

# SCI 222 Meteorology Project V

## Purpose

Demonstrate your understanding of human-caused changes to the atmosphere.

## What it is

Your project is a formal way to demonstrate that you understand the content covered in Unit V of the course. It should thoroughly fulfill at least one of the unit objectives.

This project differs from the other projects in this course in that it includes a presentation to the instructor and class during the final examination period.

## Unit V objectives

1. Identify the hazards associated with prominent pollutants, including ozone, CO, SO<sub>x</sub>, NO<sub>x</sub>, and particulates.
2. Identify the sources of common pollutants and the mechanisms that remove them from the atmosphere.
3. Describe the influence of weather and local topography on pollution events.
4. Explain and describe the effect of anthropogenic greenhouse gases on atmospheric surface temperature.
5. Explain the predicted climatic changes resulting from AGW, and identify the greatest uncertainties in the predictions.
6. Characterize prominent feedbacks in a warming climate.

## Possible projects

These are some ideas for a project. You are free to suggest others. I will approve of projects that demonstrate your mastery of a required unit objective.

- A video explaining anthropogenic global warming.
- A description of a particular pollution event, such as the 1952 London smog disaster, or of a recurring pattern, such as smog in the Los Angeles basin, the Denver basin, or Mexico City.
- A report on the Montreal Protocol and its amendments, including the problems addressed, actions mandated, and progress to date
- A slide presentation on an area disproportionately affected by anthropogenic global warming, such as the Andes, Siberia, or the Gulf or Maine.
- A lesson on the chemistry of photochemical smog.

## Graded Components

**Sign up:** Select a project. Describe succinctly what form your project will take, and which unit objective(s) it will cover.

**Check-in:** Give an overview of your project in more detail than your sign-up. Show that you have planned how your project will teach the content of your unit objective, and that you have planned out the project.

**Final Project:** The completed project. There must be something tangible submitted in addition to the oral presentation. If the final project is solely a presentation, submit notes or a transcript.

The project must include an **annotated bibliography** that includes, for each source, the full attribution (author, publisher, look-up information); a description of the source including its form (e.g. an industry website, a published biography, a newspaper), the information it contains, and the information it provided to your project.

**Oral Presentation:** Live presentation before the class during the final exam period. Present your project and concisely explain the applicable course content. Engage your audience.

## Dates and Deadlines

May 12	Project assigned
May 15	Sign-up
May 16–19	Work days
May 18	Check-ins due
May 25	Final projects due, project presentation during final exam period (10:30 AM–12:30 PM)

## Scoring

### Sign-up (3 points)

Tell me what you have in mind.

+1	Identifies the form of the project.
+1	Identifies the unit objective(s) addressed.
+1	Describes how the project will demonstrate mastery of the objective(s).

### Check-in (8 points)

Show the progress made toward the project and clarify expectations.

+2	Provides evidence that the project will satisfy the objective(s).
+6	Demonstrate that the project is fully planned.

### Final Project (48 points)

Demonstrate your mastery of a unit objective.

Your project may be primarily your final presentation to the class. Regardless of the particular form of your project, it must include an annotated bibliography.

+24	Objective is covered thoroughly and correctly.
+8	Neat, creative, and appealing.
+8	Organized and easily understandable.
+8	Sources are properly cited, evaluated, and acknowledged in an annotated bibliography.

### Oral Presentation (16 points)

Present your work to your classmates. Convey both the work and the content of the unit objective.

+4	Fully presents or describes the project.
+4	Teaches the unit objective.
+2	Speaks audibly and clearly.
+2	Maintains eye contact with the audience.
+2	Conveys enthusiasm.