

Syllabus: Intermediate Microeconomics

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Class location: SILV 507

Class hours: MTWR 09:00am - 10:35am (05/18/09 to 06/26/09, May 25: Memorial day; no class)

Textbook: Microeconomics, Besanko and Braeutigam (available at NYU bookstore)

Course Description:

Intermediate microeconomics constitutes an important building block for further study in practically any field of economics. Modern macroeconomics, financial economics, industrial organization etc. all utilize the tools and theory that you will be learning in this course. You can think of this course as consisting of 5 parts. In the first part we will be studying the theory of the consumer which will allow us to construct a theory of demand. The second part provides the counterpart to the consumer's problem where we will study the firm's decision on how much labor to hire and capital to rent in order to produce a certain output. Furthermore, we will touch on a host of concepts which will help us to understand what the optimal size of a firm should be. Thirdly, we will study a variety of market structures such as perfect competition, monopoly, and oligopoly. While in the latter we will encounter strategic firm behavior we will study strategic decision making, somewhat more formally, under the topic game theory in the fourth part of the course. In the last part of the course, we will explicitly recognize the interdependence of various markets in the determination of prices. We will encounter some classical issues in economics such as economic efficiency and conclude the course with the two fundamental theorems of welfare economics.

Evaluation:

Assignments: 10%

Mid-term: 40% (June 1, tentative; no make-up exam!)

Final: 50% (June 25)

1 Parts I and II

1.1 Consumer Theory (approx. 5 classes)

- Preferences and utility: representing preferences through utility functions. Constructing indifference curves and understanding the marginal rate of substitution of one good for another (chapter 3).

- How does an individual with unlimited wants decide on how to allocate her limited resources? The optimal choice problem, the expenditure minimization problem, and revealed preferences (chapter 4, except section 4.3).
- (Tentative) Uncertainty: decision making under uncertainty; asymmetric information (chapter 15, only up to section 15.4).
- A theory of consumer demand: constructing a demand curve from the consumer's optimal choice problem. Understanding the income and substitution effect and computing measures of consumer's well-being such as the compensating and equivalent variation (chapter 5).

1.2 Producer Theory (approx. 3 classes)

- Inputs and production functions: constructing isoquants and understanding the marginal rate of technical substitution of one factor of production for another. Elasticity of substitution, returns to scale, and technological progress (chapter 6).
- How does the firm choose a combination of inputs to minimize the cost of producing a given quantity of output? Long-run and short-run optimal choices of the firm. Construct labor and capital demand curves (chapter 7).
- Cost curves: variable costs, fixed costs, and average costs. Understanding economies of scale (section 8.1 and 8.2).

Mid-term, June 1

2 Parts III-V

2.1 Market Structure (approx. 7 classes)

- Characteristics of a perfectly competitive market. Short-run and long-run supply curves and the determination of a competitive equilibrium (chapter 9).
- Monopoly: one single seller and many buyers. How is production and pricing determined in such a setting? What are the welfare implications compared to a perfectly competitive market (chapter 11)?
- Instead of studying extreme market structures such as perfectly competitive markets and monopoly we study markets with an intermediate market structure. Two classic models we will encounter are the Cournot and the Bertrand model. Furthermore, we will study the Stackelberg model (chapter 13).

2.2 Game Theory and Strategic Behavior (approx. 3 classes)

- What do economists mean by a game? Examples and definitions: players, actions, payoff matrices, and strategies. Nash equilibrium as the solution concept in pure and mixed strategies (chapter 14).
- Study the equilibria of the Cournot and Bertrand models encountered previously as examples of the Nash equilibrium but being more specific in the terminology (chapter 14).
- Repeated games such as playing the Prisoner's Dilemma repeatedly, backward induction, and the value of commitment (chapter 14).
- (Tentative) Auctions (chapter 15 section 15.5)

2.3 General Equilibrium Theory (approx. 4 classes)

- Determining price and output in more than one market simultaneously as opposed to previously where we have concentrated on a partial equilibrium analysis in which only a single market was considered (chapter 16).
- Using Edgeworth box analysis to study economic efficiency and gains from exchange (chapter 16).
- The first and second fundamental theorems of welfare economics and why they are important (chapter 16).

Final, June 25