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**Course Outline**

**Plagiarism** (copying and handing in for credit someone else's work) is a serious instructional offense that will not be tolerated. Please refer to the section on instructional offenses in the Undergraduate Calendar for additional information.

**Students with Disabilities:** Students with disabilities requiring academic accommodations in this course are encouraged to contact a coordinator at the Paul Menton Centre for Students with Disabilities to complete the necessary letters of accommodation. After registering with the PMC, make an appointment to meet and discuss your needs with me at least two weeks prior to the final exam. This is necessary in order to ensure sufficient time to make the necessary arrangements. Please note the following deadlines for submitting completed forms to the Paul Menton Centre: *March 7, 2012* for the Winter Term.

**Health and Safety Information:** Here is the link to the health and safety manual: [www.sce.carleton.ca/courses/health-and-safety.pdf](http://www.sce.carleton.ca/courses/health-and-safety.pdf)

## Resources

**Textbook and Sources:** There is no required textbook for the course. We will make use of a variety of information sources, many freely available online. Some of the more important documents include:

- BP Statistical Review of World Energy, June 2011. [www.bp.com/statisticalreview](http://www.bp.com/statisticalreview)
- BP Energy Outlook 2030, January 2011.  
[http://www.bp.com/liveassets/bp\\_internet/globalbp/globalbp\\_uk\\_english/reports\\_and\\_publications/statistical\\_energy\\_review\\_2011/STAGING/local\\_assets/pdf/2030\\_energy\\_outlook\\_booklet.pdf](http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_energy_review_2011/STAGING/local_assets/pdf/2030_energy_outlook_booklet.pdf)
- World Energy Council, 2010 Survey of Energy Resources.  
[http://www.worldenergy.org/documents/ser\\_2010\\_report\\_1.pdf](http://www.worldenergy.org/documents/ser_2010_report_1.pdf)
- Climate Change 2007: Synthesis Report. Summary for Policymakers.  
[http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4\\_syr\\_spm.pdf](http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf)
- D MacKay, Sustainable Energy – Without the Hot Air, version 3.5.2, November 3, 2008.  
<http://www.withouthotair.com/download.html>

Other useful readings include:

- Vaclav Smil, *Energy Myths and Realities: Bringing Science to the Energy Policy Debate*, The AEI Press, Washington, 2010.

**Course Web page:** A WebCT page will be maintained for the course.

**Getting help:** Get help early if you are having difficulty. Here are ways to get help:

- Ask questions in class. It's best to clear things up right at the start.
- Ask the professor during office hours. Email to set up an appointment if the office hours won't work for you.
- Email is not a suitable medium for technical questions. Questions submitted this way will be answered at the beginning of the next class.

**Course Outline**

**Approximate Schedule**

<b>Date:</b>	<b>Topics:</b>	<b>Assessment</b>
Jan 6	Introduction. Climate impact of fossil fuels.	
Jan 13	Fossil fuels: supply and demand.	Project proposal due
Jan 20	Nuclear, hydro, biomass, geothermal energy: supply and demand.	
Jan 27	Solar (all forms): supply and demand.	
Feb 3	Economics and analytic tools	Project outline presentation
Feb 10	Conservation. <i>1.5 hr midterm.</i>	Midterm
Feb 17	Risks and impacts (environmental, health, economic)	
Feb 24	<i>Winter break: no class</i>	
Mar 2	Changing the energy supply mix: technical issues.	Project progress presentation
Mar 9	Changing the energy supply mix: influencing policy. Government bodies and regulatory agencies.	
Mar 16	Cases: electricity grid, electric cars, biofuels, wind, carbon sequestering.	
Mar 23	Designing a better policy.	Project final presentations
Mar 30	Recommendations from various bodies.	Project final presentations