

## **CHEM 299R – Fossil Fuels and Sustainability**

**Instructors: Jack Eichler, Brenda Harmon, Jasmin Hutchinson, Christine Loflin**

Spring 2008

Credit: 1 Hour

Tuesday or Thursday, 1:00-2:15 pm, Pierce 101

### Goals:

The goal of this course is to provide the student with a multidisciplinary perspective on the use of fossil fuels as an energy source, and the impact this has on both local and global environmental sustainability issues. In order to achieve this goal, a collection of one- hour lectures will be given by a variety of faculty from all of the academic divisions at Oxford. In addition, there will be two guest lectures given by experts on issues of sustainability from outside of Oxford.

### Grading:

- Attendance: 40%
  - You are allowed one absence without penalty. Each additional absence results in the loss of 5 points from the attendance grade.
- Four Papers: 60%
  - You will be required to hand in a 2-3 page paper based on the lecture and associated readings. You get to pick the four lectures for which you will complete the paper. Each paper is due two weeks after the talk with which it is associated. Double spacing with 12 point Times New Roman font.

### Tentative Schedule:

- Jan. 22 – Class Introduction/Syllabus
- Jan. 29 – Theodosia Wade/Environmental Studies-Biology  
“Climate Change 101: What's the Evidence?”
- Feb. 5 – Steve Henderson/Geology  
“Geology and Extraction of Coal, Oil, and Natural Gas”
- Feb. 14 – Eloise Carter/Biology  
Title: “Photosynthesis and Ancient Ecosystems”
- Feb. 19 – Jack Eichler/Chemistry  
“The Chemical Reactions of Fossil Fuel Combustion: A Case Study”
- Feb. 26 (7pm) - Ron Carroll/University of Georgia  
“Water, Energy and Climate Change: What's in store for Georgia and what can we do about it?”
- March 6 – Brenda Harmon/Chemistry  
““It's All Organic...Fossil Fuels, Renewable Fuels, and Plastics””
- March 19 (7pm Williams Hall) – Movie  
“Save our Land, Save our Towns”
- March 20 (7pm Allen Memorial) – Dr. Art Wendel/Center for Disease Control  
“Public Health and the Built Environment”

- March 27 – Frank Maddox/Economics  
“The Costs and Benefits of Oil Exploration in ANWR”  
(Note: students must watch the movie “Oil on Ice” prior to this talk)
- April 1 – Allison Burdette/Goizuetta Business School  
“Leadership, Boundaries, and the Environment”
- April 8 or 10 – Valerie Singer/Anthropology  
Title TBD
- April 17 – Jasmin Hutchinson/Physical Education and Health  
“The Health Benefits of Alternative Transportation”
- April 22 or 24 – Stacy Bell/English  
“Sustainable Food Initiatives”

\*A Blackboard site is associated with this class. The updated schedule of talks, the guidelines for the four papers, grading criteria, and the associated readings will be posted on this site.