

## Economics 427(L01) (ENERGY ECONOMICS & POLICY)

Instructor: W. D. WALLS  
Phone: x6761  
Email: wdwalls@ucalgary.ca

Lecture Location: ES 054  
Lecture Days/Time: MWF 0900--0950

Office: SS 332  
Office Hours: MWF 11:50--12:30

(Fall 2019)

---

### Course Description:

This course provides theoretical and empirical analysis of energy economics.

### Course Outcomes:

Student will gain a working knowledge of theoretical and empirical analysis of individual and industrial demand for energy, energy supply, energy markets, and public policies affecting energy markets. Students will learn to apply the tools of economics to the energy industries including crude oil, natural gas, coal, electricity, and nuclear power. Specific topics will include energy taxation, price regulation, deregulation, energy efficiency and emissions.

### Course Outline:

- Introduction and Background
- Review of the Basics of Supply, Demand and Price Formation in Competitive Markets
- Energy Demand: Short Run and Long Run Price and Income Elasticities; review of Multivariate Regression Analysis
- Energy Supply and the Economics of Depletable Resources
- World Oil Markets and Energy Security
- Natural Gas Price Regulation, Deregulation and Markets
- Electricity
- Risk Management, Futures Markets and Derivatives
- Energy and Climate Change
- Internalizing Environmental Externalities with a Focus on Cap and Trade Mechanisms
- Coal
- Nuclear Power
- Energy Efficiency Policies
- Renewable Energy Policies

### Prerequisites:

ECON 357 and ECON 395.

**Required Textbook(s):**

There is no textbook for this course. The course draws heavily on journal articles. Students will not be held responsible for the more sophisticated mathematical and statistical material in some of the articles. The reading list will be posted on the course website available through the D2L web portal.

**Recommended Textbook(s):****Other Reference Materials**

The US Department of Energy, Energy Information Administration (EIA) is an excellent source of current information on energy economics. Students should be familiar with its website ([www.eia.doe.gov](http://www.eia.doe.gov)).

There are many articles in economic journals that may be of particular interest to this class, such as those published in *Annual Review of Energy*, *Journal of Energy and Development*, *The Energy Journal*, *Energy Economics*, *ENERGY---The International Journal*, and *Energy Policy*. For reference to other recent articles on the economics of the oil industry see the relevant sections (Q4) in the *Journal of Economic Literature*, the *Journal of Energy Literature*, and draw on ECONLIT as a journal search engine.

Governments also publish useful material on the energy industries. In Alberta, material from the Energy and Utilities Board and Alberta Department of Energy are of particular interest. For the Canadian federal government, see the National Energy Board, the Science Council of Canada, the Geologic Survey of Canada and Department of Natural Resources. For the US see the Department of Energy (especially the Energy Information Administration), and Federal Energy Regulatory Commission. The OECD also has a number of interesting recent publications on energy, including publications of the International Energy Agency (IEA). The Canadian Energy Research Institute (CERI) also publishes several sector-specific reports that provide up-to-date information.

**Books on Reserve:**

1. Adelman, M.A. *The Economics of Petroleum Supply*. MIT Press, 1993.
2. Kneese, A., and J. Sweeney, editors. *Handbook of Natural Resource and Energy Economics*, volumes 1, 2, and 3. North Holland, 1985, 1985, and 1993.
3. Stevens, Paul, editor. *The Economics of Energy*, volumes I and II. Edward Elgar, 2000.
4. Cleveland, Cutler, editor. *Encyclopedia of Energy*. Elsevier, 2004.
5. Evans, J. and L. Hunt, editors. *International Handbook on the Economics of Energy*. Edward Elgar, 2009.
6. Keppler, J., R. Bourbonnais and J. Girod, editors. *The Econometrics of Energy Systems*. Palgrave Macmillan, 2007.

**Desire2Learn:**

This course will make use of the Desire2Learn (D2L) platform. Students who are registered in the course can log on at <http://d2l.ucalgary.ca> through their student centre. Please note that D2L features a class e-mail list that may be used to distribute course-related information. These e-mails are sent to your University of Calgary e-mail addresses only.

**Grade Determination and Final Examination Details:**

In-class Quizzes (3 @ 10% each)	30%
Term Paper	30%
Final Examination (comprehensive)	40%
	-----
	100%

**IMPORTANT COURSEWORK DATES**

The in-class quizzes are scheduled for the following dates:

Quiz 1 -- Friday October 4th
Quiz 2 -- Friday November 8th
Quiz 3 -- Friday November 29th

The term paper is due by 4 PM on Wednesday December 4th and may be handed in at the Economics Department Main Office located on the 4th floor of Social Sciences.

(Scores on later papers will be reduced by a flat 10 percentage points per day until the day of the final exam. Term papers may not be handed in after the final exam.)

The official grading system will be used. See <http://www.ucalgary.ca/pubs/calendar/current/f-1-1.html>.

**Students must receive a passing grade on the final exam to pass the course.**

If a student's letter grade on the final exam exceeds their midterm(s) letter grade, the weight of the midterm(s) is (are) transferred to the final exam. The student must have written the midterm(s) or provided supporting documentation for the absence(s) such as a medical note or statutory declaration.

As per the Writing Across the Curriculum Statement in the Calendar, writing and grading thereof will be a factor in the evaluation of student work. See <https://www.ucalgary.ca/pubs/calendar/current/e-2.html>.

Any student work which remains undistributed after the last day of classes will be available to students during the instructor's office hours until the end of the academic term in which the course has been offered. After that time uncollected term work will be discarded.

The final examination will be comprehensive, scheduled by the Registrar, held in a classroom, and last 2 hours. If a student cannot write their final exam on the date assigned by the Registrar's Office, they need to apply for a deferred exam [www.ucalgary.ca/registrar/exams/deferred\\_final](http://www.ucalgary.ca/registrar/exams/deferred_final). Under no circumstance will this be accommodated by the Department.

Programmable calculators WILL BE ALLOWED during the writing of tests and the final examination. Cellphones, textbooks, course notes, and other electronic devices WILL NOT BE allowed during the writing of tests and the final examination. Students are reminded that simply being able to access their cellphone during an exam is academic misconduct.

The exact dates for the in-class midterm tests are indicated above.

THERE WILL BE NO MAKEUP OR DEFERRED QUIZZES/TESTS/EXAMS under any circumstances, nor may the quizzes/tests/exams be written early. Students unable to write the quizzes/tests/exams because of documented illness, family emergency, religious observance, or university-sanctioned event will have the weight shifted to the final examination; otherwise a grade of zero will be assigned.

**Reappraisal of Grades and Intellectual Honesty:**

*For reappraisal of graded term work, see Calendar I.2*

<http://www.ucalgary.ca/pubs/calendar/current/i-2.html>

*For reappraisal of final grade, see Calendar I.3*

<http://www.ucalgary.ca/pubs/calendar/current/i-3.html>

*Statement of Intellectual Dishonesty, see Calendar K.4*

<http://www.ucalgary.ca/pubs/calendar/current/k-4.html>

*Plagiarism and Other Academic Misconduct, see Calendar K.5*

<http://www.ucalgary.ca/pubs/calendar/current/k-5.html>

**Academic Accommodations:**

Students seeking an accommodation based on disability or medical concerns should contact Student Accessibility Services; SAS will process the request and issue letters of accommodation to instructors. Students who require an accommodation in relation to their coursework based on a protected ground other than disability should communicate this need in writing to their Instructor. The full policy on Student Accommodations is available at <http://www.ucalgary.ca/policies/files/policies/student-accommodation-policy.pdf>.

**Freedom of Information and Protection of Privacy (FOIP) Act:**

Personal information is collected in accordance with FOIP. Assignments can only be returned to the student and will be accessible only to authorized faculty and staff. For more information, see <http://www.ucalgary.ca/legalservices/files/legalservices/faq-students.pdf> and [http://www.ucalgary.ca/legalservices/files/legalservices/faq-faculty\\_0.pdf](http://www.ucalgary.ca/legalservices/files/legalservices/faq-faculty_0.pdf).

**Internet and Electronic Communication Device information:**

The use of cell phones **for any purpose** in class is prohibited. [This includes ordering pizza, cruising Tinder, and posting to Snapchat, etc.] Computers and tablets may be used for note taking only unless otherwise authorized by the instructor.

**Copyright Legislation:**

See the University of Calgary policy on Acceptable Use of Material Protected by Copyright at [www.ucalgary.ca/policies/files/policies/acceptable-use-of-material-protected-by-copyright.pdf](http://www.ucalgary.ca/policies/files/policies/acceptable-use-of-material-protected-by-copyright.pdf). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

**Important Dates:**

Please check: <http://www.ucalgary.ca/pubs/calendar/current/academic-schedule.html>

**Student Organizations:**

Faculty of Arts Students' Association (F.A.S.A.):

Economics Department Representative

Office: SS 803, E-mail: [econrep@fasaucalgary.ca](mailto:econrep@fasaucalgary.ca) and Web: [www.fasaucalgary.ca](http://www.fasaucalgary.ca).

Society of Undergraduates in Economics:

<https://www.ucalgarysue.com/>.

Society of Undergraduates in Economics is a student run organization whose main purpose is to assist undergraduate economics students to succeed both academically and socially at the University of Calgary. Services include access to the exam bank, career events such as Industry Night and information sessions, mentorship programs, and social events for members. They invite you to join by contacting SUE at [societyofundergradsineconomics@gmail.com](mailto:societyofundergradsineconomics@gmail.com).

**Faculty of Arts Program Advising and Student Information Resources:**

- Have a question, but not sure where to start? The Arts Students' Centre is your information resource for everything in Arts! Drop in at SS102, call them at 403-220-3580, or email them at

[artsads@ucalgary.ca](mailto:artsads@ucalgary.ca). You can also visit the Faculty of Arts website at <http://arts.ucalgary.ca/undergraduate>, which has detailed information on common academic concerns, including program planning and advice.

- For registration (add/drop/swap), paying fees and assistance with your Student Centre, contact Enrolment Services at 403-210-ROCK [7625] or visit them in the MacKimmie Library Block.

**Student Support and Resources:**

- See <https://www.ucalgary.ca/registrar/registration/course-outlines> for information on campus mental health resources, the Student Ombuds' Office, Student Success Centre, Safewalk, and Emergency Evacuation and Assembly.
- Online writing resources are available at <https://ucalgary.ca/student-services/student-success/writing-support>.

**NOTES:**

- Cell phones **may not be used to for any purpose** in class, including taking photographs.
- Students are responsible for all assigned material, e.g., supplementary material posted on D2L, regardless of whether or not the material was covered in class.

WDW

2019-17-17