Syllabus
Brown University
Economics 111, Intermediate Microeconomics
Summer 2006

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Office hours: Mondays, 4:00 p.m. - 6:00 p.m. in Robinson Hall 104B
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1. Description of the course: Class will meet on Mondays, Tuesdays and Wednesdays from 2 to 4 pm, and the TA sections will meet on Thursdays from 2 to 3. This course will explore the decision making of economic agents (consumers and firms). It will also examine how different market mechanisms operate to allocate resources. We will begin by studying the theories of the consumer and the producer. Next we will combine both in the study of individual markets, including perfect competition, monopoly, oligopoly, etc. Following this study of individual markets, we will discuss how all markets interact in the economy and emphasize the good efficiency properties of the competitive system. The course will end with the analysis of some of the circumstances in which competitive markets fail to produce efficient allocations.

2. Prerequisites: Economics 11 or equivalent, Mathematics 9 or 10 or equivalent (univariate and ideally, multivariate calculus). Your willingness to work hard is by far the most important prerequisite.

3. Textbook: the textbook is Varian's *Intermediate Microeconomics: a Modern Approach* (7th edition), Norton, 2005 (its previous editions would also be fine). The exercise book by Bergstrom and Varian that goes with it is recommended, as solving problems is essential in the course.

4. Grading policy: the grade of the course will be divided into 25% for weekly homework assignments, due in the TA section (five assignments at 5% each), 25% for the midterm exam (Wednesday July 12), and 50% for the final exam (Thursday August 3, at 1:30).

I hope you enjoy working hard in the course and learn a lot of microeconomics this summer.

Introduction

Lesson 1. The economic problem. The economic science. Microeconomics and Macroeconomics. Partial and general equilibrium analyses.

Part I. The theory of the consumer

Lesson 2. Preferences. Assumptions on preferences. Utility: cardinal and ordinal utility. Marginal utility and the marginal rate of substitution. From Chapters 3 and 4 (Skip 4.6) of the 7th edition of the textbook.

Lesson 3. The budget set and the budget constraint. The consumer's optimal choice. The individual demand function. Chapters 2 and 5 (skip 5.4).

Lesson 4. The income demand curve or Engel curve. Normal and inferior goods. The demand curve. Ordinary and Giffen goods. The inverse demand curve. The cross demand curve. Substitutes and complements. Chapter 6 (less Central: eg. of Homothetic preferences and Quasi Linear Preference in Sec 6.3. Skip a Discrete Good in Sec 6.6).

Lesson 5. Substitution and income effects. Ordinary demand, compensated demand and aggregate demand. Elasticity. Chapters 8 (Important:8.8, skip 8.9) and 15 (Only sections 15.1,15.2,15.5,15.6).

Lesson 6. Choice between consumption and leisure. The labor supply. Substitution and income effects in the labor supply. Working overtime. Non-labor income and unemployment benefits. Chapter 9 (Only 9.8 and 9.9).

Lesson 7. Intertemporal choice of consumption. The supply of savings. Interest rates. The inflation rate. Substitution and income effects. Present value. Chapter 10 (Skip sections 10.8 to 10.11).

Lesson 8. Taxes. Lump-sum tax and specific tax. Rebating a tax. Consumer's surplus. From chapters 2, 8 and 14 (Skip 14.6 and 14.8-11).

Part II. The theory of the producer

Lesson 9. The technological constraints of the firm. The long run production function. Assumptions on technology. The technical rate of substitution. Returns to scale. The short run production function. Marginal product and average product. Chapter 18.

Lesson 10. Cost curves. Cost minimization. The long run cost function. Relation between returns to scale and the long run production function. The short run cost function. Relation between marginal product and the short run cost function. Relation between the long run and the short run cost functions. Chapters 20 (Skip 20.2 and 20.5) and 21 (Skip 21.5 and 21.6).

Lesson 11. Profit maximization. Profit maximization in the short run. The supply of a competitive firm in the short run. Long run profit maximization. The long run supply of a competitive firm. Chapters 19 (Skip sections 19.2,19.3,19.4,19.7,19.9,19.11,19.12) and 22.

Part III. Market structures: partial equilibrium

Lesson 12. Industry supply. The industry supply in the short run. The industry supply in the long run in a competitive market with free entry and exit. Producer's surplus. Effects of taxes in the short run. Effects of taxes in the long run. The deadweight loss of a tax. Chapters 16 (Skip 16.9) and 23 (Skip 23.7,23.8,23.9,23.10).

Lesson 13. Factor markets. The behavior of a competitive firm in both the output and the input markets. Monopsony. Chapter 26 (Skip Chapter!).

Lesson 14. Monopoly. Profit maximization by a monopolist. The mark-up pricing of a monopoly. The effects of taxes on monopoly. The loss of efficiency in a monopoly and the monopoly deadweight loss. Comparison with a competitive market. Price discrimination: first, second and third degree price discrimination. Chapters 24 and 25 (Skip Sections 25.6-25.8).

Lesson 15. Oligopoly. Strategic interaction and game theory. The leadership in a quantity setting (Stackelberg). Simultaneous choice of output (Cournot). Collusion. Comparison of the different models. Chapters 27 (Skip sections 27.7,27.8,27.9) and 28 (Look over this Chapter).

Part IV. General equilibrium

Lesson 16. Exchange. A pure exchange economy and the Edgeworth box. Pareto-efficient allocations. Competitive or Walrasian equilibrium. The two fundamental theorems of welfare economics. Implications of the fundamental theorems of welfare economics. Chapter 31 (Very Important Chapter).

Lesson 17. Production. General equilibrium model of an economy with exchange and production. One consumer, several consumers. Pareto-efficiency. Competitive equilibrium. The fundamental theorems of welfare. Chapter 32 (Skip Sections 32.6,32.10,32.12-32.14).

Part V. Failures of the competitive mechanism

Lesson 18. Externalities. Solutions to the problem of externalities. Chapter 34 (Skip sections 34.2,34.6,34.7).

Lesson 19. Public goods. The "free rider" problem. Solutions to the sub-optimality problem. Chapter 36 (Skip sections 36.3,36.5,36.8,36.9,36.10).

Lesson 20. Information. Asymmetric information. Adverse selection. Moral hazard. Chapter 37 (Only 37.1).