Class Project
Global Climate Change
Fall 2016

I. Description

For your class project, you will research a topic on global climate change that interests you. You will then write a 10-page paper describing this topic. Alternatively, there may be options of giving a presentation to the class or creating a poster for display in the Commons. Expected content and depth of knowledge is the same regardless of alternative.

*If you wish to discuss an alternative with me, you need to email me by Thursday, September 1 to indicate your interest and set up a time to discuss this.*

You will turn in a description of your proposed topic early in the semester. You will also turn in an annotated bibliography in the middle of the semester.

The paper will be roughly 10 pages but no more than 12 pages (double-spaced; figures and references extra), printed out and handed in to me, that includes the following items:

- introduction and background (including significance/justification of topic; why is this topic important and why did you select it?)
- (methods and results) OR synthesis
- conclusions
- references
- figures (must be referred to in text) and figure captions (with citations)

All appropriate statements in your paper should be cited; see [http://writing-speech.dartmouth.edu/learning/materials/sources-and-citations-dartmouth](http://writing-speech.dartmouth.edu/learning/materials/sources-and-citations-dartmouth) for examples or ask me.

Use a common style for your bibliography and be consistent. A preferred style is from the Ecological Society of America; an example is:


Grammar, syntax, correct citations and clarity of writing will count for 15% of your paper score.

Do not plagiarize. Copying text verbatim without proper citation is considered plagiarism. See syllabus for more information.

II. Topics

Pick a topic about global climate change that interests and excites you.

Possible topics:
1. Perform some modeling or data analysis, such as calculating trends in temperature or other climate variables (must be new research). Please see me for more information.

2. Review the scientific literature on a topic of your choice. Examples are:

   - What are the ethical considerations of climate change?
   - How can improved communication about climate change effect change in attitudes of policy makers and the general public?
   - Why is XXX an excellent strategy for reducing greenhouse gas emissions?
   - How is the climate changing and what are the impacts in XXX geographic location?

If you are writing a synthesis or review of a topic, this is good advice (from Dartmouth College): “A review of the literature looks at what has been published on a given problem; however, it is not simply a summary of what's been written. It is instead a paper that tries to synthesize existing articles to form a coherent and thorough understanding of the matter at hand. It also evaluates these articles and the experiments upon which they are based, alerting the reader to potential weaknesses.”

III. Grading

You will be graded on these aspects of your project:

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<tr>
<th>Aspect</th>
<th>Points</th>
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<tbody>
<tr>
<td>proposed topic on time</td>
<td>5</td>
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<tr>
<td>annotated bibliography on time</td>
<td>5</td>
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<tr>
<td>content of paper</td>
<td>75</td>
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<td>writing style</td>
<td>15</td>
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<td>total</td>
<td>100</td>
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VI. Project deadlines

1. Select a topic for the class project, and email me this topic by Thursday, September 8 for discussion and approval. I will return this to you with comments.

2. Create an annotated bibliography by summarizing 4-5 relevant references on your topic. Select at least three from the primary literature (original research published in a scientific journal; textbooks are considered secondary literature, and encyclopedias are considered tertiary literature). Then read the papers. An annotated bibliography consists of a citation of each reference (in a standard format) and several sentences that describes the study and its relevance to your project. Do not copy and paste the abstract (that is plagiarism), but use your own writing. An example:
Logan, J., J. Regniere, and J. A. Powell. 2003. Assessing the impacts of global warming on forest pest dynamics. Frontiers in Ecology and the Environment 1:130-137. Journal paper describing how global warming has affected and will affect several important insect species of the United States, including gypsy moth, spruce beetle, and mountain pine beetle. The paper shows how recent hot, dry weather has contributed to multiple outbreaks across North America, and that future projections will result in redistributions of these species.

Email me this bibliography by Tuesday, October 11.

3. Turn in a printout of the paper. The deadline for the paper is Thursday, November 10, at midnight. Papers turned in after that will have 25% deducted for each day late.

4. After I grade and return your paper, you have an opportunity to turn in an updated version for a new grade. This is optional. That version (printed out) is due Thursday, December 8 at midnight.

V. Resources

Writing

An excellent site that you should read: http://writing-speech.dartmouth.edu/learning/materials.

Here is a good web site about writing a report about your own research: http://writingcenter.unc.edu/handouts/scientific-reports/


Research

For your purpose, reviews and papers written for interdisciplinary journals will be valuable. Good sources include: Science, Nature, BioScience, Trends in Ecology and Evolution, Frontiers in Ecology and the Environment. Journals written for the general public such as Scientific American are also useful. The National Inquirer is not.

Disciplinary journals are also helpful. The broad scientific topics covered in climate change mean that there are a large number of possible journals. Suggestions include: Climatic Change, Journal of Climate, Global Change Biology, among others (there are many).

Several assessments may be helpful, including the Fifth Assessment Reports of the IPCC (all Working Groups) and US National Climate Assessments.

The Internet may or may not be a useful provider of information. It is an excellent means of finding sources of information, but not necessarily for providing accurate information. In other
words, check out the information listed in Wikipedia, but don’t cite that directly. Instead, follow the links and references listed.

One of the most useful tools for you will be the ISI Web of Science journal search. This is a powerful search engine that allows you to search by topic, keyword, journal, and author. A major advantage is the ability to look “forward” in time to see papers that cite the one you are looking at, giving you the capability of seeing the most current ideas on your topic. To get to this web site, go to the UI library (http://www.lib.uidaho.edu/), select “Find” from the tabs across the top, then select “Articles and Research Databases”, then “Web of Science” from the pulldown menu under “Databases by Title”.