

# Department of Economics Faculty of Arts

# Economics 627 (L01) (Energy Economics)

Instructor: Lucija Muehlenbachs Lecture Location: SS 423

Phone: +1 (403) 220-7264 Lecture Days/Time: MW 09:00 - 10:15

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Office: SS 410

Office Hours: Wednesday 14:00-15:00 Winter 2018

# **Course Description:**

Applies the tools of microeconomics, institutional economics, and econometrics to energy markets and policies. Focuses on empirical studies of the energy business including markets for natural gas, crude oil, gasoline, electricity and coal.

#### **Course Objectives/Learning Outcomes:**

The objective of this course is to provide the economist's perspective on a broad range of topics surrounding energy supply and demand. Course goals are to understand: how markets work; the consequences of environmental externalities and other market failures; and how the characteristics of markets impact effective policy. Topics include: pricing non-renewable resources, transportation policies, and electricity markets. In the OPEC game, students may solve for collusive equilibria in the setting of a non-renewable resource and develop their own strategies given that monitoring oil production is imperfect.

#### Prerequisites/corequisites:

None

#### Required Textbook(s):

There is no required textbook for this course. Required course readings are journal articles and will be made available via D2L.

#### **Reserved Readings:**

Nathaniel O. Keohane and Sheila M. Olmstead, <u>Markets and the Environment</u>

Quentin Grafton, Wiktor Adamowicz, Diane Dupont, Harry Nelson, Robert J. Hill,Steven Renzetti <u>The Economics of the Environment and Natural Resources</u>

K. Viscusi, J. Harrington, and J. Vernon, <u>Economics of Regulation and Antitrust</u>

#### Desire2Learn:

This course will make use of the Desire2Learn (D2L) platform. Students who are registered in the course can log on at <a href="http://d2l.ucalgary.ca">http://d2l.ucalgary.ca</a> 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 go to your University of Calgary e-mail addresses only.

# **Grade Determination/Assessment:**

OPEC GAME	15%
CLASS PARTICIPATION	15%
PRESENTATION OF AN ARTICLE	15%
REFEREE REPORTS	20%
EMPIRICAL PROJECT	35%
	100%

#### 15% Class participation

Class participation is determined from two unannounced pop quizzes (5% each) and attendance at the OPEC game team meetings and student presentations (5%). The pop quizzes will be primarily shortanswer and problem-solving questions to test your command of the core models and key concepts. The best way to be prepared for a pop quiz is to participate fully and actively in the course: read the journal articles before class; ask lots of questions in class; seek help from your classmates and myself when necessary.

# 15% OPEC game

The OPEC game is a series of simulations of the world oil market developed by Severin Borenstein, at UC Berkeley, and Jim Bushnell, at UC Davis. There will be multiple games running at one time. Each student will be part of a delegation of decision makers from one of 7 OPEC countries. The decisions of the OPEC cartel members take place outside of the US and Europe and the members, are therefore, free to attempt to collude. Grading is based on performance in the game, class participation, and a written (5 pages) strategy memo. Students will be assigned to teams. The schedule for the OPEC game is:

22-Jan	Mo	Introduction to OPEC game
24-Jan	We	First OPEC meeting in class
26-Jan	Fr	Production quantities due by 10PM for phase 1, period 1
29-Jan	Мо	Production quantities due by 10PM for phase 1, period 2
31-Jan	We	Second OPEC meeting in class
2-Feb	Fr	Production quantities due by 10PM for phase 2, period 1
5-Feb	Mo	Production quantities due by 10PM for phase 2, period 2
7-Feb	We	Production quantities due by 10PM for phase 2, period 3
9-Feb	Fr	Production quantities due by 10PM for phase 2, period 4
12-Feb	Mo	OPEC strategy memo due beginning of class (late submissions not accepted)

# 15% Presentation of a journal article

I will provide you with a list of papers on various topics in energy economics. Each student will give a 15-20-minute presentation (depending on class size) summarizing the findings in the paper. I will distribute a list of papers and you can email me (<a href="mailto:lmuehlen@ucalgary.ca">lmuehlen@ucalgary.ca</a>) your top two choices for presentation, and I will assign papers on a first-come first-serve basis. Presentations will be evaluated by me and your classmates.

#### 20% Referee reports

At the beginning of class on days in which papers are presented, each non-presenting student will submit a written response to pre-specified questions on each paper (~ 1 page).

### 35% Empirical project

The goal of this assignment is to give you practice conducting research, writing, and analyzing data. I will provide you with several publicly available datasets, and throughout the duration of the class, you will explore these datasets to craft a question and find an answer, while getting feedback from me and your classmates.

#### **Grade Determination and Final Examination Details**

Department of Economics Criteria for Letter Grades. Economics professors use the following criteria when assigning letter grades:

Grade	Grade Point Value	Description
A+	4.00	Outstanding
А	4.00	Excellent-superior performance, showing-comprehensive understanding of subject matter
A-	3.70	Very good performance
B+	3.30	Good performance
В	3.00	Satisfactory performance
B-	2.70	Minimum pass for students in the Faculty of Graduate Studies
C+	2.30	All grades below "B-" are indicative of failure at the graduate level and cannot be counted toward Faculty of Graduate Studies course requirements. Individual programs may require a higher passing grade.

# **Grading Scale**

A+	95 – 100	В	73 – 76	C-	60 – 62
Α	85 – 94	B-	70 – 72	D+	56 – 59
A-	80 – 84	C+	67 – 69	D	50 – 55
B+	77 – 79	С	63 – 66	F	0 – 49

A passing grade on any particular component of the course is not required for a student to pass the course as a whole.

There will be a department scheduled final examination, held in a classroom, lasting 2 hours. Non-programmable calculators will be allowed during the writing of tests or final examinations.

Tests and exams will involve multiple choice questions.

The midterm exam will be in class on Friday, February 16.

# Absence from a Test/Exam

THERE WILL BE NO MAKEUP OR DEFERRED QUIZZES under any circumstances, nor may the quizzes be written early. Students unable to write the quizzes 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. If a student cannot write their final exam on the date assigned by the Department, they need to arrange for a deferred exam with the department.

# Reappraisal of Grades and Intellectual Honesty:

For reappraisal of graded term work, see Calendar 0.1 <a href="http://www.ucalgary.ca/pubs/calendar/grad/current/gs-o.html">http://www.ucalgary.ca/pubs/calendar/grad/current/gs-o.html</a>

For reappraisal of final grade, see Calendar 0.1. B <a href="http://www.ucalgary.ca/pubs/calendar/grad/current/gs-o.html">http://www.ucalgary.ca/pubs/calendar/grad/current/gs-o.html</a>

Statement of Intellectual Dishonesty http://www.ucalgary.ca/pubs/calendar/grad/current/gs-r.html

Plagiarism and Other Academic Misconduct <a href="http://www.ucalgary.ca/pubs/calendar/grad/current/gs-r.html">http://www.ucalgary.ca/pubs/calendar/grad/current/gs-r.html</a>

#### **Academic Accommodation:**

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. For additional information on support services and accommodations for students with disabilities Visit www.ucalgary.ca/access/.

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 <a href="http://www.ucalgary.ca/policies/files/policies/student-accommodation-policy.pdf">http://www.ucalgary.ca/policies/files/policies/student-accommodation-policy.pdf</a>

# **Important Dates:**

Please check: <a href="http://www.ucalgary.ca/pubs/calendar/grad/current/academic-schedule.html">http://www.ucalgary.ca/pubs/calendar/grad/current/academic-schedule.html</a>

#### **Student Organizations:**

Faculty of Grad Studies website: http://grad.ucalgary.ca/home

Graduate Students Association: <a href="http://gsa.ucalgary.ca/">http://gsa.ucalgary.ca/</a>

Professional Development for Grad Students

Workshops and resources can be found at <a href="http://www.ucalgary.ca/mygradskills/">http://www.ucalgary.ca/mygradskills/</a>

Economics Graduate Association: <a href="http://econ.ucalgary.ca/ega/">http://econ.ucalgary.ca/ega/</a>

#### **Evacuation Assembly Point:**

In case of an emergency evacuation during class, students must gather at the designated assembly point nearest to the classroom. The assembly point for this classroom is Professional Faculties - Food Court.

# Safewalk:

The Safewalk program provides volunteers to walk students safely to their destination anywhere on campus. This service is free and available 24 hrs/day, 365 days a year. **Call 403-220-5333.** 

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