Economics 606
Microeconomic Theory I

Fall 2003
Lecture: TR 3:00-5:00 PM
Room: BUSAD C101

Instructor: Gerard “Jerry” Russo
Office Hours: TR 9:00-11:00 AM
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Teaching Assistant: Ming Liu
E-mail: mingliu@hawaii.edu
Office Hours: MW 9:00 - 10:30 AM, TR 11:30 AM - 1:30 PM
Office: Saunders Hall (SAUND) 539
Phone: 956-8639, 944-7503

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:


[http://www.sims.berkeley.edu/~hal/people/hal/Errata/errata-ma.html](http://www.sims.berkeley.edu/~hal/people/hal/Errata/errata-ma.html)


GRADE DETERMINATION:

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<td>Mid-Term Exam</td>
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EXAMINATION DATES:

**Mid-Term Exam — Tuesday, October 7, 2003, 3:00-5:00 PM**

**Final Exam — Tuesday, December 16, 2003, 2:15-4:15 PM**

SCHEDULE AND TENTATIVE TOPICS

I. INTRODUCTION

Lecture #1
Tuesday, August 26, 2003

Methodology

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

Chiang, Chapter 1, pp. 3-6.


Varian, Intermediate, Chapter 1.

Bergstrom & Varian, Workout 1.

Lecture #2
Thursday, August 28, 2003

Mathematical Preliminaries


* 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.

* indicates required reading.

* indicates required reading.
Lecture #3  
Tuesday, September 2, 2003

Introduction to Comparative Static Analysis

* Silberberg, Chapters 6-7, pp. 117-174 and Chapter 18, Section 18.2, pp. 545-550.

Takayama, Chapter 1, Sections A-E, pp. 59-133 and Chapter 3, Section A, pp. 295-302.


Bergstrom & Varian, Workout 16.

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.


Bergstrom & Varian, Workouts 2-10.

* indicates required reading.
Lecture #4  Consumer Preferences  
Thursday, September 4, 2003

Lecture #5  Utility Maximization  
Tuesday, September 9, 2003

Lecture #6  Properties of the Indirect Utility Function  
Thursday, September 11, 2003  and the Marshallian Demand Functions

Lecture #7  Expenditure Minimization  
Tuesday, September 16, 2003

Lecture #8  Properties of the Expenditure Function and  
Thursday, September 18, 2003  the Hicksian Demand Functions


Lecture #9  Slutsky's Equation  
Tuesday, September 23, 2003


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http://www.jstor.org/view/00220515/dm990778/99p0003f?PAGE=0

Lecture #10  Partial Equilibrium Welfare Analysis

* indicates required reading.
Thursday, September 25, 2003


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


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

Cornes, Chapter 9, pp. 204-235.

http://links.jstor.org/sici?sici=0002-8282%28197609%2966%3C589%3ACSWA%3E2.0.CO%3B2-1
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http://www.jstor.org/view/00028282/di950058/95p0061s?PAGE=0


Varian, Intermediate, Chapter 14.

Bergstrom & Varian, Workout 14.

* indicates required reading.
Lecture #11 Partial Equilibrium Welfare Analysis (Continued)
Tuesday, September 30, 2003

Lecture #12 Partial Equilibrium Welfare Analysis (Continued)
Thursday, October 2, 2003

Lecture #13 MID-TERM EXAMINATION
Tuesday, October 7, 2003 3:00-5:00 PM

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

* indicates required reading.
Thursday, October 9, 2003  
Lecture #15  
Properties of the Cost Function and the  
Conditional Factor Demand Functions  
Tuesday, October 14, 2003  
Lecture #16  
Profit Maximization  
Thursday, October 16, 2003  
Lecture #17  
Properties of the Profit Function, and the  
Output Supply and Input Demand Functions  
Tuesday, October 21, 2003  
Lecture #18  
Comparative Static Analysis:  
(i) The Algebraic Approach  
(ii) The Neoclassical Approach  
(iii) The Dual Approach  
Thursday, October 23, 2003  
Lecture #19  
Comparative Static Analysis (continued)  
Tuesday, October 28, 2003  
IV. MARKET STRUCTURE  
* Jehle, Chapter 4, Sections 4.1-4.2, pp. 153-164.  
* Varian, 3rd ed., Chapters 13-14, pp. 215-258 and  
Chapter 16, pp. 285-312.  
* Mas-Colell, Chapter 12, Sections 12.A-12.C, pp. 383- 
400.  
Silberberg, Chapter 19, Section, 19.4, pp. 662-666.  
Lecture #20  
The Perfectly Competitive Industry:  
A Homogeneous Firms Model  
Thursday, October 30, 2003  
Lecture #21  
The Perfectly Competitive Industry:  
* indicates required reading.
Tuesday, November 4, 2003    (continued)

Lecture #22  The Standard Monopoly Model
Thursday, November 6, 2003

Lecture #23  Monopolistic Competition:
Thursday, November 13, 2003  Chamberlin's Model

Lecture #24  Oligopoly:
Tuesday, November 18, 2003  Reaction Functions
Conjectural Variations
Cournot Model
Stackelberg Model

Lecture #25  Welfare Effects of Monopoly Pricing:
Thursday, November 20, 2003  Price Discrimination
Ramsey Pricing
Two-Tier Pricing

V. MICROECONOMIC THEORY AND ECONOMETRICS

Lecture #26  Theoretical Properties and Their Implications
Tuesday, November 25, 2003  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

* indicates required reading.
Lecture #27
Tuesday, December 2, 2003

Expected Utility Theory

* 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.


Lecture #28
Thursday, December 4, 2003

Risk Aversion


http://links.jstor.org/sici?sici=0012-9682%28196401%2F196404%292%3C122%3ARAITSA%3E2.0.CO%3B2-K
http://www.jstor.org/view/00129682/di952559/95p00103?PAGE=0


* indicates required reading.
Vol. 3, pp. 66-84.

Lecture #29 Moral Hazard
Tuesday, December 9, 2003
Bergstrom & Varian, Workout 36.

http://links.jstor.org/sici?sici=0033-5533%28197402%2988%3C44%3AOPPOI%3E2.0.CO%3B2-X
http://www.jstor.org/view/00335533/di951815/95p0209u?PAGE=0


Lecture #30 Adverse Selection
Thursday, December 11, 2003
http://links.jstor.org/sici?sici=0033-5533%28197008%2984%3C488%3ALMF%22QU%3E2.0.CO%3B2-6
http://www.jstor.org/view/00335533/di951801/95p0304u?PAGE=0

* Rothschild, Michael and Joseph Stiglitz (1976), “Equilibrium in Competitive Insurance Markets:

* indicates required reading.

http://links.jstor.org/sici?sici=0033-5533%28197611%2990%3C629%3AEICIMA%3E2.0.CO%3B2-O

http://www.jstor.org/view/00335533/di951826/95p0069o?PAGE=0

FINAL EXAM - Tuesday, December 16, 2003, 2:15-4:15 PM

* indicates required reading.