APPLIED MICROECONOMIC THEORY

Econ 6070

Charles de Bartolome
Office hours: M 4-4:45pm, Tu 10-11
F 11:30-12:30 pm
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Recitation leader:
Recitation time
Recitation place:
Office hours:
Office:


Course description: Microeconomics is about what goods get produced and bought, and at what prices. The course teaches the mathematical structure of microeconomic theory. It is designed for first-year MA students. The formulation of the consumer's and the firm's problems is rigorously analyzed. Price determination is considered in the context of a monopoly, an oligopoly and a competitive market structure. Game theory is introduced and the characteristics which determine industrial structure are explored. Competitive equilibrium is seen as the successful entry of many firms into a market. Welfare implications are discussed.

Problem sets: Weekly problem sets are posted on the course WebCT webpage located at:
http://webct.colorado.edu.

The problem sets are discussed in the recitation session. The problem sets are an integral part of the course. They are designed to help you use the material, and a significant part of the exam will be based on them.

Grading: there are two experiments, one midterm and a final exam. The grade of the student will be determined as: 10% experiments, 45% Midterm, 45% Final.

Exams: because this is a MA level class, the exams will not just repeat material covered in class. Some questions will repeat material covered in class, but some will ask you to apply the material in a different environment.

The midterm exam will be given in the evening as:
MIDTERM EXAM: Monday, 15 October, 7-9:30 pm in ECON 205

The final exam is scheduled as:
FINAL EXAM: Friday, 14 December 4:30-7:00 pm.
You should bring a blue-book to each exam.
Students with special needs: I will make all reasonable accommodations for students with documented disabilities. However, you must notify me by Monday 10 September and you must provide documentation of the disability obtained from the Disabilities Services Office located in Willard Hall, Room 322.

Course outline:

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<th>Date</th>
<th>Topic</th>
<th>Chapter</th>
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<td>27, 29 Aug</td>
<td>INTRODUCTION</td>
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<td>Use of models</td>
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<td>Positive and normative.</td>
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<td>The circular flow</td>
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<td>5, 7, 10 Sept</td>
<td>CONSUMER PREFERENCES</td>
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<td>Sets.</td>
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<td>Utility</td>
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<td>Indifference curves</td>
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<td>Marginal rate of substitution (marginal benefit)</td>
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<td>&quot;At least as good as&quot; set is convex.</td>
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<td>Diminishing marginal utility.</td>
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<td>12, 14, 17, 19 Sept</td>
<td>CONSUMER CHOICE</td>
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<td>Objective.</td>
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<td>Feasible (budget) set.</td>
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<td>&quot;Marginal rate of substitution = price ratio&quot; rule.</td>
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<td>Indirect utility.</td>
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<td>Duality: Expenditure Function.</td>
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<td>21, 24, 26, 28 Sept</td>
<td>INDIVIDUAL DEMAND</td>
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<td>Homogeneity - normalizing prices</td>
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<td>Income changes - normality.</td>
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<td>Price changes.</td>
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<td>Demand curve.</td>
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<td>Evaluating changes</td>
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<td>- consumer surplus.</td>
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<td>- equivalent variation.</td>
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<td>- compensating variation.</td>
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1 Oct
COMPARATIVE STATICS
Cross-price effects.
MARKET DEMAND
Summing individual demand curves.
Elasticity - inelastic and elastic.
APPLICATIONS OF CONSUMER CHOICE
3 Oct Labor supply.
8 Oct Savings.
10, 12 Oct Insurance
15 Oct MIDTERM (7-9:30 pm)
17, 19, 22 Oct PRODUCTION
Production functions
- diminishing marginal product.
Isoquants.
"At least as much" set is convex.
Marginal rate of technical substitution.
Returns to scale.
Short-run and long-run production relationships.
24, 26, 29 Oct COSTS
Isocost curves.
Cost minimization
- "marginal rate of technical substitution = price ratio" rule.
Duality: output maximization.
Long-run: average and marginal costs.
Input substitution
Short-run: average and marginal costs.
Envelope result
- long-run as envelope of short-run costs.
31 Oct FIRM CHOICE
Marginal revenue.
Profit-maximization
- "marginal revenue = marginal cost" rule.
2 Nov MONOPOLY
Marginal revenue curve lies
below demand curve.
Monopolist pricing.
Social loss: excess burden (deadweight loss)
5, 7 Nov  
GAME THEORY AND OLIGOPOLY  
Extensive form.  
Strategy.  
Normal form.  
Nash equilibrium.  

9, 12 Nov  
OLIGOPOLY  
Cournot Duopoly.  
Perfect competition as sequence of successful entries.  

14 Nov  
COMPETITIVE SUPPLY  
Firm supply.  
Input demand:  
- "value of marginal produce = input price" rule.  
Producer surplus as area "above" supply curve.  

16, 19 Nov  
PARTIAL EQUILIBRIUM  
Short-run market equilibrium  
- "price = marginal cost" rule.  
Profits induce entry.  
Long-run market equilibrium  
- "price = min. average cost" rule.  

21, 26, 28 Nov  
MARKET EFFICIENCY  
Partial equilibrium efficiency.  

30 Nov  
GENERAL COMPETITIVE EQUILIBRIUM  
Walras law  

3, 5 Dec  
MARKET EFFICIENCY  
Pareto-efficiency.  
Exchange efficiency  
- "equal marginal rates of substitution" rule.  
Production efficiency  
- "equal marginal rate of technical substitution" rule.  
- production possibility frontier.  
Product-mix efficiency  
- "marginal rate of transformation = marginal rate of substitution" rule.  
Representative individual (Robinson Crusoe) economy.  
Fundamental Theorems of Welfare Economics.