MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE  
COURSE OUTLINE

DEPARTMENT: Geography  
COURSE NO.  2140

NUMBER OF CREDITS:  3

COURSE TITLE:  Introduction to Meteorology

CATALOG DESCRIPTION:  Develops a basic understanding of atmospheric processes, weather systems, 
weather maps and forecasting.  GEOG 1101 recommended.  Prerequisite: STSK 0095 or evidence of college 
level reading ability through assessment test or prior college coursework.

AUDIENCE:  All registered students

FULFILLS MN TRANSFER CURRICULUM AREA(S):  n/a

PREREQUISITES OR NECESSARY ENTRY SKILLS/KNOWLEDGE: Minimum score on entrance exam

LENGTH OF COURSE One semester

THIS COURSE IS USUALLY OFFERED:
Every other year  fall  spring  summer  undetermined

Four goals are emphasized in course at Minnesota West Community & Technical College:

1) ACADEMIC CONTENT: The academic objectives of this course are to understand, recognize, and 
apply principles and concepts related to the study of the atmosphere and related weather and climate.

2) THINKING SKILLS: This course will help students improve the effectiveness of their thinking skills 
through analysis, application, and discussion of concepts fundamental to meteorology.  Students will be 
encouraged to compare and contrast weather-related conditions they experience in their environments.

3) COMMUNICATIONS SKILLS: This course will help students improve their oral and written 
communication skills through frequent writing assignments and discussions.  Students will need to 
communicate what they see and understand indirectly through course materials as well as directly 
through the weather they experience in their daily lives.

4) HUMAN DIVERSITY: This course will help students recognize, understand, and appreciate human 
diversity by calling attention to various weather and climate patterns as well as severe weather events 
that affect people in a wide variety of environments and cultures.

TOPICS TO BE COVERED: The atmosphere, heat and temperature, moisture and condensation, air pressure 
and winds, circulation of the atmosphere, air masses, weather patterns, severe weather (thunderstorms, 
tornadoes, and hurricanes), and weather analysis and forecasting.
LIST OF EXPECTED COURSE OUTCOMES:

- To describe the structure and composition of the atmosphere
- To explain the factors that control heating and cooling of the Earth System
- To explain the role of moisture in our atmosphere
- To describe how midlatitude cyclones develop and the weather they create
- To describe how severe weather forms
- To compare various types of weather forecasting
- To interpret basic weather map symbols

LEARNING/TEACHING TECHNIQUES used in the course are:

- Collaborative Learning
- Student Presentations
- Creative Projects
- Lecture
- Demonstrations
- Lab
- Problem Solving
- Interactive Lectures
- Individual Coaching
- Films/Videos/Slides
- Other (describe below)

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:

- Reading
- Oral Presentations
- Textbook Problems
- Group Problems
- Tests
- Worksheets
- Papers
- Term Paper
- Individual Projects
- Collaborative Projects
- Portfolio
- Other (describe below)

EXPECTED STUDENT LEARNING OUTCOMES:

- Students will describe the structure and composition of the atmosphere.
- Students will identify and explain the factors that control heating and cooling of the Earth System.
- Students will explain the role of moisture in our atmosphere and how it relates to weather.
- Students will describe how midlatitude cyclones develop and the weather they create.
- Students will describe how severe weather forms.
- Students will compare and contrast various types of weather forecasting.
- Students will interpret basic weather map symbols.

STUDENTS WITH DISABILITIES

The information in this course outline is subject to revision

Veteran Services: Minnesota West is dedicated to assisting veterans and eligible family members in achieving their educational goals efficiently. Active duty and reserve/guard military members should advise their instructor of all regularly scheduled military appointments and duties that conflict with scheduled course requirements. Instructors will make every effort to work with the student to identify adjusted timelines. If you are a veteran, please contact the Minnesota West Veterans Service Office.

To receive reasonable accommodations for a documented disability, please contact the campus Student Services Advisor or campus Disability Coordinator as arrangements must be made in advance. In addition, students are encouraged to notify their instructor.