



Course Information

Division	Science/Mathematics
Contact Hours	75
Lecture Hours	45
Lab Hours	30
Total Credits	4

Prerequisites

ENGL 090, RDG 090 and competency at the MATH 090 level

Course Description

This course provides an introduction to atmospheric processes that create daily weather patterns. Students will study topics such as heat and energy, daily and seasonal temperatures, humidity, cloud development and precipitation types, air pressure and winds, development of pressure systems and fronts, weather forecasting and severe weather. Additionally, special emphasis on local weather patterns, climatology and climate change will be discussed.

This course is approved as a General Education competency satisfier.

General Education Goal: Critical Thinking

Competency: Understand the elements of scientific inquiry and scientific principles in a natural science college laboratory course setting.

Learning Outcome: Students will use the scientific method to define a problem, utilize appropriate methods to solve the problem, and propose and evaluate a solution to the problem.

General Education Learning Objectives

- A. Observe and describe natural phenomena and formulate hypotheses.
- B. Plan and implement scientific experiments to test hypotheses.
- C. Utilize scientific laboratory skills for data collection within a college laboratory setting.
- D. Evaluate experimental data and propose solutions based on this data.
- E. Evaluate the proposed implications of a solution.



Course Outcomes

In order to evidence success in this course, the students will be able to:

1. Identify key weather features, pressure systems and fronts on a surface weather map.
Applies to General Education Objectives
 - A. Observe and describe natural phenomena and formulate hypotheses.
 - B. Utilize scientific laboratory skills for data collection within a college laboratory setting.

2. Measure components of the atmosphere including temperature, humidity, air pressure and wind.
Applies to General Education Objectives
 - A. Observe and describe natural phenomena and formulate hypotheses.
 - B. Plan and implement scientific experiments to test hypotheses.
 - C. Utilize scientific laboratory skills for data collection within a college laboratory setting.
 - D. Evaluate experimental data and propose solutions based on this data.
 - E. Evaluate the proposed implications of a solution.

3. Distinguish between different types of clouds and fog.
Applies to General Education Objectives
 - A. Observe and describe natural phenomena and formulate hypotheses.
 - B. Utilize scientific laboratory skills for data collection within a college laboratory setting.
 - C. Evaluate experimental data and propose solutions based on this data.
 - D. Evaluate the proposed implications of a solution.

4. Contrast different precipitation types and how each is formed based on the lower atmospheric temperature profile.
Applies to General Education Objectives
 - A. Observe and describe natural phenomena and formulate hypotheses.
 - B. Plan and implement scientific experiments to test hypotheses.
 - C. Utilize scientific laboratory skills for data collection within a college laboratory setting.

5. Utilize numerical weather models, surface and upper air charts to create short-term weather forecasts, including daily maximum/temperatures and precipitation probability, type, and amounts if applicable.
Applies to General Education Objectives
 - A. Observe and describe natural phenomena and formulate hypotheses.
 - B. Plan and implement scientific experiments to test hypotheses.
 - C. Utilize scientific laboratory skills for data collection within a college laboratory setting.
 - D. Evaluate experimental data and propose solutions based on this data.
 - E. Evaluate the proposed implications of a solution.



MONROE COUNTY
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Course Outcome Summary

General Education Satisfier Course

MET 151 Introduction to Meteorology & Climate

6. Identify conditions that are favorable for severe thunderstorm, tornado and tropical storm development.

Applies to General Education Objectives

- A. Observe and describe natural phenomena and formulate hypotheses.
- B. Utilize scientific laboratory skills for data collection within a college laboratory setting.
- C. Evaluate experimental data and propose solutions based on this data.
- D. Evaluate the proposed implications of a solution.

7. Interpret Doppler radar and satellite imagery.

Applies to General Education Objectives

- A. Observe and describe natural phenomena and formulate hypotheses.
- B. Plan and implement scientific experiments to test hypotheses.
- C. Utilize scientific laboratory skills for data collection within a college laboratory setting.
- D. Evaluate experimental data and propose solutions based on this data.
- E. Evaluate the proposed implications of a solution.



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Date Updated: 09/18/2022

By: K. Cooper

Course Outcome Summary

General Education Satisfier Course

MET 151 Introduction to Meteorology & Climate