

# **Climate Change, Greenhouse Gasses, and Our Environment: A World Reinvented**

## **Fall quarter – 2013**

**Instructor:** Paul J. Pickett, cell: 360-359-3435, email: [pickettp@evergreen.edu](mailto:pickettp@evergreen.edu)

**Class Meetings:** Monday evenings, from 6:00 PM to 10:00 PM. Monday November 11 and 25 are college holidays. A special session for student presentations will be held on Monday December 16<sup>th</sup>.

### **Description**

Focus: the science and policy of global and regional climate change.

This elective will address:

- The science of global greenhouse gas emissions and climate change, including the work of the Intergovernmental Panel on Climate Change
- Current strategies to reduce GHG emissions, such as carbon cap-and-trade, carbon taxes, and renewable energy
- Potential impacts of climate change and ocean acidification on the Pacific Northwest, including the Pacific Coast, Puget Sound, rivers and streams, agriculture, forests, arid lands, and human infrastructure and communities
- Current efforts to adapt to impacts
- The interactions of the scientific, economic, legal, political, cultural and social aspects of the problem
- New and emerging ideas about the problem and how to make progress in solving it

### **Course Objectives**

- Learning and understanding:
  - The science of climate change
  - The impacts of increasing greenhouse gasses
  - Mitigation strategies to reduce greenhouse gasses
  - Strategies to adapt to the unavoidable impacts of climate change and ocean acidification
  - The social, cultural, economic, and political context of humanity's response to climate change
- Developing and enhancing:
  - Research and analysis skills
  - Communication skills, including writing, group discussion and decision-making, and oral presentation
- Exploring a personal response to climate change, including career opportunities, citizen activism, and democratic engagement.

### **Class Resources**

- Text: "Global Climate Change – Convergence of Disciplines", Arnold J. Bloom, Sinauer Associates, Inc.
- Other reading provided on Class Moodle as posted documents or internet links
- Weekly exploration of "Climate Change Science and News" items.
- Weekly class discussion of reading and a special topic
- Student research paper and presentation
- Also on Class Moodle: Course information and class materials

## Attendance and Course Credit

Students are expected to attend all scheduled classes. Participation in class is an important part of the learning process for all the students in the course. Students may be excused for unavoidable conflicts only with prior approval from the instructor. Unexcused absence from the class can result in a partial loss of class credit.

## Required elements for earning full credit

- Attendance and active participation in class
- Completion of assignments for each class
- Completion of a draft and final research paper and class presentation

## Expectations and Evaluation

1. **Class participation:** Climate Change is a diverse, broad, and rapidly evolving subject area. Shared learning and teaching are critical elements of this class. All students are expected to participate in class through group discussions, formal and informal presentations and information sharing, feedback to peers, and by helping to facilitate topic discussions. Individual styles differ and will be taken into account. Each student is encouraged to find a way to stimulate discussion and thinking, enhance the learning of both yourself and your fellow students, and contribute in class in his or her own unique way.
2. **Complete assigned readings:** Assigned readings are essential – the discussion of readings in class will enhance and expand learning. All students are expected to complete assigned readings prior to the class and demonstrate their comprehension in class discussions and assignments.
3. **Provide “Climate Change Science and News” articles and discuss in class:** New developments are announced and reported on every day that are relevant to Greenhouse Gas reduction, and Climate Change impacts and adaptation. All students are expected to look for articles, reports, and papers on emerging research, issues, and news and post links to the articles on the Moodle forum provided for this purpose. Students are also expected to provide a short summary and lead a brief discussion of the articles in class.
4. **Complete weekly written assignments:** Brief written assignments will be made for several of the classes. Students are expected to complete and provide the written assignments by the deadline, and discuss the assignments in class
5. **Lead a class seminar:** Each student will be expected to select a topic, research it, and lead a in-class seminar on the topic. Students may select a topic from a list provided by the instructor or choose a topic of personal interest with the instructor’s approval.
6. **Complete Research Paper and Conduct Presentations:** An important part of this class will be a research paper on a topic selected by the student. Students are encouraged to propose a topic to the instructor, but may also choose a topic suggested by the instructor.  
The paper should be 10 to 12 pages (single-spaced) of text (additional pages for figures, tables, and references is acceptable). All references should be original source; Wikipedia and other secondary internet sources may not be used as references. All students are expected to provide in a timely fashion by the assigned deadline: an abstract of their topic, a draft paper, a presentation of the topic, and a final paper.