Class Meetings: TR, 3:30-4:45p, EH 211
Office hours: W, 1-4p or by appointment
Contact Info: Email: jcarbone@mines.edu, Phone: x2175, Office: EH 311
Course Website: http://www.mines.edu/~jcarbone/EBGN_521_s18/
Instructional activity: 37.5 hours lecture, 0 hours lab, 3.0 semester hours
Course designation: Major requirement

Course description:
This is a course in applied microeconomic theory. It concentrates on the behavior of individual agents in the economy (consumers and producers) in response to change in prices and other features of the economic environment, how they interact in markets, and how to apply this theory to the study of natural resource and energy markets. Prerequisites: Principles of Microeconomics, MATH111, MATH530, EBGN509, EBGN510; or permission of instructor.

Textbook and/or other requirement materials:


• Other useful references:
  – Brian Binger and Elizabeth Hoffman (1997), Microeconomics with Calculus, 2nd edition, Addison Wesley. (out of print)

• Other required supplemental information: Course materials distributed via the course website or as books on reserve at Arthur Lakes Library.

Student learning outcomes: At the conclusion of the class students will...

1. Describe the various models of production in mineral and energy markets
2. Distinguish between competitive and non-competitive markets
3. Create models of production in both static and dynamic frameworks

4. Demonstrate the competence to use microeconomic models and tools in subsequent MEE classes

5. Learn how to evaluate the assumptions underlying standard microeconomic models as they apply to mineral and energy markets.

Brief list of topics covered:

1. Economic models
2. Production and supply (static and dynamic)
3. Derived demand
4. Consumer theory and utility maximization
5. Partial equilibrium competitive markets
6. Market power
7. Game theory
8. Decision making under uncertainty
9. Capital and time

Policy on Disability Support:
The Colorado School of Mines is committed to ensuring the full participation of all students in its programs, including students with disabilities. If you are registered with Disability Support Services (DSS) and I have received your letter of accommodations, please contact me at your earliest convenience so we can discuss your needs in this course. For questions or other inquiries regarding disabilities, I encourage you to visit disabilities.mines.edu for more information.

Policy on Academic Integrity/Misconduct:
The Colorado School of Mines affirms the principle that all individuals associated with the Mines academic community have a responsibility for establishing, maintaining and fostering an understanding and appreciation for academic integrity. In broad terms, this implies protecting the environment of mutual trust within which scholarly exchange occurs, supporting the ability of the faculty to fairly and effectively evaluate every student's academic achievements, and giving credence to the university's educational mission, its scholarly objectives and the substance of the degrees it awards. The protection of academic integrity requires there to be clear and consistent standards, as well as confrontation and sanctions when individuals violate those standards. The Colorado School of Mines desires an environment free of any and all forms of academic misconduct and expects students to act with integrity at all times.

Academic misconduct is the intentional act of fraud, in which an individual seeks to claim credit for the work and efforts of another without authorization, or uses unauthorized materials
or fabricated information in any academic exercise. Student Academic Misconduct arises when a student violates the principle of academic integrity. Such behavior erodes mutual trust, distorts the fair evaluation of academic achievements, violates the ethical code of behavior upon which education and scholarship rest, and undermines the credibility of the university. Because of the serious institutional and individual ramifications, student misconduct arising from violations of academic integrity is not tolerated at Mines. If a student is found to have engaged in such misconduct sanctions such as change of a grade, loss of institutional privileges, or academic suspension or dismissal may be imposed.

The complete policy is [online].

Grading Procedures:
Assignments are marked on a numerical (percentage) basis, then converted to letter grades. The course grade is then calculated using the weights indicated above. As a guide to determining standing, the following letter grade equivalence will generally apply:

A 93-100  B- 80-82  D+ 67-69
A- 90-92   C+ 77-79  D  60-66
B+ 87-89   C  73-76  F  <60
B 83-86   C- 70-72

Students must successfully complete all components of the course to successfully complete the course. At the instructors prerogative, remedial assignments for partial credit may be requested of students who have attempted term work without achieving passing grades. Any work which is not attempted and submitted will be assigned a grade of zero.

There is a final exam for this course that will scheduled during the exam period.

Notes:
Students seeking reappraisal of a piece of graded term work (term paper, essay, etc.) should discuss their work with the Instructor within 15 days of the work being returned to the class.

Readings and Problem Sets

The readings and problem sets will be posted on the course website at least a week in advance of day they are due. The problem sets are a critical tool for learning how to master the course material.

Homework will not be accepted if turned in late.

Evaluation

Your final grade is based on the problem sets (40%), two midterms and a final exam (60%). Within each categories, assignments are equally weighted.

Coursework Return Policy:

Graded coursework will be returned to students within two weeks of the date it is submitted for evaluation.
Absence Policy (e.g., Sports/Activities Policy):

You decide how to best make use of your time. If you have a university-sanctioned excused absence that prevents you from completing a scheduled exam or assignment, I will simply omit it from your final grade, placing added weight on the remaining assignments and exams. There are no make-up assignments.

Common Exam Policy (if applicable): N/A
Course Outline and Readings

1. Introduction (Jan. 9)

   * No class – Jan. 11 and 16

2. Production, Cost Minimization and Duality (Jan. 18 – Feb. 15)
   - Technology, Varian, Ch. 1 (Jan. 18-23)
   - Profit Maximization, Varian, Ch. 2 (Jan. 25)
   - Profit Function, Varian, Ch. 3 (Jan. 30)
   - Cost Minimization, Varian, Ch. 4 (Feb. 1-6)
   - Cost Function, Varian, Ch. 5 (Feb. 8)
   - Duality, Varian, Ch. 6 (Feb. 13-15)

   President’s Day Break – Feb. 20

   Midterm 1 – Feb. 22

3. Consumer Theory and Empirical Practicalities (Feb. 27 – Mar. 1)
   - Utility Maximization, Varian, Ch. 7 (Feb. 27)
   - Econometrics, Varian, Ch. 12 (Mar. 1)

4. Market Equilibrium (Mar. 6-22)
   - Competitive Markets, Varian, Ch. 13 (Mar. 6-8)
   - Monopoly, Varian, Ch. 14 (Mar. 13)
   - Game Theory, Varian, Ch. 15 (Mar. 15-20)
   - Oligopoly, Varian, Ch. 16 (Mar. 22 - Apr. 3)

   Spring Break – Mar. 26-30

   Midterm 2 – Apr. 12

5. Uncertainty, Decision-making over Time and Capital (Apr. 10-26)
   - Uncertainty, Varian, Ch. 11 (Apr. 10-17)
   - Time, Varian, Ch. 19 (Apr. 19)
   - Asset Markets, Varian, Ch. 20 (Apr. 24-26)

6. Additional Topics (May 1-3)

   Final Exam – TBA.

See the course website at: http://www.mines.edu/~jcarbone/EBGN_521_s18/ for more details.