

UNIVERSITY OF HAWAII AT MĀNOA
Department of Economics

Rev. 08/15/2004

ECON 301(002)
Intermediate Economics: Price Theory

UHM Foundations Course: Symbolic Reasoning (FS)
<http://www.hawaii.edu/gened/foundations.htm>

Fall Semester, 2004
Lecture: MWF 12:30-1:20 PM
Room: POST 126

Instructor: Gerard Russo
Office Hours: MTWR 1:30-2:30 PM
or by appointment
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COURSE DESCRIPTION: This course examines how the allocation of resources is achieved through market mechanisms. It begins by asking, why an efficient allocation of resources is an economic goal, how societies attempt to achieve that goal and how it might best be achieved. The goals of this course are twofold: first, to train the student to use the analytical tools of economics, primarily model building, with optimization and equilibrium analysis as subtools; and second, to train the student to think like an economist and apply the analytical tools to a wide range of social issues. More specifically the course begins with the most basic tool, supply and demand analysis. This provides an overview of market allocation, but to fully understand models of markets, we must examine the behavioral assumptions of the economic agents, the incentives they face, the technology and information available to them, as well as the institutional structure in which they operate. Consumer theory underlies demand analysis and theory of the firm underlies supply analysis. Throughout the analyses, it is asked if a market is allocating resources efficiently, being careful to draw sharp distinctions between allocative and technical efficiency. Although microeconomics is primarily concerned with the goal of economic efficiency, the equity implications of varying allocations will be discussed. The main theoretical topics include; the nature of consumer demand, production and costs, monopoly, perfect competition, oligopoly, and monopolistic competition. Special topics will include; government regulation, taxes, externalities, public goods, game theory and uncertainty. The analytical skills required for successful completion of this course are quite substantial the course relies heavily on mathematics and graphics. The student should have a firm understanding of the material contained in the prerequisite courses, although strong intuition and verbal skills can be partial substitutes for more technical ability. Calculus is recommended, but not required. Students should have training in mathematics up to and including pre-calculus. This course is extremely analytical. Only students serious about economics are encouraged to enroll.

PREREQUISITE: Economics 130 and 131.

TEACHING METHODOLOGY: Lecture with discussion. Intense problem solving. Demonstration of formal proofs.

PRIMARY TEXT (required): Varian, Hal R. (2003), *Intermediate Microeconomics: A Modern Approach*, 6th Edition, (New York: W.W. Norton & Co.). ISBN 0-393-97830-3.

WORKBOOK (required): Bergstrom, Theodore C., and Hal R. Varian (2003), *WORKOUTS in Intermediate Microeconomics*, 6th Edition, (New York: W.W. Norton & Co.). ISBN 0-393-97831-1.

GRADE DETERMINATION: Course grades will be assigned on the UHM plus/minus grading system. <http://www.catalog.hawaii.edu/>. Grades will be based upon class attendance, problem sets, 2 midterm exams and a final exam weighted in the following fashion:

Problem Sets	10%
Attendance & Class Participation	10%
First Mid-Term Exam (10/01/2004)	20%
Second Mid-Term Exam (11/10/2004)	20%
Final Exam (12/17/2004)	<u>40%</u>
TOTAL	100%

Examinations will include short answer, problem solving, graphical analysis, and essay style questions. Some questions on the exams will be drawn from the problem sets.

TENTATIVE COURSE SCHEDULE
(Subject to Revision)

Reading: Chapter 1

Lecture 1

[Monday, August 23, 2004]

Introduction:

- Economic Methodology
- Positive vs. Normative Economics
- Microeconomics vs. Macroeconomics
- Fundamental Principles of Scarcity and Choice
- Mathematics and Graphics in Economics
- Technical Efficiency vs. Allocative Efficiency
- Efficient Resource Allocation
- Partial Equilibrium Analysis vs. General Equilibrium Analysis

Model Building:

- Equilibrium Analysis
- Optimization Analysis

Lecture 2

[Wednesday, August 25, 2004]

Supply and Demand Analysis:

Determinants of Demand

- Prices
- Incomes
- Tastes
- Expectations

Determinants of Supply

- Output Prices
- Input Prices
- Technology
- Weather
- Expectations

Comparative Static Analysis

- Normal Goods
- Inferior Goods
- Complementary Goods
- Substitute Goods

Workout 1 due

Lecture 3

[Friday, August 27, 2004]

Supply and Demand Analysis:

- Market Equilibrium
- Price Ceilings and Price Floors
- Economic Surpluses and Economic Shortages

Readings: Chapter 2

Lecture 4

[Monday, August 30, 2004]

Consumer Theory:

- Budget Sets

Budget Lines
Prices and Income

Readings: Chapter 3	<u>Lecture 5</u> Consumer Theory (continued): Preferences and Tastes Utility Theory Cardinal Utility vs. Ordinal Utility Utility Functions Indifference Curves	[Wednesday, September 1, 2004]
Readings: Chapter 4 Workout 2 due	<u>Lecture 6</u> Consumer Theory (continued): Preferences and Tastes Utility Theory Cardinal Utility vs. Ordinal Utility Utility Functions Indifference Curves	[Friday, September 3, 2004]
Reading: Chapter 5	<u>Lecture 7</u> Consumer Theory (continued): Derivation of a Demand Curve Giffen Goods	[Wednesday, September 8, 2004]
Reading: Chapter 6 Workout 3 due	<u>Lecture 8</u> Consumer Theory (continued): Applications: Transfers in Cash vs. Transfers in Kind Income Taxes vs. Commodity Taxes	[Friday, September 10, 2004]
Readings: Chapter 7 Workout 4 due	<u>Lecture 9</u> Revealed Preference: Preferred Region Dominated Region Non-satiation (more is preferred to less) Weak Axiom of Revealed Preference (WARP) Strong Axiom of Revealed Preference (SARP)	[Monday, September 13, 2004]
	<u>Lecture 10</u> Revealed Preference (continued): Application: Simultaneous Income and Relative Price Changes with Possible Consumer Responses Delineated via Revealed	[Wednesday, September 15, 2004]

Preference

- Workout 5 due Lecture 11 [Friday, September 17, 2004]
Workout Review Session
- Readings: Chapter 8 Lecture 12 [Monday, September 20, 2004]
Slutsky's Equation:
 Price Effect
 Income Effect
 Substitution Effect
 Giffen Goods Revisited
 Slutsky Compensation vs. Hicksian Compensation
- Lecture 13 [Wednesday, September 22, 2004]
Slutsky's Equation (continued):
- Readings: Chapter 14 Lecture 14 [Friday, September 24, 2004]
Workout 6 due Consumers' Surplus and Producers' Surplus
 The Demand Curve: A Measure of Marginal Social Benefit
 The Supply Curve: A Measure of Marginal Social Cost
- Readings: Chapter 15 Lecture 15 [Monday, September 27, 2004]
Workouts 7&8 due Elasticities:
 Elasticity (sensitivity, responsiveness)
 Price Elasticity of Demand
 Relationship to Total Revenue
 Substitutability: The Key to Elasticity
 Measurement
 Arc Elasticity vs. Point Elasticity
 Income Elasticity of Demand
 Cross-Price Elasticity of Demand
 Price Elasticity of Supply
- Readings: Chapter 16 Lecture 16 [Wednesday, September 29, 2004]
Workouts 14&15 due Elasticities (continued)
 Application: Excise Tax Incidence
- Workout 16 due Lecture 17 [Friday, October 1, 2004]
FIRST MIDTERM EXAM
Friday, October 1, 2004

12:30-1:20 PM

Readings: Chapters 18 Lecture 18 [Monday, October 4, 2004]

Theory of the Firm: Production
Technology
Production Sets
Production Functions
Total Product
Average Product
Marginal Product

Readings: Chapters 19 Lecture 19 [Wednesday, October 6, 2004]

Theory of the Firm: Production (continued)

Workouts 18&19 due Lecture 20 [Friday, October 8, 2004]

Workout Review Session

Readings: Chapter 20 Lecture 21 [Monday, October 11, 2004]

Production (continued):
Isoquants
Isocost Lines
Technical Efficiency
Cost Minimization
Efficient Expansion Path (EEP)

Readings: Chapter 21 Lecture 22 [Wednesday, October 13, 2004]

Workout 20 due Theory of the Firm: Duality - The Relation Between Product Curves and

Cost Curves
Variable Costs
Fixed Costs
Sunk Costs
Opportunity Cost
Total Cost (TC)
Total Fixed Cost (TFC)
Total Variable Cost TVC)
Marginal Cost (MC)
Average Total Cost (ATC)
Average Variable Costs (AVC)
Short Run Cost Curves
Long Run Cost Curves
Economies of Scale (EOS)

Readings: Chapter 28 Lecture 36 [Monday, November 15, 2004]
Workout 27 due

Oligopoly Theory (continued)
Introduction to Game Theory:
Dominant Strategies
Mixed Strategies
Nash Equilibrium
Prisoner's Dilemma

Readings: Chapter 29 Lecture 37 [Wednesday, November 17, 2004]
Workout 28 due

Game Theory (continued)

Readings: Chapters 9&26 Lecture 38 [Friday, November 19, 2004]
Workout 29 due

Factor Markets:
Labor Supply
Firms' Demand for Inputs
Marginal Revenue Product (MRP)
Value of the Marginal Product (VMP)

Readings: Chapter 12&36 Lecture 39 [Monday, November 22, 2004]
Workouts 9&26 due

Uncertainty:
Expected Utility Theory
Insurance Theory
Moral Hazard
Adverse Selection

Readings: Chapter 30 Lecture 40 [Wednesday, November 24, 2004]
Workouts 12&36 due

General Equilibrium Analysis: Exchange
Partial Equilibrium vs. General Equilibrium
The Edgeworth Box
Gains from Trade
Walras' Law
Pareto Efficiency
The First Welfare Theorem
The Second Welfare Theorem

Readings: Chapter 31 Lecture 41 [Monday, November 29, 2004]
Workout 30 due

General Equilibrium Analysis: Production
Comparative Advantage

Readings: Chapter 32 Lecture 42 [Wednesday, December 1, 2004]
Workout 31 due

General Equilibrium Analysis: Welfare
Arrow's Impossibility Theorem

