

**Fond du Lac Tribal and Community College  
COURSE OUTLINE FORM**

**Updated 01/21/16**

Please return this form to the college vice president of academic affairs and the chairperson of the Academic Affairs and Standards Council (AASC)

**1. Prepared by:** \_\_\_\_\_

**2. Date submitted:** \_\_\_\_\_

3. Date approved: \_\_\_\_\_ Date revised 10/14/16, 04/21/16

**4. Department/discipline:** Physics

**5. Department(s) endorsement(s):** \_\_\_\_\_  
**(Signatures of the person(s) providing the endorsement are required.)**

6. Course Title: Meteorology

Abbreviated course title (25 characters or less): \_\_\_\_\_

7. Course Designator: PHYS 8. Course Level: 1030

9. Number of Credits: Lecture 3 Lab \_\_\_\_\_

10. Control Number (on site) 70 Control Number (online) \_\_\_\_\_

11. Catalog/Course description:

An introduction to the study of the nature and dynamics of the Earth's atmosphere with emphasis on meteorological processes and weather observation. Implications of extreme weather on humans and the environment will be examined.  
(Meets MnTC goal area 3 & 10).

12. Course prerequisite(s) or co-requisite(s): Accuplacer scores/ Other courses

Prerequisite(s):

Co-requisite:

13. **Course Materials** (Recommended course materials and resources. List all that apply, e.g. textbooks, workbooks, study guides, lab manuals, videos, guest lecturers).

Text determined on a yearly basis depending on availability and content.

Three-Ring Binder and Colored Pencils.

Handouts, Overheads, Slides, and Videos.

14. **Course Content** (Provide an outline of major topics covered in course)

- Nature of the atmosphere
- Energy and temperature
- Humidity and water vapor
- Condensation
- Precipitation
- Clouds
- Atmospheric pressure

- Wind observation and Theory
- Cyclones and anticyclones
- Air masses and fronts
- Severe weather
- Weather analysis and interpretation
- Optical phenomena of the Atmosphere

### 15. Learning Goals, Outcomes, and Assessment

At FDLTCC we have 4 Competencies Across the Curriculum (CAC) areas. They are as follows:

- A. Information Literacy (the ability to use print and/or non-print tools effectively for the discovery, acquisition, and evaluation of information)
- B. Ability to Communicate (the ability to listen, read, comprehend, and/or deliver information in a variety of formats.)
- C. Problem Solving (the ability to conceptualize, apply, analyze, synthesize, and/or evaluate information to formulate and solve problems.)
- D. Culture (knowledge of Anishinaabe traditions and culture, knowledge of one's own traditions and culture, knowledge of others' traditions and cultures, culture of work, culture of academic disciplines and/or respect for global diversity.)

Course learning outcomes will fulfill the identified competencies.

*Course Learning Outcomes:*

Upon completion of this course, students will be able to:

1. Identify and Interpret symbols used on a synoptic map. (B, C)
2. Identify the ten basic cloud types. (C)
3. Conduct internet research, and present historical weather data reflecting climate change in Minnesota. (A, B)
4. Demonstrate methods used to assess potential extreme weather to human life and property. (B, C)

16. **Minnesota Transfer Curriculum (MnTC):** If this course fulfills an MnTC goal area, state the goal area and list the goals and outcomes below:

See [www.mntransfer.org](http://www.mntransfer.org)

Goal Area(s): 3 & 10

Goal and Outcomes:

Goal 3: Natural Sciences

Course goals:

Goal: To promote an understanding of meteorological concepts and their relevancy to the student's everyday world.

Outcome: Students will demonstrate and communicate concepts through scientific inquiry and laboratory activities.

Assessment:

- In class question and answers
- Lab and field activities
- Problem solving exercises
- Student presentations
- Exams
- Attendance

Goal 10: People and the Environment

Students will be able to:

- Explain the basic functions of meteorology within ecosystems.
- Discern patterns and interrelationships of weather systems and how humans interact with them at individual and community levels.
- Describe the role of the National Weather Service in the evolving challenges presented by global climate change.
- Evaluate extreme-weather impacts on local and regional ecosystems.

Does this course require additional material for specific program requirements?

If yes, please provide.