

## Economics 323 (L01) (Natural Gas Markets)

Instructor:	Lucija Muehlenbachs	Lecture Location:	SH 268
Phone:	+1 (403) 220-7264	Lecture Days/Time:	MWF 13:00 - 13:50
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Office:	SS 410		
Office Hours:	By Appointment	(Fall 2016)	

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### Course Description

Operation of the natural gas industry in North America. Economics of exploration, development, production, marketing and transportation of natural gas. Impact of government regulations and deregulation.

### Course Objectives/Learning Outcomes

Students will see a wide array of issues in various natural gas sectors. We will examine natural gas supply (including exploration, storage, transportation, and local distribution) and demand (including environmental externalities, and substitutes for natural gas use).

### Prerequisites/corequisites

Economics 201 and 203

### Required Textbook(s)

There is no single text for the course.

### Reserved Textbooks

Nathaniel O. Keohane and Sheila M. Olmstead, *Markets and the Environment*  
Rebecca L. Busby *Natural Gas in Nontechnical Language*  
A Mashayekh *The Economics of Natural Gas, Pricing, Planning & Policy*  
Paul W. MacAvoy *The Natural Gas Market: Sixty Years of Regulation and Deregulation*  
Fletcher J. Sturm *Trading Natural Gas: Cash, Futures, Options and Swaps*  
Vivek ChandraOeb *Fundamentals of Natural Gas: An International Perspective*  
J.P. Stern *The Future of Russian Gas and Gazprom*  
Victor, A.M. Jaffe, and M.H. Hayes *Natural Gas and Geopolitics From 1970-2040*  
Quentin Grafton, Wiktor Adamowicz, Diane Dupont, Harry Nelson, Robert J. Hill, Steven Renzetti *The Economics of the Environment and Natural Resources*  
Nathaniel O. Keohane and Sheila M. Olmstead *Markets and the Environment*

### Course Requirements/Assessments:

**Quiz #1 on October 7<sup>th</sup> (20% of grade)**  
**Quiz #2 on November 7<sup>th</sup> (20% of grade)**  
**Essay due on December 7<sup>th</sup> (10% of grade)**  
**Final exam date TBD (50% of grade)**

**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 go to your University of Calgary e-mail addresses only.

### 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	Grade	Grade Point Value	Description
A+	4.00	Outstanding	C+	2.30	
A	4.00	Excellent-superior performance, showing-comprehensive understanding of subject matter	C	2.00	Satisfactory – basic understanding of the subject matter
A-	3.70		C-	1.70	Receipt of a grade point average of 1.70 may not be sufficient for promotion or graduation. (See individual undergraduate faculty regulations.)
B+	3.30		D+	1.00	
B	3.00	Good – clearly above average performance with knowledge of subject matter generally complete.	D	1.00	Minimal pass – marginal performance; generally insufficient preparation for subsequent courses in the same subject.
B-	2.70		F	0	Fail – unsatisfactory performance or failure to meet course requirements
			I	0	Incomplete – unsatisfactory (effective January 2007)

### Grading Scale

A+	95 – 100	B	73 – 76	C-	60 – 62
A	85 – 94	B-	70 – 72	D+	56 – 59
A-	80 – 84	C+	67 – 69	D	50 – 55
B+	77 – 79	C	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 Registrar 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 some multiple choice questions.

### **Reappraisal of Grades**

**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>

A student who feels that a piece of graded term work (e.g., term paper, essay, test) has been unfairly graded, may have the work re-graded as follows. The student shall discuss the work with the instructor within 15 days of being notified about the mark or of the item's return to the class; no reappraisal of term work is permitted after the 15 days. If not satisfied, the student shall immediately take the matter to the Head of the department offering the course, who will arrange for a reassessment of the work within the next 15 days. The reappraisal of term work may cause the grade to be raised, lowered, or to remain the same. If the student is not satisfied with the decision and wishes to appeal, the student shall address a letter of appeal to the Dean of the faculty offering the course within 15 days of the unfavourable decision. In the letter, the student must clearly and fully state the decision being appealed, the grounds for appeal, and the remedies being sought, along with any special circumstances that warrant an appeal of the reappraisal. The student should include as much written documentation as possible.

### **Plagiarism and Other Academic Misconduct**

Intellectual honesty is the cornerstone of the development and acquisition of knowledge and requires that the contribution of others be acknowledged. Consequently, plagiarism or cheating on any assignment is regarded as an extremely serious academic offense. Plagiarism involves submitting or presenting work in a course as if it were the student's own work done expressly for that particular course when, in fact, it is not. Students should examine sections of the University Calendar that present a Statement of Intellectual Honesty and definitions and penalties associated with Plagiarism/Cheating/Other Academic Misconduct,

<http://www.ucalgayr.ca/pubs/calendar/current/k.html>

### **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/](http://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 [www.ucalgry.ca/policies/files/policies/student-accommodation-policy\\_0.pdf](http://www.ucalgry.ca/policies/files/policies/student-accommodation-policy_0.pdf)

**Absence from a Quiz/Test/Exam**

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. 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.

**Important Dates**

Date	
T Sept 6	Start of term
F Sept 23	Last day to drop full courses (Multi-term) and Fall Term half Courses. No refunds for full courses (Multi-term or Fall Term half courses after this date.
M Sept 6	Last day to add or swap full courses (Multi-term) and Fall Term half courses. Last day for change of registration from audit to credit or credit to audit.
F Sept 30	Fee payment deadline for Fall Term full and half courses
M Oct 10	Thanksgiving Day, University closed (except Taylor Family Digital Library, Law, Medical, Gallagher and Business Libraries). No lectures.
Nov. 10-13	Reading Days. No lectures.
W Nov 11	Remembrance Day (Observed). University closed (except Taylor Family Digital Library, Law, Medical, Gallagher and Business Libraries). No lectures.
F Dec 9	Fall Term Lectures End. Last day to withdraw with permission from Fall Term half courses.
Dec 12-22	Fall Term Exam Period

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

Economics Department Representative

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

Society of Undergraduates in Economics

[www.ucalgarysue.com](http://www.ucalgarysue.com)

Society of Undergraduates in Economics is a student run organization whose main purpose is to assist undergraduate economics students succeed both academically and socially at the University of Calgary. Services include access to the exam bank, career partnerships with the Career Centre through hosting industry nights and information sessions, recognizing achievements in teaching, and organizing social events for members.

*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.

- Online writing resources are available at <http://www.ucalgary.ca/ssc/resources/writing-support>

### **Evacuation Assembly Point**

In case of an emergency evacuation during class, students must gather at the designated assembly point nearest to the classroom. The list of assembly points is found at

[www.ucalgary.ca/emergencyplan/assemblypoints](http://www.ucalgary.ca/emergencyplan/assemblypoints)

Please check this website and note the nearest assembly point for this course

### **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**