COURSE DESCRIPTION: This is a first course in partial equilibrium microeconomic analysis. As such, this course focuses on mathematical models of individual economic behavior. Primary emphasis is on the most basic static full-information models. All models will rely on an assumption of either equilibrium or optimization to render soluble form. Topics include: theory of the firm - production, costs, profit maximization, cost minimization and duality; theory of the market - perfect competition, monopoly, oligopoly, and monopolistic competition; and theory of the consumer - preferences, expenditures, utility maximization, expenditure minimization and duality. Additionally, some topics in uncertainty and information theory, including expected-utility theory, moral hazard, and adverse selection will be presented. This course will rely on problem solving as the primary instructional technique.

COURSE OBJECTIVES: The course objectives are threefold: first, to present a rigorous mathematical treatment of fundamental microeconomic theory with emphasis on static partial equilibrium analysis; second, to train students to construct and analyze mathematical models of individual economic agents; and third, to demonstrate the useful application of these models to a wide variety of public policy issues, including but not limited to, regulation, taxation, and insurance. The overall and ultimate objective is to prepare the students for advanced field courses and independent research.

PREREQUISITES: Calculus, Intermediate Microeconomics
CO-REQUISITE: ECON 627.
TEXTS:


For errata see link below.
http://www.sims.berkeley.edu/~hal/people/hal/Errata/errata-ma.html


GRADE DETERMINATION:  
<table>
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<th>Component</th>
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<tr>
<td>Homework</td>
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<tr>
<td>Mid-Term Exam</td>
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<td>Final Exam</td>
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EXAMINATION DATES:  
**Mid-Term Exam — Wednesday, October 3, 2007, 3:30-4:45 PM**  
**Final Exam — Monday, December 10, 2007, 7:30-9:30 AM**
SCHEDULE AND TENTATIVE TOPICS

I. INTRODUCTION

Lecture #1  Methodology
Monday, August 20, 2007

* Silberberg, Chapter 1, pp. 1-24.

Chiang, Chapter 1, pp. 3-6.


Varian, Intermediate, Chapter 1.

Bergstrom & Varian, Workout 1.

Lecture #2  Mathematical Preliminaries
Wednesday, August 22, 2007


* Mas-Colell, Appendix, pp. 926-970.

* Silberberg, Chapters, 2-5, pp. 25-116.

Cornes, Chapter 1, pp. 3-28.

Chiang, Chapter 2, pp. 7-32, and Chapters 4-5, pp. 54-124.

Takayama, Chapter 0, Section A, pp. 5-39.

Lecture #3  Introduction to Comparative Static Analysis
Monday, August 27, 2007

* indicates required reading.
II. CONSUMER THEORY


* Varian, 3rd ed., Chapters 7-9, pp. 94-159.


* Silberberg, Chapter 10, pp. 252-313, and Chapter 11, Sections 11.1-11.4, pp. 314-347.

Cornes, Chapters 2-4, pp. 31-103.

Takayama, Chapter 1, Section G, pp. 155-168, Chapter 2, Section B, pp.175-185, and Chapter 2, Section D, pp. 234-249.

Varian, Intermediate, Chapters 2-10.

Bergstrom & Varian, Workouts 2-10.

Lecture #4 Consumer Preferences
Wednesday, August 29, 2007

Lecture #5 Utility Maximization

* indicates required reading.
Wednesday, September 5, 2007

Lecture #6  Properties of the Indirect Utility Function
Monday, September 10, 2007  and the Marshallian Demand Functions

Lecture #7  Expenditure Minimization
Wednesday, September 12, 2007

Lecture #8  Properties of the Expenditure Function and
Monday, September 17, 2007  the Hicksian Demand Functions


Lecture #9  Slutsky's Equation
Wednesday, September 19, 2007


Lecture #10  Partial Equilibrium Welfare Analysis
Monday, September 24, 2007


* Jehle, Chapter 4, Section 4.3, pp. 165-171.


* indicates required reading.
* Silberberg, Chapter 11, Section 11.5, pp. 347-357, and Chapter 19, Section 19.7, pp. 600-604.

Cornes, Chapter 9, pp. 204-235.


Bergstrom & Varian, Workout 14.

Lecture #11 Partial Equilibrium Welfare Analysis (Continued)  
Wednesday, September 26, 2007

Lecture #12 Partial Equilibrium Welfare Analysis (Continued)  
Monday, October 1, 2007

Lecture #13 **MID-TERM EXAMINATION**  
Wednesday, October 3, 2007  9:00-10:15 AM

* indicates required reading.
III. THEORY OF THE FIRM

* Jehle, Chapter 3, pp. 117-150.

* Varian, 3rd ed., Chapters 1-6, pp. 1-93.


* Silberberg, Chapters 8-9, pp. 175-251 and Chapter 14, pp. 418-447.

Cornes, Chapter 5, pp. 104-138.

Chiang, Chapter 21, pp. 716-755.

Takayama, Chapter 0, Section C, pp. 49-58, and Chapter 1, Section F, pp. 133-155.

Varian, Intermediate, Chapters 18-22.

Bergstrom & Varian, Workouts 18-22.

Lecture #14 Production Theory & Cost Minimization
Monday, October 8, 2007

Lecture #15 Properties of the Cost Function and the Conditional Factor Demand Functions
Wednesday, October 10, 2007

Lecture #16 Profit Maximization
Monday, October 15, 2007

Lecture #17 Properties of the Profit Function, and the Output Supply and Input Demand Functions
Wednesday, October 17, 2007

Lecture #18 Comparative Static Analysis:
Monday, October 22, 2007
(i) The Algebraic Approach
(ii) The Neoclassical Approach
(iii) The Dual Approach

Lecture #19 Comparative Static Analysis (continued)

* indicates required reading.
IV. MARKET STRUCTURE

* Jehle, Chapter 4, Sections 4.1-4.2, pp. 153-164.


Silberberg, Chapter 19, Section, 19.4, pp. 662-666.

Lecture #20  The Perfectly Competitive Industry:
Monday, October 29, 2007  A Homogeneous Firms Model

Lecture #21  The Perfectly Competitive Industry:
Wednesday, October 31, 2007  (continued)

Lecture #22  The Standard Monopoly Model
Monday, November 5, 2007

Lecture #23  Monopolistic Competition:
Wednesday, November 7, 2007  Chamberlin's Model

Lecture #24  Oligopoly:
Wednesday, November 14, 2007  Reaction Functions
Conjectural Variations
Cournot Model
Stackelberg Model

Lecture #25  Welfare Effects of Monopoly Pricing:
Monday, November 19, 2007  Price Discrimination
Ramsey Pricing
Two-Tier Pricing

* indicates required reading.
V. MICROECONOMIC THEORY AND ECONOMETRICS

Lecture #26  Theoretical Properties and Their Implications
Wednesday, November 21, 2007  for Empirical Analysis


* Silberberg, Chapter 11, Section 11.6, pp. 357-363.

Cornes, Chapter 8, pp. 189-203.


VI. INTRODUCTION TO UNCERTAINTY AND INFORMATION THEORY

Lecture #27  Expected Utility Theory
Monday, November 26, 2007

* Jehle, Chapter 2, Section 2.4, pp. 92-116.


* Mas-Colell, Chapter 6, pp. 167-215.

* Silberberg, Chapter 13, pp. 394-417.

Varian, Intermediate, Chapter 12.

Bergstrom & Varian, Workout 12.


* indicates required reading.
Lecture #28  Risk Aversion  
Wednesday, November 28, 2007


Lecture #29  Moral Hazard  
Monday, December 3, 2007


Bergstrom & Varian, Workout 36.


* indicates required reading.
Lecture #30 Adverse Selection
Wednesday, December 5, 2007


FINAL EXAM - Monday, December 10, 2007, 7:30-9:30 AM Saunders 244

* indicates required reading.