CALENDAR DESCRIPTION: This course surveys important features of energy markets and related environmental challenges. One of the central objectives is to provide an understanding of the key economic tools needed to analyse these markets. A related objective is the development of a framework for understanding the public discourse on energy and the environment. Topics include the theoretical and empirical tools necessary to analyse energy markets, the politics and history of energy, the hydrocarbon economy (oil, natural gas and coal), electricity markets, global warming and other externalities, renewable energy, conservation, carbon taxes and 'cap-and-trade'.

LOCATION AND TIME: Mondays 2-5 SK 548, 246 Bloor West

EVALUATION:
Evaluation for this course consists of a Paper worth 40%, assignment worth 20%, and two tests worth 20% each (held Monday February 11 and Monday April 1, 2019). The due date for the assignment is Friday March 8, 2019.

The only generally acceptable reason for missing an exam or term test is illness. A medical certificate is required. We are asked to remind you that plagiarism and cheating are serious academic offences with potentially serious penalties.

RESEARCH PAPER:
- Undergraduates taking the course may write an overview paper analysing an energy topic of interest.
- Graduate students taking the course are required to include some empirical analysis in their paper.

Paper Outline is due February 22, 2019. This is a hard deadline. Late submissions will be penalized 10% per day on the paper grade. Please submit the outline electronically through Quercus and name the file using your name. For example, my outline would be “YatchewOutline.doc” or “YatchewOutline.pdf”. Your two-page outline must contain the following:
  - An abstract not exceeding 200 words
  - A list of key references (be sure to do a citation search)
  - An outline of how your analysis will be conducted and the anticipated results of your analysis
  - If your analysis is empirical, a spreadsheet with any data that you will be using

The Paper is due Friday April 5, 2019, by midnight. This is a hard deadline. Late submissions will be penalized 10% per day. Please submit the paper electronically as an attachment, and name the file using your name. For example, my paper would be “YatchewPaper.pdf”.

IN THE NEWS
Students will follow current issues in energy by signing up for news alerts (e.g., through Google Alerts). Subscribe to MIT Energy Initiatives daily updates by visiting http://mitei.mit.edu/about/contact. Each class will begin with a brief discussion of the week’s developments in energy. Students should regularly...
visit MIT Technology Review [http://www.technologyreview.com/] to review advances in energy. For insightful commentary on a range of issues, some related to energy, please sign up for the weekly briefing from Project Syndicate [http://www.project-syndicate.org/].

COURSE MATERIALS

Readings

Additional References and Data Sources:
12. World Resources Institute – GHG gas data, slide presentation, papers, annual “Stories to Watch”.

LECTURE TOPICS AND READINGS

1. Background and Introduction (2 weeks)

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1 In some cases Kindle editions are available and considerably less costly than hardcopy. You do not need a Kindle device as Kindle books can be read on Macs and PCs.


2. Energy in World History (1 week)

   a. Theory: Refer to your texts in microeconomics to review the following subject areas: supply/demand analysis; consumer and producer theory; industry structures – monopoly, oligopoly, monopolistic competition, perfect competition; game theory; externalities; public goods; taxes and deadweight loss.
   b. Empirical Work:

4. Global Warming and Other Externalities (2 weeks)
      iii. Schelling, T. 2007, “Climate Change: The Uncertainties, the Certainties, and What They Imply About Action”
   f. Socolow, R. and S. Pacala


5. Regulation and Government Intervention (2 weeks)

6. Oil, Natural Gas and Coal (2 weeks)

7. Electricity and Renewables (2 weeks)
i. Rivard, B. and A. Yatchew 2016 “Integrating Renewables Into the Ontario Electricity System”.

8. Canada – Energy History and Policy


