

ENV 4001: ENVIRONMENTAL SYSTEMS ENGINEERING

Department of Civil & Environmental Engineering

University of South Florida

Semester Project
Project Overview

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Spring 2012

1. Introduction

This document describes the group project that ENV 4001 students will complete this semester. As the semester progresses, additional guidance, materials, and documents will be provided. All documents for the group project will be posted on Blackboard. The group project will count for about 22% of each student's grade. That 22% will be further sub-divided into some different assignments, as described below.

2. Objectives of the Assignment

The purposes of this assignment are:

- to teach you about an important contemporary, complex, multi-disciplinary environmental issue;
- to give you practice researching a subject independently (outside the classroom);
- to give you practice working in a team setting;
- to give you experience making decisions based on a body of (sometimes conflicting) evidence and opinions;
- to give you practice with effective written communication; and
- to make you informed citizens with regard to an important scientific and political issue.

3. Description of the Assignment

This semester's assignment is to prepare a group report on the topic of *global climate change*. Your group should pick *one* of the following four questions to answer this semester.

- i. Has the average temperature of the earth's surface experienced a significant increase since the start of the 20th century? In other words, has global warming really been occurring over the past 100 years or so?
- ii. To what extent are *humans* responsible for any recent (say, in the last 100–150 years or so) changes in the earth's climate?
- iii. Imagine that you are an advisor to a US Senator. A bill has been introduced into the Senate which would require the US to cut emissions of greenhouse gases by 15 percent (relative to 2010 levels) by the year 2020, and by 67 percent by the year 2060. Do you advise your boss (the Senator) to vote in favor of this bill, or against it? Explain why. As part of your argument, you must consider which is less expensive,

mitigating climate change or *adapting to* climate change. (Your boss is particularly interested in this aspect of the problem.)

- iv. Imagine that the bill listed in question (iii) has been passed and has been signed into law. The bill authorized the US Environmental Protection Agency to decide between a *carbon tax* and a *cap-and-trade system* to achieve the reductions targets. You are an advisor to the EPA. Which system do you recommend? Why? What details can you provide about what the system should look like? (For instance, if you recommend a carbon tax, how will the tax be implemented? If you recommend a cap-and-trade system, how will allowances be distributed? etc.)

For whichever question your group decides to answer, you must form your own opinion or point of view, and then you must *argue persuasively* for your point of view, employing supporting evidence and a sound line of reasoning. Your paper will be evaluated primarily on the quality of your *thinking*, not on mechanics like grammar or punctuation (though that will count some too).

Hints: Answer the question that is asked of you. Make sure that your group has a clear and coherent point of view, that your point of view addresses the question that was asked, and that I can easily discern your point of view. Make sure that you support your point of view with evidence and sound reasoning. Document your assertions with appropriate references.

4. Guidelines for Report Preparation

There is no set length requirement for this assignment, but I would guess that most of the reports will be around 5–10 pages. The maximum allowable length is 12 pages (not including references). Your report should be submitted in hard copy on 8.5-by-11 inch paper, preferably laser printed.

It is fine to include figures or tables if these help you to address the assignment. Figures can either be prepared by you or can be “borrowed” from other sources. However, you must give proper citations if you use somebody else’s figure or table, or even if you create your own figure or table that is based largely on somebody else’s work.

Format should follow the *Publication Manual of the American Psychological Association*, 6th edition – this is also called “APA style”. If you have questions about the formatting requirements, consult the APA publication manual, or ask the instructor.

5. Plagiarism

If I discover that your final report contains plagiarism, *all group members will receive zero credit* for the assignment. That is likely to have a significant negative impact on your semester grade. It is in your individual interest to make sure that your group members do not engage in plagiarism. If you have questions about what constitutes plagiarism, ask the instructor.

6. Due dates

The project will be completed in seven stages. As the semester progresses, additional details will be provided for each stage. Due dates for the seven stages are as follows.

- Monday, January 23: Form groups and turn in signed sheet indicating that all group members have completed preliminary tasks (details to be provided separately)
- Monday, February 6: Draft of your opening paragraph(s)
- Monday, February 20: List of at least 10 references (*not* from the Internet!), with full bibliographic information, in proper APA format
- Monday, March 5: Outline of your paper indicating your lines of evidence/argument
- Monday, March 26: Rough draft of entire report (including complete references)
- Monday, April 9: Peer review of another group's report (completed individually)
- Monday, April 30: Final report

7. Grading

You will receive a numerical score for this assignment. The numerical score will be based on the six stages of the report as described above. Weighting is as follows:

- Preliminary tasks, 5%
- Opening paragraph, 10%
- Reference list, 10%
- Outline, 10%
- Rough draft, 5%
- Critique of another group's rough draft, 10%
- Final report, 50%

In the not-too-distant future, I will provide you with a "rubric" that shows you the criteria on which your final papers will be graded.

All members of a group will receive the same grade on the preliminary tasks, opening paragraph, reference list, outline, rough draft, and final draft. Therefore, it is in your individual interest to be sure that your group members are contributing to the effort. It is especially in your interests to make sure that nobody in your group conducts plagiarism.

At the end of the semester, students will be given the opportunity to evaluate their group members' contributions. Group members who did not perform their fair share of the work will be penalized appropriately.