

## **GEOG/ENST 3431, Fall 2014**

### **THE GEOGRAPHY OF ENERGY**

**Instructor:** Dr. Adam Cornwell  
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Office: RC 2006D  
Hours: T 10:30-12, W 3:30-5

#### **Course Content:**

Energy is a keystone to human society; its availability has a powerful influence on the way we live our lives. The goal of this course is to illuminate how and why we make use of the energy sources available to us, and to appreciate the consequences that our energy use has on the environment around us. In addition to reviewing the basic terms and concepts required to understand energy on a physical basis, the course will examine the nature of world energy resources and the changing patterns of their distribution, production and consumption.

#### **Textbook:**

Everett, R., G. Boyle, S. Peake, and J. Ramage (2006). *Energy Systems and Sustainability: Power for a Sustainable Future, 2nd Edition* (Oxford University Press).

#### **Evaluation Scheme:**

<b>Midterm I</b>	20%	October 7
<b>Midterm II</b>	20%	November 4
<b>Discussion</b>	5%	Starting October 9
<b>Paper</b>	5%	November 27
<b>Final Examination</b>	50%	TBA

The discussion and paper constitute an independent project described in the syllabus.

#### **Lecture Times and Place:**

Tuesdays and Thursdays: 8:30 – 10:00 (RB 2024)

## **Lecture Schedule, Fall 2014 (subject to changes)**

<i>Dates</i>	<i>Tuesday</i>	<i>Thursday</i>
<b>Sept 9 &amp; 11</b>	Introduction	Primary Energy
<b>Sept 16 &amp; 18</b>	Energy Services	Forms of Energy
<b>Sept 23 &amp; 25</b>	Coal	Heat Engines
<b>Sept 30 &amp; Oct 2</b>	Oil and Gas	Other Fossil Fuels
<b>Oct 7 &amp; 9</b>	Midterm 1	Transportation
<b>Oct 14 &amp; 16</b>	Electricity	Electricity Generation
<b>Oct 21 &amp; 23</b>	Nuclear Energy	Nuclear Generation
<b>Oct 28 &amp; 30</b>	Nuclear Waste	Pollution
<b>Nov 4 &amp; 6</b>	Midterm 2	Regional Scale
<b>Nov 11 &amp; 13</b>	Global Problems	Global Remedies
<b>Nov 18 &amp; 20</b>	Hydro and Wind	Solar
<b>Nov 25 &amp; 27</b>	Biomass	Energy Markets

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## **Individual Projects, Fall 2014**

### **Introduction**

University graduates are expected to possess the skill of critical thinking. This includes the ability to evaluate information that is presented to you at more than face value. The goal of this project is to examine media reports about current issues relating to course material.

### **Material**

The basis for each project is a print article chosen from popular media (newspapers or magazines) published in the past 12 months. The article must make reference to recent research from a peer-reviewed journal.

Your sources will include the original article, the academic article it refers to, and at least one additional article. The additional material must consist of either academic or 'grey' literature (published reports from government agencies or other responsible organizations). Other popular media or (including web sites) will not be sufficient; consult with the instructor if necessary.

Once you have selected your popular media starting point, **notify the instructor** so that there is no duplication and the article can be distributed. All students in the class will be expected to read this article prior to your discussion.

### **Discussion**

You will be allotted 10 minutes of class time to lead a discussion of this subject with your peers. Audio/visual aids are not necessary. You should assume that the rest of the class has completed the article and so is familiar with your topic.

Your discussion should include the following:

- What were the objectives and methods of the original researchers?
- What were their conclusions?
- Were these conclusions reported on accurately in popular media? Were there any important errors or omissions?
- What was the perspective taken in the popular media version? Do you believe this was justified?
- How did the additional material you found fit with your original sources?

### **Papers**

Each student will write a summary paper on their topic that is not more than three pages in length (1.5 line spacing). The paper should review the material you have collected and reflect on the critical evaluation from your discussion. Tables, figures, and the reference list can extend the three page limit.

While this is a short paper, it should still have a formal style ***with an abstract and a concluding section***. An abstract is a short paragraph that describes the contents and conclusions of your paper. Most likely 3-4 sentences will be sufficient.

Remember to cite your sources within your paper! **Failure to refer to your sources constitutes plagiarism.** All papers are to be fully referenced using the author-date style of referencing (e.g., Hanson et al. 2008). If you are unsure, follow the format described in the Department of Geography Undergraduate Thesis Manual, available through the department web site: <https://www.lakeheadu.ca/academics/departments/geography/thesis>

A short paper may seem like an easier task, but in practice it may be difficult to distill the material and opinions into three pages. Avoid redundancies in your writing, such as the words “and opinions” in the previous sentence. Papers will be evaluated according to:

- Content
- Analysis
- Writing style
- Formatting and referencing

### **Suggested Topics**

Listed below are some examples of topics you will find discussed in popular media. **This list is not exhaustive;** you may decide on a topic that doesn't fit any of these categories.

You should discuss your topic with the instructor before the end of September in order to avoid duplication, and to ensure that your topic is relevant.

#### *Energy development*

- Tar/Oil/Bituminous Sands
- Hydraulic fracturing for gas extraction
- Transcontinental pipeline projects

#### *Socio-economic issues*

- International conflict
- Economic development
- Markets and subsidies

#### *Environmental issues*

- Cap-and-trade programs
- Air quality
- Global climate change
- Impacts of energy extraction