any technical credits to ascertain their validity within the student’s major study.

4. If the transcript contains general education courses, the Campus Resource Specialist will forward a copy of the official transcript to the College Registrar for review. The College Registrar will verify applicability of transfer credits and respond back to the Campus Resource Specialist.

5. Military credits will be recorded on a transcript once the student has completed 12 credits at Minnesota West.

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**Academic Information**

**Attendance**

Students should adhere to the attendance policy as stated on each course syllabus. It is the student’s responsibility to check with each instructor concerning assignments, projects, or work missed during and absence.

**Definition of College Credit**

A college credit is a unit of measure that is used to quantify progress in or completion of a college course, program, or degree. A credit comprises elements of both time and academic achievement. In higher education, one semester credit generally involves 45 hours of activity. A lecture credit generally is comprised of 15 hours of classroom instruction from a qualified instructor, and an expectation of an additional 30 hours of student supplemental study or activity outside of the classroom. A lab credit would generally be comprised of 30 hours of laboratory instruction from a qualified instructor with an expectation of an additional 15 hours of supplemental study or activity by the student outside the classroom. An On-the-Job (OJT) credit would involve 45 hours of training at an actual job location, working for an employer, under the supervision of a qualified instructor. All credits would require assimilation of specified knowledge and skills comparable to and consistent with learning objectives established for similar courses and levels at other accredited institutions of higher learning.

Advances in communication technologies have affected how colleges award credit. Distance education courses, such as those offered on-line, stress assimilation of knowledge and skills more than time spent in a classroom. Students taking such courses are expected to acquire equivalent knowledge and skills by devoting more time to independent activities designed and directed by qualified faculty than they would for an equivalent course on campus with an instructor.

A college may grant or waive credit for a course in which the student does not enroll if the student can document a direct correlation between his or her life experience and the prescribed faculty-developed coursework. The student must establish that his or her experience was equivalent or superior to the classroom experience as well as demonstrate mastery of the course’s learning objectives in a manner determined by appropriate department faculty.

**Dean’s List and Honors**

To be eligible for the semester Dean’s list and/or honors, students must meet the following requirements:
1. Be a full-time student enrolled in a minimum of 12 credits
2. Earn 12 credits of course work within the A-F grading system. Credits with Pass/Fail grading methods do not count towards the 12 credit minimum.
3. Earn a 3.5 GPA.

Online/Distance Learning

Student Responsibilities

Distance Learning
Distance learning occurs when the student and instructor are separated by distance, time and/or location. Minnesota West provides avenues for distance learning for students; interactive television (ITC), zoom rooms, and online courses. ITV courses are offered at the same time in different locations.

Interactive Television (ITC)
Interactive Television and zoom rooms are used extensively at Minnesota West. This technology provides students with a broad range of classroom experiences that might not otherwise be available. Using state-of-the-art two-way video conferencing, instructors and students are brought together in full video and audio. In many cases, instructors enhance their teaching with technical tools that are available in these specially equipped classrooms.

When a class lecture or lab is being recorded for any reason, students will be informed that a recording is taking place. Students will be advised as to the purpose of the recording, how it will be used, and the process for destroying of the recording. Students wishing to record a class must have written permission from the instructor.

Minnesota West Online Courses
At Minnesota West, efforts focus on developing internet based courses that parallel campus courses. Online courses at Minnesota West are taught by college faculty who work with students throughout the duration of the course. Instructors apply the same rigorous academic standards for success with an Online course as they do in their traditional classroom courses. Online courses are delivered through Minnesota West’s online learning management system Desire2Learn Brightspace.

All students are enrolled in an Introduction to Online Learning course. It is recommended that you review this course before you take an online course.

To obtain the maximum benefit of online courses, it is the student’s responsibility to be actively engaged in the online learning experience by:
- attending online classes per the instructor’s requirements, participating in online discussion, and setting aside time for online coursework
- proactively seeking assistance when needed

For information, see Minnesota West Online.

Grading System
At the beginning of each semester, students must be informed by their instructor as to how students will be graded in each course. If the information is not provided by the faculty member, it should be requested.

Pass/Fail Policy
A student may request a "pass" (P) grade for any class in which he or she is enrolled. The "P" grade must be requested by the student ten school days prior to the end of the term. The "P" grade indicates the student has performed at a passing level. Passing level is interpreted as being a grade of "C" or better. A grade of C- is not considered passing. Any student who achieves less than "C" level work will receive an "F" on his/her transcript. A student may have a total of 20% of his or her credits with a grade of "P". It is not recommended that a student request a "P" grade for any course that will apply toward a major or minor.

Right to Alternative Complaint
These procedures do not deny the right of any individual to pursue other avenues of recourse, which may include filing charges with the Minnesota Department of Human Rights, initiating civil action or seeking redress under state and federal law.

Last Date of Attendance
Last Dates of Attendance are entered through faculty eServices. It is expected that faculty will enter a date into this field for students who have quit attending or mark the check box for students who have never attended but have not withdrawn from their class. A grading symbol of "F" will automatically be entered for any student for which a last date of attendance is entered. A grading symbol of FN will be automatically entered for any student marked as never attending.

Students will be allowed to submit an official withdrawal from the course if doing so falls within the withdrawal deadline per policy 5.12.0. For courses where faculty have reported that the student started but quit attending, the Registrar’s Office will then change the "F" to a “W” and enter the Last Date of Attendance as the date the official withdrawal form is submitted to the registration office. For courses where faculty have reported the student as never attended, the FN and last date of attendance shall not be changed.

The following grading system is used at Minnesota West to report academic achievement and to compute the student’s grade point average.
<table>
<thead>
<tr>
<th>Letter grade</th>
<th>Meaning</th>
<th>Grade Point Value per Credit Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
<td>4</td>
</tr>
<tr>
<td>A-</td>
<td></td>
<td>3.67</td>
</tr>
<tr>
<td>B+</td>
<td>Above Average</td>
<td>3.33</td>
</tr>
<tr>
<td>B</td>
<td>Above Average</td>
<td>3</td>
</tr>
<tr>
<td>C+</td>
<td>Average</td>
<td>2.33</td>
</tr>
<tr>
<td>C-</td>
<td>Average</td>
<td>2.67</td>
</tr>
<tr>
<td>C</td>
<td>Average</td>
<td>2</td>
</tr>
<tr>
<td>D+</td>
<td>Below Average</td>
<td>1.33</td>
</tr>
<tr>
<td>D</td>
<td>Below Average</td>
<td>1</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete</td>
<td>.67</td>
</tr>
<tr>
<td>FN</td>
<td>Never Attended</td>
<td>No grade point value</td>
</tr>
<tr>
<td>F</td>
<td>Failure</td>
<td>No grade point value</td>
</tr>
<tr>
<td>NC</td>
<td>No Credit (assigned only to courses numbered below 100 which are not passed)</td>
<td>No grade point value earned</td>
</tr>
<tr>
<td>P</td>
<td>Pass - C or higher grade must be earned to receive a grade of P. C- is not considered passing.</td>
<td>Earned credit but no grade point value</td>
</tr>
<tr>
<td>W</td>
<td>Withdrawed</td>
<td>No earned credit</td>
</tr>
<tr>
<td>AU</td>
<td>Audit-no credit earned</td>
<td>No grade assigned or grade point value</td>
</tr>
<tr>
<td>IP</td>
<td>In Progress</td>
<td>No grade assigned at this time</td>
</tr>
<tr>
<td>Z</td>
<td>Course registered for but grade not yet assigned</td>
<td>No grade assigned</td>
</tr>
<tr>
<td>CR</td>
<td>Credit by Test Out</td>
<td>No Grade point toward GPA</td>
</tr>
</tbody>
</table>

Definitions/Conditions:

**Grade points:** A letter grade is assigned at the end of a semester for each course in which the student is enrolled. A grade point value for each credit in the course is assigned to each letter grade.

**Grade Point Total:** Grade point total is the sum grade points earned as determined by multiplying the grade point value of the grade by the number of course credits.

**Grade Point Average:** Grade point average (GPA) is the student's grade point total divided by the grade point credits. Each grade report shows the student's GPA for the term and cumulative GPA since admission. "P" does not carry a grade point value and, as such, is not calculated in the GPA. A "P" will not improve the student's GPA. However, the credits count toward registered credits.

**Credit:** The unit by which academic work is measured.

**Registered Credits:** The total number of credits for which a student is officially enrolled at the end of the registration drop period each term.

**Completed Credits:** Completed credits include A, B, C, D, P, and F. They do not include "I" (incomplete), "W" (withdraw), "FW" (no grade point value), audit, no credit, or drops (classes dropped during the first days of class). Completed credits may qualify for retroactive payment of financial aid.

**Earned Credits:** Earned credits are successfully completed credits that count toward the required percentage of completion. Earned credits include only A, B, C, D, and P.

**Incomplete:** The mark "I" is a temporary grade that is assigned only in exceptional circumstances. An "I" grade will automatically become an "F" grade at the end of the next semester. Faculty has the option of setting an earlier completion date.

**Repeat Credits:** Credits awarded when a student repeats a course in order to improve a grade. A student may repeat a course two times and the most recent grade will become the grade calculated for GPA purposes. If a student chooses to take a course more than three times, the third grade and all subsequent grades in that course will be averaged into the GPA.

**Developmental Credits:** Credits awarded for coursework below the course prefix 1000. Student may receive financial aid for developmental credits up to a maximum of 30 semester hours.

**Transfer Credits:** Credits that are accepted by the College. Accepted transfer credits are not included in the calculation of GPA, but are used in the calculation of the 67 percent completion rule.
Cumulative Credits (Cumulative attempted CUMATT on transcript): Cumulative credits are the total number of credits registered for all terms of enrollment at the College, including summer terms and terms for semesters for which the student did not receive financial aid.

Audit: Term used to identify a course taken by a student who wishes to obtain the information presented but does not wish to earn credit. Students who audit a course are not required to complete assigned work or take written examinations. Audited courses do not count toward Cumulative Credits toward graduation and do not figure into the grade point average. Audits are designated by the grade of AU on the transcript. To register for an audit, notify the registrar of intent at the time of registration so the appropriate designation may be made. Audits are allowed on a space available basis only. Full tuition and fees must be paid. No financial aid is available for classes taken for audit.

Grade Appeals
In the case where a student disputes the grade he/she has received in a particular course, class or assignment, the student's first recourse is to meet with the instructor to discuss their concerns of the grade. (See Student Handbook) If no resolution between the instructor and the student can be met the student should then refer to the grievance procedures as found under Student Rights and Responsibilities in the Student Handbook.

Education Plan
Students on Academic Probation will be expected to work with their advisor toward improving their grades by agreeing to an Education Plan. The Plan will outline what activities the student will participate in to raise his/her GPA. Activities may include tutoring, meeting regularly with an advisor, Study Skills Workshops and other support activities.

Students who have been suspended and are re-entering the college will be required to appeal and if approved, participate in an Education Plan/Case Management Program.

Independent Study
Independent study is approved only in situations where an academic emergency exists. Students may request registration for one or more credits of independent study in a semester and must have the consent of the instructor and Administrative approval for the course in which the credit is being sought. The nature of the project, number of credits to be awarded, and the evaluation procedures must be approved by the instructor on a special form located at Student Forms.

Statement on the Role/Importance of Writing
The College recognizes that clear, correct and concise use of language is a characteristic of an educated person. Papers and examinations that are poorly written may receive a lower grade based on the quality of the writing alone. Poor writing is sufficient cause for a failing grade on a paper or in a course. This pertains to all courses offered by the College.

Library and Academic Resource Center (LARC)
Each Minnesota West Community & Technical College campus has a Library and Academic Resource Center (LARC), which supports the curriculum, students, and staff. The LARC houses the following services:

Library
Minnesota West Community & Technical College has approximately 50,000 items including books, periodicals, audio-visual materials, electronic books, and streaming videos. The library website provides access to the online catalog, full-text article databases and reference books, and other library services. Off-campus access is available through proxy services. Library materials are transported between campuses via U.S. mail. Interlibrary loan for materials not owned by Minnesota West Community & Technical College is provided through the MINITEX system.

Library staff provides reference and user instruction on all campuses and to our distance learners. Each library has open computer and study spaces designed to create an inviting atmosphere with comfortable seating, individual carrels, and group study areas.

Tutoring
The Library and Academic Resource Center offers free tutoring to students who need help with classes or programs.

• Individualized and small group tutoring is available for students on all campuses. Students use tutoring services in the LARC to receive assistance in oral and written communication skills, math, reading skills, study skills, and technical tutoring.
• Tutors help students prepare for tests, improve study techniques, review course materials, and answer questions about assignments. They assist with fundamental skills such as time management, note taking, and test preparation techniques that are necessary for college success. Tutors will not do work for students, nor do they replace instructors. They will show techniques to keep pace with assignments and help students understand course material.
• Students usually request tutoring on their own, but faculty may also refer a student for tutoring.

Both peer and staff tutors are available at Minnesota West Community & Technical College.

• Peer tutors are fellow students who display a willingness to assist others and who know the course content and the instructor’s expectations.

• Staff tutors provide tutoring and assistance with general study techniques.

Online Assistance
Minnesota West utilizes Tutor.com, a dynamic online tutoring service. This service is available to students 24/7 361 days per year (4 holidays are observed) for free. Students needing assistance in math, economics, accounting, chemistry, physics, Spanish, nursing, statistics, and a wide range of other subjects will receive real-time assistance. Tutor.com also includes an online writing lab, allowing students to submit drafts of writing assignments for assistance in revisions.

Test Proctoring
Make-up tests and testing services for students with documented disabilities are proctored in the Library and Academic Resource Centers at each campus. Hours are set each semester and appointments must be made to schedule a test.

Career Center
Career Services include resume and cover letter assistance. These services are provided at no charge to Minnesota West Community & Technical College students, graduates, and alumni. A Career Assessment tool is also available for current and prospective students. Students, alumni, and employers have free access to College Central Network, Minnesota West’s official online job posting and resume building service.

Computer Access
Each Minnesota West Community & Technical College Campus provides computer access to students. Open computer labs for student use are located in each Library and Academic Resource Center.

LARC Help Desk
The college-wide help desk is housed in the Worthington Library and Academic Resource Center. Students from all campuses and distance learners can contact the help desk via phone or online through our Ask JAY service. Ask JAY is a web-based, self-service database of frequently asked questions. The LARC help desk staff works with students to resolve issues related to online courses/D2L and tutoring services. Call (507) 372-3476.

One Stop Communication Center
The college maintains a Communication Center staffed by Resource Specialists who can answer most of the students’ questions regarding program information, application, admissions, registration, financial aid, eServices Student Account, Tuition and Fees, Payment Plans, student email, and much more. The Communication Center is available Monday-Friday during the day. Call (800) 658-2330.

Financial Aid

Covering college costs is usually a cooperative effort involving student and parent resources and financial aid, which can consist of grants, scholarships, loans, and student employment.

The responsibility of financing a college education begins with students and parents and their financial capability to contribute to the costs. How much parents and students are expected to contribute is determined by a Department of Education Needs Analysis Formula.

Financial Aid
The amount of financial aid available to a student is also based on the Needs Analysis Formula. Like most colleges, Minnesota West Community & Technical College makes these determinations based on information submitted by families on the Free Application for Federal Student Aid (FAFSA).

Submitting a FAFSA allows students to be considered for aid from the following programs:

• Federal aid such as the Pell Grant, SEOG Grant, Direct Loan, and Perkins Loan.

• State aid such as the Minnesota State Grant.

• College employment through the Work Study program.

Scholarships
Minnesota West Community & Technical College recognizes students who have demonstrated outstanding academic, leadership, service, and extracurricular achievements through the Minnesota West Community & Technical College Scholarship program. Qualified students, regardless of financial circumstances, may apply for these awards.

Getting Started with Financial Aid
Minnesota West Community & Technical College is ready to assist students and provide information about financing education. Students must apply for financial aid each year because financial, academic, or personal situations may change.
Satisfactory Progress Standards

Minnesota West Community & Technical College adheres to Minnesota State policy of maintaining an open door admissions policy, assessing students, and providing developmental coursework and other programs of assistance to support student success. However, students must perform at an acceptable academic level and program completion level to continue enrollment and be eligible to receive financial aid.

Minnesota West Community & Technical College is a publicly supported institution and has an obligation to follow rules and regulations set forth by the state and federal government by providing documented accountability of the taxpayer’s investment in education by closely monitoring all students’ academic progress.

Minnesota West Community & Technical College requires that students make satisfactory academic progress toward a degree, diploma or certificate to remain in good standing. According to regulations governing the federal financial aid programs, a student must be enrolled in a program of study leading to a degree or certificate and must be making satisfactory academic progress according to standards and practices of the institution in order to continue to be eligible for the federal programs (Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, Federal Direct Loan, Federal PLUS, and Federal work Study), state programs (Minnesota State Grant, Minnesota Non-AFDC Child Care Grant, Minnesota State Work Study, and Student Education Loan Fund), and institutional programs. All students must comply with the standards of Satisfactory Academic Progress as outlined in this policy without exception for full-time/part-time status or regardless of program of study.

Satisfactory Academic Progress is defined as progressing in a positive manner toward fulfilling requirements for the degree or certificate in a given program of study. Satisfactory progress is the measurement of a student’s performance (credits completed and cumulative grade point average) in meeting the institutional degree requirements.

Minnesota West Community & Technical College believes that students are responsible for their own academic progress and for seeking assistance when experiencing academic difficulty.

Minnesota West Community & Technical College has an established procedure for placing students on academic warning, continued academic probation, academic suspension, financial aid warning, and financial aid suspension. There is also an appeal process for academic/financial aid suspension based on unusual or extenuating circumstances. Appeal forms for both academic and financial aid issues are available from the Student Services Office, the Campus Administrator Office or online.

The standards that follow are based on Federal requirements and Minnesota State Board Policy.

Requirements

1. Qualitative Measure

All students are required to maintain an acceptable grade point average (GPA). The minimum standard is progressive based on cumulative registered credits and is detailed below.

Grades of A, B, C, D, and F will be included in calculating a student’s GPA.

<table>
<thead>
<tr>
<th>Cumulative Registered Credits</th>
<th>Minimum Required GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>0.00</td>
</tr>
<tr>
<td>6-15</td>
<td>1.60</td>
</tr>
<tr>
<td>16-30</td>
<td>1.80</td>
</tr>
<tr>
<td>31+</td>
<td>2.00</td>
</tr>
</tbody>
</table>

2. Quantitative Measures

   a. Required Completion Percentage: Students are required to complete a minimum of all attempted credits as follows:

<table>
<thead>
<tr>
<th>Cumulative Registered Credits</th>
<th>Minimum Completion Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 5</td>
<td>0%</td>
</tr>
<tr>
<td>6+</td>
<td>67%</td>
</tr>
</tbody>
</table>

   b. The completion percentage will be reviewed after the end of each term. Grades of Incomplete (I), Failing (F), Ceased to attend (FW), Withdraw (W), No Credit (NC) or No Grade Assigned (Z) do not count toward satisfactory completion but as attempted credits.

   c. Maximum Time Frame: All students are expected to complete their program within an acceptable period of time. Financial Aid recipients may continue to receive aid until they complete all of their required coursework or until they have attempted 150% of the normal time required to complete a program (ex: for a 60 credit program you can attempt 90 credits towards the completion of the program and receive financial aid). There is no warning period for Maximum Time Frame.

   i. If a student changes programs after receiving financial aid for partial completion of one program, and if the new completion time will be more than 150% of normal completion of the original program, the maximum time for the student’s financial aid eligibility will be agreed to be the length of time to complete only the additional
courses required to complete the second program.

ii. If a student decides to have a double major, the 150% completion time may be extended. The maximum time for the student’s financial aid eligibility will be agreed to be the length of time to complete only the additional courses required to complete the second major.

iii. If a student completes one program and decides to enter into another program, the maximum time for the student’s financial aid eligibility will be agreed to be the length of time to complete only the additional courses required to complete the second program.

3. Evaluation Period

Satisfactory Academic Progress will be monitored as follows:
All students with registered credits during a term will be evaluated at the end of the term including summer to make sure that all criteria of the satisfactory progress policy have been met. The review is based on cumulative records. Students who are part-time will not be evaluated until six cumulative registered credits are posted on the student’s transcript.

4. Failure to Meet Standards
   A. Academic and Financial Aid Warning and Suspension

   Warning
   A student will be placed on Academic and Financial Aid Warning for one term if he/she fails to meet these standards at the end of the review period. Students on warning are eligible to receive financial aid. To be removed from warning, a student must meet the SAP standards at the end of the warning period.

   If a student fails to meet the SAP standards at the end of the warning period, he/she will be placed on Academic and Financial Aid Suspension.

   Suspension
   Academic and Financial Aid Suspension: A student will be placed on suspension if he/she does not satisfactorily remove him/herself from Academic and Financial Aid warning.

   Financial Aid suspension: If a student has reached 150% of credits attempted for Financial Aid suspension or MWCTC has determined it is not possible for the student to raise his/her GPA or completion rate to meet the college’s standards prior to the end of the program for which the student is receiving financial aid.
   A student does not have to be placed on academic suspension to be placed on financial aid suspension.

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

5. Notification
The college will notify a student in writing by mail and/or student email when they enter into a warning or suspension status. It is the student’s responsibility to monitor their Satisfactory Academic Progress.

6. Appeal Process:
The appeal of academic suspension and appeal of financial aid suspension are separate processes. Approval of an academic appeal does not guarantee approval of a financial aid appeal. By federal regulations, the guidelines for approval of financial aid appeals are more restrictive.

   Academic Appeal:

   1. Appeals must be submitted in writing using the Academic/Financial Aid Reinstatement Appeal form and include all of the following documentation:
      a. Letter of explanation describing extenuating circumstances that affected academic progress and how your situation has/will change.
      b. Copy of unofficial college transcript(s).
      c. A completed Education Plan listing courses and credits by semester, and actions/steps to achieve Satisfactory Academic Progress. It must be signed by student and advisor.
      d. If requested by the Committee Chairperson or designee, the appeal must include supporting documentation beyond the written explanation.

   2. The Appeals Committee will meet the second week of every month however, Appeals must be received by the Committee Chairperson prior to the beginning of the start of the term desired. Any appeals received after the term begins will be considered for the next term.
3. A committee of five or more members and the Committee Chairperson will consider the appeal.
   a. The appeals committee will meet monthly and within a reasonable time frame prior to the start of each term. The Committee Chairperson may call other meetings as needed.
   b. The decision will be transmitted to the student within three working days after the decision has been made. The decision will be final.
4. If an appeal is denied, a student may file a new appeal in a subsequent term.
5. An Academic Dean may approve registration into one course without lifting the suspension only if the Academic Appeal form is completed by the student and signed by an Advisor with consultation of SAP requirements.

Academic Reinstatement
A student who has been suspended from enrollment may return to the college on probationary status after an appeal has been approved with the following requirements.
1. The student will continue on probationary status if the student completes 75% of his/her registered credits in the probationary semester with a 2.5 term grade point average but has not met the institution's cumulative standards.
2. The student will be removed from probationary status when both the cumulative qualitative and quantitative criteria for satisfactory academic progress have been met.
3. The student must contact her/his academic advisor at three times each semester to report academic status and registration for next term.

Financial Aid Appeals
A student who fails to make satisfactory academic progress and is suspended from enrollment has the right to appeal based on unusual or mitigating circumstances including but not limited to death of a relative, illness, hospitalization, or injury to the student. Mitigating circumstances are situations that are out of the control of the student and were not present at the time of initial enrollment. An academic appeal must be approved before a financial aid appeal can be considered. The appeal must be submitted using the Academic/Financial Aid Reinstatement Appeal form found on our website.
1. The appeal must include an explanation of the extenuating circumstances that negatively affected academic progress.
2. The appeal must include supporting documentation beyond the written explanation.
3. The appeal must include what has changed in the student’s situation that would allow the student to demonstrate satisfactory academic progress at the end of the next evaluation period.
4. Sitting out a year is not in itself a reason for appeal or reinstatement of financial aid.

The initial consideration of appeal shall be undertaken by the Director of Financial Aid or a designee. Students have the right to request appeals of adverse decisions to go to the Financial Aid Appeals Committee. Results of all appeals will be communicated to the student in writing in a timely manner along with pertinent information regarding the conditions of the appeal and the length of the appeal period.

7. Financial Aid Reinstatement
Student will be eligible for Reinstatement of Aid when:
1. They satisfactorily complete acceptable academic work (2.0 GPA and 67% completion) in a minimum of 6 credit hours taken toward completion of their degree in the same semester. This student cannot receive financial aid for the period during which eligibility is being reinstated. A student who has met this condition must still be approved through the appeal process. Reinstatement of financial aid is not guaranteed.
2. They have had a financial aid suspension appeal approved based on unusual or mitigating circumstances including but not limited to death of a relative, illness, hospitalization, or injury to the student. Mitigating circumstances are situations that are out of the control of the student and were not present at the time of initial enrollment.
3. They have met the conditions specified in their academic plan but have not met the institution's cumulative standards. In such cases, MWCTC shall permit the student to remain on a continued probation status for a subsequent evaluation period.
4. They have a grade of Incomplete (I) turn into an acceptable letter grade during the first twenty days of the semester following the suspension that enables the student to meet the minimum Satisfactory Progress requirements.
5. They have met the cumulative GPA and completion rate requirements by taking credits on their own (no financial aid). Students need to contact the Director of Financial Aid in writing when they have met the requirements.

8. Additional Elements
A. Treatment of Grades: A course repeated with the intent of improving GPA will have both the initial and repeated course counted when calculating courses attempted. Grades of
Incomplete (I), Failing (F), Failure, Ceased to Attend (FW), Withdraw (W), No Credit (NC), In Progress (IP), or No Grade Assigned (Z) shall be treated as credits attempted but not successfully completed.

B. Academic Amnesty: Credits for which students have been granted academic amnesty ("academic forgiveness", "academic renewal", etc.) will be included in both cumulative GPA and completion percentage for financial aid warning/suspension calculations.

C. Audited Courses: Audited courses (AU) are not included in any financial aid satisfactory academic progress measurements.

D. Consortium Credits: Credits for which financial aid is received under a consortium agreement will be included in cumulative GPA, completion percentage and maximum time frame calculations for financial aid warning/suspension.

E. Remedial Credits: Developmental courses are those awarded for remedial course work (below 1000 levels). Students may receive financial aid for developmental credits up to a maximum of 30 credit hours (excluding ESL). These credits are included in all financial aid satisfactory academic progress measurements. Up to 30 credits of developmental credits shall be excluded from maximum time frame calculation.

F. Repeated Courses: Repeated credits are credits awarded when a student repeats a course in order to improve a grade. The last grade will become the grade calculated for GPA purposes. Academic policy allows a student to repeat a course no more than two times, however, a student shall not be permitted to receive financial aid for more than one repetition of a previously passed course. All repeated credits are included in the percentage of completion and maximum time frame calculation for financial aid purposes.

G. Transfer Credits: Transfer credits accepted by Minnesota West Community & Technical College shall not be counted as credits attempted for calculation of cumulative completion percentage, and grades associated with these credits shall not be used in calculating cumulative GPA. Transfer credits accepted and applied by Minnesota West Community & Technical College toward a student’s general education program, or degree requirements shall apply toward the maximum time frame calculation.

H. Withdraws: Credits for courses that a student withdraws from after the drop period will be included in credits attempted but not successfully completed for purpose of monitoring academic satisfactory progress. Thus, a “W” does not impact GPA, but does negatively impact the cumulative completion percentage.

I. Students who have not met the institution’s cumulative grade point average and completion percentage standards and have not met the conditions specified in his/her academic plan shall be re-suspended immediately upon completion of the evaluation.

Student Eligibility Policy
A student must meet federal/state requirements to be eligible for and receive financial aid.

Federal Requirements
1. A student must be a citizen of the United States or an eligible nonresident.
2. A student must meet the requirements of the Selective Services regulations.
3. A student may not be in default on a student loan or owe an overpayment on Title IV funding at any previously attended postsecondary school.
4. A student must be making "satisfactory progress" toward graduation.
5. A student must have a high school diploma or a GED certificate.
6. A student must be enrolled in (or have applied for admission to) an eligible program.

State Requirements
1. A student must be enrolled in an eligible program of at least three credits.
2. A student must be a Minnesota resident.
3. A student must demonstrate financial need.
4. A student must be past mandatory high school age or if under 17, hold a high school diploma or GED.
5. A student must not be delinquent on child support payments.

Ability to Benefit
Every student receiving financial aid at Minnesota West Community & Technical College must be academically qualified for study at a higher education level. A student with a high school diploma or its recognized equivalent (GED) is always considered to be academically qualified. A student who does not have a high school diploma or its recognized equivalent is not eligible for Federal Financial Aid funds, only state funds.

Enrollment/Degree Verification
Minnesota West Community & Technical College has authorized the National Student Clearinghouse to act as agent for verification of student enrollment and degree status. The verification service is available 24 hours a day, 7 days a week.

The Clearinghouse receives data electronically from Minnesota West Community & Technical College and, in
compliance with the Family Educational Rights and Privacy Act (FERPA), dispenses the information electronically to current students or agencies and organizations requiring proof of enrollment. Student Status is defined as:

- Full-time status: 12 or more hours
- Half-time status: 6-11 hours
- Less than half-time: 1-5 hours

Note: For students who need GPA or grades reported, an official/unofficial transcript is available from the Registrar's office.

Professional or Business Organizations/Companies
The National Student Clearinghouse provides instant electronic verification of student degrees and student enrollment to employers, employment agencies, credit card companies, background search firms, travel companies, and various other businesses that offer products or services based on an individual's status as an enrolled student.

Agencies and organizations are required to contact the Clearinghouse at www.degreeverify.org for Minnesota West Community & Technical College student enrollment information.

National Student Clearinghouse
13454 Sunrise Valley Road, Suite 300
Herndon, VA 20171
Phone: 703-742-4200
Fax: 703-742-4239

Active Duty with Armed Forces
Minnesota West Community & Technical College in accordance with Minnesota State policy 5.12 recognizes the importance of America's national defense that is made by students who are members of the armed forces. Students enrolled at Minnesota West Community & Technical College who are members of any branch of the U.S. military reserves and who are unable to complete a semester due to having been called to active duty shall to the extent possible be provided one of the following options:

1. The student may be given a full refund of tuition. Students receiving financial aid who choose this option should be made aware that they may be liable for any required refunds of state or federal financial aid funds.
2. The student may be given a grade of incomplete in a course and complete it upon release from active duty. Course completion may be accomplished by independent study or by retaking the course without payment of tuition. Under federal financial aid policies a course that is retaken this way may not be counted toward a student's enrollment load.
3. If in the instructor's judgment the student has completed sufficient course work to earn a grade of C or better, the student may be given credit for completion of a course.

Minnesota West Community & Technical College will provide a full refund of required tuition, fees, and other institutional charges, or provide a credit in a comparable amount against future charges for students who are forced to withdraw from the College as a result of a military mobilization. Students affected by a military mobilization will be provided an easy and flexible re-entry back into Minnesota West Community & Technical College upon the students release from active duty.

Leave of Absence
Students who have a legitimate reason for an extended absence may request a leave of absence. The leave of absence shall meet these conditions:

1. Must be a written request giving starting and ending dates.
2. Must be approved by the student’s advisor and a College Dean.
3. Will not exceed thirty (30) school days.
4. Does not require the student to pay any charges to the College during the leave period.
5. Does not require the student to repeat any class time.
6. May be granted to a student only once in a twelve (12) month period.

Note: If a student who has been granted a leave of absence does not return to class at the end of the leave, the student’s withdrawal date is the first date of the leave. Consequently, no financial aid will be disbursed during the period.

Graduation Information
Graduation
Students will graduate with an Associate of Arts Degree, Associate in Science Degree, Associate in Applied Science Degree, Diploma, or Certificate upon the successful completion of all program/major requirements.

A minimum cumulative grade point average of 2.0 is required for graduation. Practical nursing, registered nursing, medical lab technician, medical assisting, law enforcement (technical courses), radiologic technology, surgical technology requires a 2.0 per course for satisfactory completion.

To be eligible for a degree, diploma, or certificate, a transfer student must earn at least 30% of the major
graduation requirements from Minnesota West Community & Technical College.

Graduation with Honors
A student will be graduated "with honors" if the cumulative grade point average is between 3.5 and 3.74, and "with high honors" if the cumulative grade point average is 3.75 or greater.

Apply for Graduation
Each graduating student must complete an Application for Graduation Form for Student Services during the semester preceding graduation.

Campus Graduation Ceremonies
Each Minnesota West Community & Technical College campus will host a graduation ceremony at the end of the spring semester recognizing all students who have completed the degree, diploma, or certificate requirements during the academic year.

Student Services

Official Transcripts
A transcript is a comprehensive record of student academic progress. Names will appear on the transcript as it appears on the College record. Academic records are classified as confidential and may be released only with the student's written authorization and signature. Official transcripts include the College seal and signature of the registrar.

To request an official transcript:

Order it online through Parchment (www.parchment.com).
Minnesota West has partnered with Parchment to provide students with the option of ordering a transcript online. Students create a personal profile, submit their requests, pay a fee of $7.00 per transcript by credit card, electronically sign and submit the order. Once Parchment receives the completed order, Minnesota West is notified of the transcript request. Ordering transcripts online allows students to track the progress of their requests.

By Mail or In Person
Print the Transcript Request form found on the Minnesota West web site.

Complete the form and mail (or personally deliver to any campus) along with $10.00 for each copy requested to: Minnesota West Community & Technical College Office of the Registrar 1450 Collegeway Worthington, MN 56187 Students do not need to complete a transcript request if they plan to attend an institution that is a part of the Minnesota State system; those colleges will have electronic access. Transcripts are sent within two working days. Students who have a hold on a college record will be sent a letter advising how to clear the hold before a transcript can be issued.

Unofficial Transcripts
Current students may print an unofficial copy of an academic record by logging in to their student account. Instructions are found in the "How Do I?" section of the page. Questions regarding transcript requests should be directed to the Registrar.

Bookstore
Minnesota West Community & Technical College operates a fulfillment center located on the Worthington campus and ships all books and materials directly to the address of the students choice for the convenience of both students and the faculty. All books and materials should be ordered online at the Minnesota West bookstore.

General supplies are available in the college retail stores located on four of the five campuses, as well as clothing, gifts, souvenirs, and snack options.

Students dropping courses will be permitted to return texts for a full refund through the 6th day of the semester. Students must fill out return slip and enclose a copy of the packing slip; texts and materials must be in perfect, unmarked condition. Texts in shrink wrap cannot be opened. Single use access codes must not be opened and registered. Study guides and solution manuals are not returnable. Books and materials being mailed back to the fulfillment center must be postmarked by the 6th day of the semester to be eligible for a full refund.

Child Care Assistance
The Post-Secondary Child Care Grant Program assists low income students who have young children pay for child care while the student attends classes.

Campus Child Care Centers
Contact your campus for a list of local child care providers. You may also contact the county Family Service Agency or the Southwestern Minnesota Opportunity Council (SMOC) Child Care Resource and Referral program at 866-511-2244.

Advisor/Advisee
It is the philosophy of Minnesota West Community & Technical College that an advisor/advisee system is essential to the growth and development of each
Two tools have been developed to help the advisor. Degree audits are available for every student, plus a course applicability system Transferology can help a student and advisor determine how courses will transfer into and out of Minnesota West Community & Technical College. A student advisee is responsible to use the degree audit to determine how the student is progressing towards graduation. Students have the final responsibility to select and register for courses that meet the program plan requirements. They are encouraged to seek consultation and advice when selecting courses.

1. Consult with an advisor prior to the first semester registration and each semester prior to graduation.
2. Make appointments for such consultations during regularly scheduled office hours.
3. If it is impossible to keep the appointment, cancel it in a timely manner.
4. Prepare for the appointment and bring appropriate materials.
5. Discuss academic and career related needs as they develop.
6. Become knowledgeable about college, department and/or program policies, procedures, and requirements and adhere to them.
7. Assure that all courses needed for graduation have been completed.

Advisor Responsibilities:
1. Inform the student of the advisor - advisee relationship.
2. Maintain advising records for each student, monitoring their progress toward educational and career plans.
3. Identify and post office hours of availability.
4. In consultation with appropriate individuals, review students’ previous academic history and placement tests to determine course placement, transfer of credits and/or recommendations for test out.
5. During pre-registration assist students with course selection and the development of semester schedules.
6. During the academic term, assist students with drops, adds, withdrawals and change of status.
7. Refer students to appropriate resources as necessary in cases where academic or personal problems are at such a level as to require intervention by other professionals.
8. Inform students of department or program policies, procedures, and requirements.
9. Assist students with job placement resources or transfer.
10. Help students to define and develop realistic educational and career plans.
11. Interpret and provide students with the rationale for institutional policies, procedures, and requirements.
12. Inform students of special services available for remediation, academic assistance, personal counseling, and career counseling.

Food Service
Food service may be available at some campuses through a private vendor. Options vary across the campuses. Vending machines are also available on campus for a variety of snacks and beverages.

Housing
Housing is the responsibility of the student. A listing of available housing is located at all campuses. Contact the campus admissions office for a list of apartment and housing units available for rent.

Student Identification Card
Each Minnesota West Community & Technical College student is issued a permanent photo identification card. The card is the property of Minnesota West Community & Technical College and the lending of the card or failure to present it when requested by a college official is a violation of the Student Conduct Code. The card is for identification and the transaction of college business only. Each student is personally liable for all obligations incurred by its use. Lost or damaged cards will be replaced at a $5 cost to the student.
Student Clubs and Organizations

Minnesota West Community & Technical College is dedicated to the principle that student clubs/organizations are an integral part of the total education program. Students have the opportunity for representation in college committees involving or affecting student interests to promote appropriate levels of student participation in campus/college decision making and assuring that student perspectives are considered.

For a complete list of college clubs and organizations please reference our website at www.mnwest.edu.

Absences for Attending College Events

Students enrolled at Minnesota West Community & Technical College and who participate in college-sponsored activities and approved Instructor-generated field trips shall be excused from missed classes without prejudice or penalty. This policy is intended to permit students to participate in events and activities without jeopardizing their academic standings or penalizing them in the classes they miss.

The activity advisor, coach or instructor will submit a list of students to be excused from classes along with the name of the event or activity, dates and times of absence to the Student Service Dean for approval and notification to the college faculty.

It is the student’s responsibility to contact his/her instructors at least two days prior to the absence to arrange to make-up work missed. Instructors may require make-up work to be complete prior to the absence. The student is responsible for all work missed during the approved absence period.

Once the student has notified the instructor, it is the instructor’s responsibility to arrange for make-up work or alternative assignments so that the student is not penalized for an approved absence. It is understood that all missed classroom experiences cannot be replicated.
Directory of Minnesota West Community & Technical College
Administration and Faculty

Administration

Terry Gaalswyk ................................................President
B.A. Northwestern College
M.Ed. South Dakota State University
M.S. South Dakota State University
Ph.D. Iowa State University

Arthur Brown .......................................................Provost
BS University of Texas
Master's University of Texas
PhD University of Texas

Jodi Landgaard .................... Vice President of Finance and Facilities
B.S. Dakota Wesleyan University
M.B.A. University of South Dakota

Abdullahi Farah Abdiagaani ................... Dean of Equity, Inclusion, and Student Development
BS University of Nebraska
MA University of South Dakota

Dillon Carlson ......................... Director of Facilities

Diana Fliss ....................... Director of Financial Operations
Diploma Minnesota West Community & Technical College
A.A. Minnesota West Community & Technical College

Dawn Gordon ............... Dean Science & Nursing
B.S. Augustana College
M.B.A. Colorado Technical University
M.S. Colorado Technical University
Ph.D South Dakota State University

Treva Graves ..........Executive Director of Foundation
BA University of Sioux Falls
MA University of Sioux Falls

Katie Heronimus ..................Director of Admissions, Registration and Financial Aid
B.A. Mount Marty College
M.S. Bemidji State University

Karen Miller .................Chief Human Resource Director
Diploma Minnesota West Community & Technical College

Jackie Otkin ......................Dean of Allied Health
B.S. South Dakota State University
M.S. Metropolitan State University

Rose Patzer ..............Director or Energy Center
B.A. SouthWest Minnesota State University
M.B.A. SouthWest Minnesota State University

Linda Pesch .........................Director of Enrollment
BS St. John’s University
MS Capella University

Craig Peters ......................... Dean of Management & Technical Programs
BS South Dakota State University;
MS South Dakota State University;
EdD University of South Dakota

Kayla Richter .........................Business Manager
A.A.S. Ridgewater College
B.A. University of Sioux Falls

Judy Tebben ............... Dean of Customized Training & Technical Programs
A.A Ridgewater College
B.A Southwest Minnesota State University
M.B.A. Southwest Minnesota State University
M.S. St. Cloud State University

Rebecca Weber...............Dean of Student Services
B.S. Southwest Minnesota State University
M.S. South Dakota State University

Kayla Westra.......... Dean of Liberal Arts, K-12, & CIO
B.S. Minnesota State University, Mankato
M.S. Utah State University
Ed.D MSU-Mankato

Faculty

Sara Abrahamson .................. Dental Assistant
A.A.S. Minnesota West Community & Technical College
B.S. Minnesota State University
M.S. Southwest Minnesota State University

Alicia Anderson .................. Nursing Assistant
A.A.S. Minnesota West Community & Technical College
B.S. Bemidji State University

Robert Arp ................... Electrician
Diploma Minnesota West Community & Technical College
A.A.S. Minnesota West Community & Technical College
B.S. Bemidji State University

Leslie Bauman ................... Accounting
Diploma Minnesota West Community & Technical College
B.S. Bemidji State University
M.S. Bemidji State University

Lance Baumann .................. Electrician
Diploma, Minnesota West Community & Technical College

Philip Berg ..................... Lamb and Wool Management
B.S. South Dakota State University
M.S. North Dakota State University

Shawn Berning ..................... Carpentry
Diploma, Alexandria Technical & Community College

Dan Bernstrom ..................... English
B.S. University of Northwestern
MFA Hamline University

Brian Binnebose ................... Powerline Technology
Diploma Wadena AVTI

Mike Boersma ..................... Farm Business Management
B.S. South Dakota State University

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Tom Bohlke .................................................. Plumbing
Diploma, Minnesota West Community and Technical College

Ty Bowen .................................................. Mechatronics
A.A. Minnesota West Community & Technical College

Aaron Brudelie .................. Farm Business Management
B.S. South Dakota State University

Brian Boomgaarden........ Farm Business Management
B.S. South Dakota State University

Liz Bunjer .......................................... Nursing Assistant
AAS Minnesota West
BS Southwest Minnesota State University

Tim Buyssse ................................................. English
B.A. University of Minnesota
M.A. South Dakota State University

Linda Carter ..................... Farm Business Management
B.S. South Dakota State University

Stacy Christensen............... Practical Nursing
B.S.N. South Dakota State University

Mike Cumiskey .............................. Law Enforcement
A.A. Alexandria Technical & Community College
B.S. Winona State University
M.S. Winona State University

Jeremy Daberkow ............ Farm Business Management
B.S. University of Minnesota

Kent Dahlman....................... Speech Communication
B.S. Minnesota State University, Moorhead
M.S. St. Cloud State University

Mike DeVries ......................... Diesel Mechanics
Diploma Minnesota West Community & Technical College

Mike Dierks .................. Farm Business Management
B.S. South Dakota State University
M.B.A. Southwest Minnesota State University

Judy Drown ......................... Electrician
A.A.S. Minnesota West Community & Technical College

Deron Erickson ............. Farm Business Management
BS North Dakota State University

Danylle Espenson .................. Cosmetology
Regency Beauty Academy

Shannon Fiene .................. Mathematics
B.S. Clemson University
M.S. North Carolina State University
Ph.D. North Carolina State University

Paul Filzen ....................... Farm Business Management
B.S South Dakota State University

Erika Freking .................. Nursing
A.A.S. Minnesota West Community & Technical College
B.A. Southwest Minnesota State University
M.S. Minnesota State University, Mankato

Amber Garcia ................. Occupational Therapy Assistant
AAS Lake Area Technical
BS St. Catherine University
MA St. Catherine University

Anita Gaul ............................................. History
B.A. Calvin College
M.A. University of Iowa, Iowa City
PhD. University of Iowa, Iowa City

Peter Girard ....................... Diesel Mechanics
A.A.S. Minnesota West Community & Technical College

Megan Gorres ....................... Practical Nursing
A.D. Ridgewater College
M.A. Bellevue University

Leah Gossom ........................ Art
B.A. Ohio State University
M.F.A. Ohio State University

Jeremy Hall ......................... Welding
Ridgewater College, Diploma

Rosalie Hayenga-Hostikka .......... Biology/Coaching
B.S. Minnesota State University, Moorhead
M.S. St. Cloud State University

Justin Heckenlaible ............. Computer Science
B.S. Dakota State University
M.S. University of South Dakota

Alyson Helgeson ........................ Child Care
B.A. Concordia College
M.A. University of Phoenix

Angela Hoffman .................... Administrative Support
B.S. Franklin University

Laura Laackman ..................... Nursing
BS Dakota State University

Amy McCuen ........................ Surgical Technology
Diploma Southeast Technical Institute
A.A.S South Dakota State University

Kent Janssen .... Farm Business Management
B.A. University of Minnesota
M.A. University of Minnesota

Pam Jensen ..................... Computer and Information Technology
A.A. Minnesota State in Fergus Falls
B.S. Minnesota State in Moorhead
Graduate Certificate University of Illinois
M.S. Bemidji State University

Douglas Kleeberger ................. Auto Mechanics
B.A. Pillsbury Baptist Bible College
M.A. Central Baptist Theological Seminary

Laura Laackman ..................... AD Nursing
AA Mankato State University
AS Southeast Technical
BS South Dakota State

Jeff Linder ..................... Physical Education/Coaching
A.A. Minnesota West Community & Technical College
B.S. Bemidji State University
M.S. United States Sports Academy

Shawn Meyer ..................... Farm Business Management
A.A. Fergus Falls Community College
B.S. University of Minnesota

Brad Milbrath ..................... Farm Business Management
B.S. South Dakota State University
Rita Miller ..................................................... Medical Lab Technician
B.S. South Dakota State University
M.S. University of North Dakota
Ed.D., MLS (ASCP) St. Cloud State University

Debra Munsterman ..................... Small Business Management
B.A. Southwest Minnesota State University
M.S. Southwest Minnesota State University
PhD South Dakota State University

Elaina Nichols ................................. Health Information Technology
B.S. Minnesota State - Moorhead

Teresa Noyes .............................................. Dental Assisting
Diploma Minnesota West Community & Technical College
A.A.S. Minnesota West Community & Technical College
B.A. University of Minnesota, Crookston
M.S. Southwest Minnesota State University

Gary Olsen .............................................. Wind Energy/Electrical
Diploma Minnesota West Community & Technical College

Troy Otto .............................................. Farm Business Management
A.A. Minnesota West Community & Technical College
B.S. South Dakota State University

Falon Paluch ................................. Radiologic Technology
Avera McKennan, Diploma
B.S. University of Sioux Falls
M.S. Southwest Minnesota State University

Eric Parrish ................................................ Music
B.A. Gustavus Adolphus
M.M. University of Northern Colorado

Terri Petersen ......................................... Medical Record Technology
Diploma Minnesota West Community & Technical College

Brenda Pomeranke ........................................ Nursing
A.S. Rochester Community & Technical College
B.A. Metropolitan State University
M.S.N. Minnesota State University, Moorhead

Robert Purcell ................................. Physical Education/Coaching
B.S. Minnesota State University, Moorhead
B.A. Minnesota State University, Moorhead
M.S. North Dakota State University

Zachary Rada ........................................ Farm Business Management
B.S. South Dakota State University

Jeffrey Rain .............................................. Biology
A.A. Vermillion Community College
B.S. Minnesota State University, Manhato
M.A. Bemidji State University

Vong Rathsachack ................................. Psychology
B.S. Huron University (CTU)
M.A. C.O. Sioux Falls Seminary (NABS)
Ph.D. Harold Abel School of Psychology (Capella University)

Tim Rhodes .............................................. Computer Support Technician
A.A.S. South Central College

Jeff Rogers .............................................. Agriculture
A.S. Minnesota West Community & Technical College
B.S. University of Minnesota
M.Ed. North Dakota State University

Terry Rotschafer .............................. Accounting/Business
B.S. Minnesota State University, Moorhead
M.B.A. Minnesota State University, Moorhead
M.S. University of Wisconsin

Jordana Runck ........................................ Biology
BS Winona State University
MA Concordia St. Paul
MS University of Nebraska, Kearney

Anna Sandager ................................. Occupational Therapy Assistant
BA Iowa State University; MA St. Catherine University

Kami Schoenfeld ............................. Farm Business Management
BS South Dakota State University

Doug Schuett ........................................ Power Line Technology
Diploma Minnesota West Community & Technical College

Ronald Schwint .................................... Law Enforcement
B.A. Augastana College
M.A. University of South Dakota

Paul Seifert ......................................... Physics
B.S. Minnesota State University Moorhead
M.S. North Dakota State University
Ph.D. North Dakota State University

Sally Sieve ........................................ Radiologic Technology
A.A. Avera McKennan School of Radiologic Technology
B. S. Bemidji State University

Gillian Singler ................................. English
B.S. St. Cloud State University
M.A. Minnesota State University, Mankato

Lisa Smith ............................................ Medical Assisting
B.S.N. South Dakota State University

Kraryton Stenzel ..................... Business/Business Management
B.S. Minnesota State University, Mankato
M.B.A. Minnesota State University, Mankato

Eric Stoll ............................................. Powerline
Diploma Northwest Iowa Community College

Heidi Tarus ........................................ Biology
B.A. Gustavus Adolphus
M.S. University of Nebraska, Lincoln

Kip Thorson ........................................ Librarian
B.S. Minnesota State University Mankato
M.S. University of Tennessee

Beth Van Orman .......................... Psychology/Human Services
A.A. Minnesota West Community & Technical College
B.A. Augustana College
M.S.Ed University of Wisconsin, Stout

Lori Van Overbeke ........................ Farm Business Management
B.S. Southwest Minnesota State University
MBA Southwest Minnesota State University

Jay Vargas ........................................ Sociology
B.A. University of Texas-Pan American
M.S. University of Texas-Pan American
M.S. Minnesota State University, Mankato
M.A.I.S University of Texas-Rio Grande Valley
Ph.D. South Dakota State University

Abby Vercauteran .......................... English
BA University of Wisconsin
MA University of Wisconsin
MA Arizona State

Brad Verly ........................................ Farm Business Management
B.A. College of St. John’s
MBA Southwest Minnesota State University
Tyler Wadzinski .............................................. Chemistry
B.S. University of Wisconsin, Madison
M.S. Yale University
PhD. University of Iowa, Iowa City

Michael Wesselink ......................................... Mathematics
B.A. Northwestern College
M.S. University of North Dakota

Justin Williamson ............ Farm Business Management
B.S. University of Minnesota
M.Ed. University of Minnesota

Lou Ann Williamson .................. Reading
B.S. South Dakota State University
B.Ed. Dakota State University
M.S. Southwest Minnesota State University