Instructor:	(
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Genevieve Peters Economics Building 110B MWF 2:00-3:30 p.m. in Espresso Roma (858) 534-7974 gpeters@ucsd.edu

COURSE DESCRIPTION

In this class you will be introduced to the way that economists view energy choices by reading peerreviewed journal articles written by economists actively working on energy issues. Each week we will address specific questions about energy supplies, energy demand, and the structure of energy markets by examining how different economists have looked at these questions, and identify any important aspects of these questions that have not yet been answered.

PREREQUISITES

Econ 1A-B or Econ 2 or Econ 100A and Math 10C or Math 20C.

COURSE READINGS

Required readings (listed below) have been provided on the course website (<u>http://webct.ucsd.edu</u>). To provide an extra incentive for students to read the listed articles before lecture, regular reading quizzes will be given in class during the quarter.

STATEMENT OF ACADEMIC INTEGRITY

Students are expected to do their own work, as outlined in the UCSD policy on Academic Integrity published in the UCSD General Catalog. Cheating will not be tolerated, and any student who engages in suspicious conduct will be confronted and subjected to the disciplinary process. Students found guilty of academic misconduct will receive a failing grade on the exam and/or in the entire course. They may also be suspended from UCSD.

QUIZZES AND EXAMINATIONS

Six quizzes will be given in this class

- Quizzes will be given at the start of Monday's class time during Weeks 1, 3, 4, 6, 8, and 10.
- The top five quiz scores will be used to determine your quiz grade (the lowest quiz score will be dropped).

One midterm exam and one final exam will be given in this section.

- The midterm exam will be given in class on Friday, October 30th.
- The final exam will be given on **Tuesday**, **December 8**th, **from 3:00-6:00 p.m.**

All quizzes and exams must be taken at the scheduled time and place. Students who arrive late will not receive extra time to complete their quiz/exam. Once a student completes the quiz/exam and hands it in for grading, no other student will be permitted to start the quiz/exam.

MISSED QUIZZES AND EXAMINATIONS

No make-up quizzes/exams will be given in this class.

Students who miss a quiz for any reason will receive a grade of zero (0) for that quiz.

Students who miss the midterm exam without an acceptable reason will receive a grade of zero (0) for that exam. Students who miss the midterm with an acceptable reason will have the weight of the final exam increased accordingly. You must take the final exam to receive a grade in this course.

Reasons for missed midterm exams must be **pre-approved** by the instructor (except when this is not possible in an emergency situation). Students who make initial contact after the exam will have to document why they could not make contact prior to the exam. In addition, any student who misses an exam due to physical illness will be required to provide documentation from a health care professional indicating why the student was physically unable to take the exam. All documentation and an additional signed written statement explaining the relevant circumstances of the absence must be provided to the instructor within two working days of the student's return to campus. Failure to comply with any of the above in the specified manner will result in a grade of zero (0) for the exam.

GRADING

Your raw numerical score will be determined as follows:

Quizzes =	15% (5 quizzes @ 3 percent each)
Midterm Exam =	35%
Final Exam =	50%
Total Raw Score =	100%

Your final letter grade will be determined by the distribution of raw numerical scores in the class.

IMPORTANT DATES

Week 1:	Mon. September 28 th	Quiz 1
Week 3:	Mon. October 12 th	Quiz 2
Week 4:	Mon. October 19 th	Quiz 3
Week 5:	Fri. October 30 th	Midterm Exam
Week 6:	Mon. November 2 nd	Quiz 4
Week 7:	Wed. November 11 th	Veteran's Day Holiday
Week 8:	Mon. November 16 th	Quiz 5
Week 9:	Fri. November 27 th	Thanksgiving Holiday
Week 10:	Mon. November 30 th	Quiz 6
Finals Week:	Tuesday, December 8 th	Final Exam

LECTURE TOPICS AND READING ASSIGNMENTS

Week 1 (Sept. 28th – Oct. 2nd): How do we decide which types of energy to use?

Fouquet, R. and P.J.G. Pearson. A Thousand Years of Energy Use in the United Kingdom. *The Energy Journal* Vol. 19, No. 4 (1998): 1-41.

Heltberg, R. Fuel Switching: Evidence from Eight Developing Countries. *Energy Economics* Vol. 26, No. 5 (Sept. 2004): 869-887.

Rosenberg, N. The Role of Electricity in Industrial Development. *The Energy Journal* Vol. 19, No. 2 (1998): 7-24.

Week 2 (Oct. 5th – Oct. 9th): How do we compare prices for different types of energy?

Econ 132 Handout: "Energy Units: Conversion and Comparison"

Adelman, M.A. and G.C. Watkins. Costs of Aggregate Hydrocarbon Additions. *The Energy Journal* Vol. 25, No. 3 (2004): 37-51.

Week 3 (Oct. 12th – Oct. 16th): Why do we rely so heavily on fossil fuels?

Cassedy, E.S. & P.Z. Grossman. Chapter 4 – The Demand for Energy. *Introduction to Energy: Resources, Technology, and Society,* 2^{nd} *Edition.* (1998): 64-70.

Kaplan, A.W. Generating Interest, Generating Power: Commercializing Photovoltaics in the Utility Sector. *Energy Policy* 27 (June 1999): 317-29.

Moroney, J.R. Energy, Carbon Dioxide Emissions, and Economic Growth. Climate Change Policy: *Practical Strategies to Promote Economic Growth and Environmental Quality* (May 1999): 41-62.

Unruh, G.C. Understanding Carbon Lock-In. Energy Policy Vol. 28, No. 12 (Oct. 2000): 817-830.

Weeks 4 and 5 (Oct. 19th – Oct. 30th): How much fossil fuel resource do we have?

Adelman, M. A. & G. C. Watkins. Reserve Prices and Mineral Resource Theory, *The Energy Journal*. Special Issue to Acknowledge the Contribution of Campbell Watkins to Energy Economics (2008): 1-16.

Atkins, F.J. and A.J. MacFadyen. A Resource Whose Time Has Come? The Alberta Oil Sands as an Economic Resource. *The Energy Journal* Special Issue to Acknowledge the Contribution of Campbell Watkins to Energy Economics (2008): 77-98.

Porter, E.D. Are We Running Out of Oil? *Advances in the Economics of Energy and Resources* Vol. 10 (1997): 185-251.

Econ 132 Handout: "Hubbert Curve Theory" Econ 132 Handout: "Estimates of the U.S. Hubbert Curve" Econ 132 Handout: "U.S.G.S. World Oil Resource Estimates"

Weeks 6 and 7 (Nov. 2nd – Nov. 13th): Should we regulate or deregulate electricity markets?

Borenstein, S., Bushnell, J., and C.R. Knittel. Market Power in Electricity Markets: Beyond Concentration Ratios. *The Energy Journal* Vol. 20, No. 4 (1999): 65-88.

Bushnell, J. California's Electricity Crisis: A Market Apart? *Energy Policy* Vol. 32, No. 9 (June 2004): 1045-1052.

Viscusi, W.K., J.E. Harrington Jr., and J.M. Vernon. Chapter 12 – Natural Monopoly Regulation and Electric Power. *Economics of Regulation and Antitrust, 4th Edition*. (2005): 429-464.

Wolfram, C. Measuring Duopoly Power in the British Electricity Spot Market. *The American Economic Review* Vol. 89, No. 4 (1999): 805-826.

Econ 132 Handout: "The Cournot Model"

Weeks 8 and 9 (Nov. 16th – Nov. 27th): Is the global oil market competitive?

Alhajji, A.F. and D. Huettner. OPEC and World Crude Oil Markets from 1973 to 1994: Cartel, Oligopoly, or Competitive? *The Energy Journal*, Vol. 21, No. 3 (2000): 31-60.

Soligo, R. and A.M. Jaffe. A Note on Saudi Arabian Price Discrimination. *The Energy Journal* Vol. 21, No.1 (2000): 121-133.

Viscusi, W.K., J.E. Harrington Jr., and J.M. Vernon. Chapter 18 – Economic Regulation of Energy: Crude Oil and Natural Gas. *Economics of Regulation and Antitrust, 4th Edition*. (2005): 641-687.

Week 10 (Nov. 30th – Dec. 4th): What type of electric generation will we build in the future?

Bhattacharyya, S.C. and D.N.Q. Thang. The Cogeneration Potential of the Sugar Industry in Vietnam. *OPEC Review* Vol. 28, No. 1 (March 2004): 63-80.

Fusaro, P.C. Chapter 10 – Market Risk in Electric Generation Finance. *Energy Convergence: The Beginning of the Multi-Commodity Market* (2002): 153-176.

Radetzki, M. Coal or Nuclear in New Power Stations: The Political Economy of an Undesirable but Necessary Choice. *The Energy Journal* Vol. 21, No. 1 (2000): 135-147.