



NYU | STERN

MICROECONOMICS

FALL 2016

MW 2:00-3:15

Course Instructor: Simon Bowmaker
Office Hours: Tuesdays, 2:00 pm - 4:00 pm
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Course Description: Economics is the study of production and allocation of scarce resources, and how agents make decisions under conditions of scarcity and uncertainty. This course provides a rigorous introduction to economics, with special emphasis on microeconomics. It will introduce you to economics as a discipline and as a way of thinking. It will also provide you with a set of tools, which will be very useful in other economics courses.

We will first study the behavior of individual consumers and firms. Then we will give you some insight into how markets work and whether market outcomes are desirable. We will also look at situations in which the firm is a monopolist, or competes with a limited number of rivals. Some of the key concepts we will introduce include economic incentives, marginal analysis, opportunity cost (which costs matter), market efficiency (what it means for a market to work) and strategic behavior (how to predict and respond to your rivals' decisions).

The tools that you will be acquainted with in this class are fundamental for most upper-division courses of the Economics major, as well as classes in Finance, Accounting and Marketing.

Textbook: Robert S. Pindyck, and Daniel L. Rubinfeld: *Microeconomics* (8th Edition), Prentice-Hall Series in Economics. The textbook can be bought at the NYU Bookstore.¹

Course website: The course's website can be found at <http://newclasses.nyu.edu/> using your Stern netID/password and choosing the course titled Microeconomics. There you will be able to find among others: 1. Lecture notes, 2. Problem sets and keys to them, 3. Sample exams, 4. Announcements

Prerequisites: This course assumes familiarity with multivariate calculus and high school algebra. In addition, we will have a review section on most essential mathematical tools.

TF Sessions: We meet twice a week and in addition a Teaching Fellow (TF) will conduct a recitation every week. TF sessions start in the week of September 12.

¹ You can also use previous editions of the textbook or the international edition as long as you make sure that you can figure out the sections of the book that we will cover.

Homework Assignments: There will be 10 homework assignments. Homework assignments will consist of problems based on the material presented in class. The objective of these assignments is to give you the opportunity to practice the concepts. TAs will go over the solutions.

Quiz: There will be 2 quizzes. There are absolutely no make-ups for missed quizzes.

Examinations-Make-up Test Policy: There will be a midterm and a final exam. Tests are written and will be taken without books, notes, and a calculator. The final exam will NOT be cumulative.

No Make-up Exams: If you miss the midterm for a justified reason and provide sufficient evidence, your final score will be counted instead of the midterm exam. If you miss the midterm for any other reason you will get a score of 0. If for a justified reason you miss the final exam, you will receive an incomplete, which has to be removed in the earliest possible semester.

Review Sessions: We will run a review session before the midterm and several before the final.

Your Final Exam: If you want to receive a copy of your final exam after the course is over, you will need to make an appointment with me or your TA.

Grading Policy: Your grade will be determined by the following

Problem Sets	20%
Quizzes	10%
Midterm	30%
Final	40%

I will use the grades A, A-, B+, ..., C- but I will only use grade D.

At NYU Stern, we strive to create courses that challenge students intellectually and that meet the Stern standards of academic excellence. To ensure fairness and clarity of grading, the Stern faculty have adopted a grading guideline for core courses with enrollments of more than 25 students in which approximately 35% of students will receive an A or A-grade.

Ethical Guidelines: All students are expected to follow the **Stern Code of Conduct** (<http://www.stern.nyu.edu/uc/codeofconduct>). A student's responsibilities include, but are not limited to, the following: (1) A duty to acknowledge the work and efforts of others when submitting work as one's own. Ideas, data, direct quotations, paraphrasing, creative expression, or any other incorporation of the work of others must be clearly referenced. (2) A duty to exercise the utmost integrity when preparing for and completing examinations, including an obligation to report any observed violations.

Students with Disabilities: Students whose class performance may be affected due to a disability should notify the professor immediately so that arrangements can be made in consultation with the Henry and Lucy Moses Center for Students with Disabilities <http://www.nyu.edu/csd/> to accommodate their needs.

Reading List and Tentative Course Schedule

Week 1:

Wednesday, Sept 7: Introduction and Preliminaries: What is economics? The study of how a society uses its limited resources to produce, trade and consume goods and services.

P&R, pp. 3-20.

Week 2:

Monday, Sept 12: The Basics of Supply and Demand. The demand curve describes consumer choice, while the supply curve describes how much firms will produce. Equilibrium of supply and demand through price.

P&R, pp. 21-32.

Wednesday, Sept 14: Consumer Behavior (1): preferences and their representation by a utility function. How do consumers make a decision given the alternatives that are available?

P&R, pp. 65-78.

TF Section: Math Review on Derivatives and Algebra.

Week 3:

Monday, Sept 19: Consumer Behavior (2): Budget Constraints.

P&R, pp. 78-86.

Wednesday, Sept 21: Consumer Behavior (3): utility maximization. How do consumers maximize their utility given the budget constraint? The use of utility maximization to derive Marshallian demand curves.

P&R, pp. 86-88, 95-96, 111-125.

TF Section: Solution to Problem Set 1.

Week 4:

Monday, Sept 26: Individual Demand and Market Demand: Study how utility maximizing choice of a good varies as income Changes (Engel Curve), and as the price of the good itself changes (Demand Curve). Add up individual demands to get market demand. Discuss elasticity of demand, the responsiveness of demand to price.

P&R, pp. 111-114, 119-122, 124-128, 132-133.

Wednesday, September 28: Production, Part I: We introduce firms and how they decide to produce. A firm is described by how it can transform inputs such as labor and capital into outputs, which is called a production function. We also discuss marginal versus average product of labor and capital.

P&R, pp. 201-215.

TF Section: Solution to Problem Set 2.

Week 5:

Monday, Oct 3: Production, Part II: Production with two inputs. The trade-off between using more labor or capital is called the marginal rate of technical substitution. We also discuss returns to scale, i.e. are larger plants more productive?

P&R, pp. 216-226.

Wednesday, Oct 5: Wednesday, Oct 12: The Cost of Production: We discuss the difference between sunk costs and fixed costs and costs in the short run versus the long run.

P&R, pp. 229-249, 254-256.

TF Section: Solution to Problem Set 3.

Week 6:

Monday, Oct 10: No class.

Wednesday, Oct 12: The Cost of Production: We discuss the difference between sunk costs and fixed costs and costs in the short run versus the long run.

P&R, pp. 229-249, 254-256.

TF Section: Solution to Problem Set 4.

Quiz 1 in last 15 minutes of lecture on Wednesday, Oct 12.

Week 7:

Monday, Oct 17: Profit Maximization and Competitive Supply. We look at the firm's decision to produce in a perfectly competitive market. If a firm is maximizing profits, then it sets marginal costs equal to marginal revenue.

P&R, pp. 279-304.

Wednesday, Oct 19: The Analysis of Competitive Markets. We use the tools of consumer and producer surplus to analyze the effect of a tax or rent control on the efficiency of a market.

P&R, pp. 317-339, 345-351.

TF Section: Solution to Problem Set 5.

Week 8:

Monday, Oct 24: Midterm review lecture.

Wednesday, Oct 26: Midterm exam, 2 pm to 3.15 pm in T-UC 50 (our class location).

Week 9:

Monday, Oct 31: Externalities and Public Goods. In many situations, your actions affect others indirectly. Does this affect market efficiency? We will talk about the failure of several fisheries due to the externality problem.

P&R, pp. 661-666, 684-693.

Wednesday, Nov 2: Market Power: Monopoly. We analyze firms with market power that do not take the market price as given, but can choose the price of their products.

P&R, pp. 357-366, 368-375.

TF Section: Solution to Problem Set 6

Week 10:

Monday, Nov 7: Market Power and Antitrust (II). The social cost of monopoly and laws against monopoly: the antitrust laws.

P&R, pp. 375-382.

Wednesday, Nov 9: Pricing with Market Power. We look at price discrimination, the practice of setting different prices for different types of consumers (such as student discounts or quantity discounts).

P&R, pp. 399-406, 408-410.

TF Section: Solution to Problem Set 7.

Week 11:

Monday, Nov 14: Choice under Uncertainty. Expected Utility and Risk Preferences. How do we make choices when certain variables such as income and prices are uncertain (making choices with risk)?

P&R, pp. 159-169.

Wednesday, Nov 16: Game Theory (I): Simultaneous moves. We examine strategic decision-making, when you are interacting with a competitor. We look at dominant strategies and a solution concept called Nash Equilibrium.

P&R, pp. 487-488, 490-498.

TF Section: Solution to Problem Set 8.

Quiz 2 in last 15 minutes of lecture on Wednesday, Nov 16

Week 12:

Monday, Nov 21: Game Theory II: Games Trees, Commitment & Threats. We look at sequential games in this lecture and the strategic role of commitment and threats.

P&R, pp. 498-512.

Wednesday, Nov 23: no class.

Week 13:

Monday, Nov 28: Oligopoly, I: We examine how firms set price or quantity when they have a single competitor (Bertrand, Cournot, and Stackelberg Competition).

P&R, pp. 451-452, 456-463.

Wednesday, Nov 30: Oligopoly, II: We examine how firms set price or quantity when they have a single competitor (Bertrand, Cournot, and Stackelberg Competition).

P&R, pp. 463-469.

TF Section: Solution to Problem Set 9.

Week 14:

Monday, Dec 5: Asymmetric Information I: Adverse Selection & Signaling. How does asymmetric information affect economic outcomes?

P&R, pp. 631-643.

Wednesday, Dec 7: Asymmetric Information II: Moral Hazard and the Principal-Agent Problem. How does asymmetric information affect economic outcomes?

P&R, pp. 643-651.

TF Section: Solution to Problem Set 10.

Week 15:

Monday, Dec 12: Behavioral Economics, I

P&R, pp. 189-192.

Tuesday, Dec 13: Behavioral Economics, II

P&R, pp. 192-197.

Wednesday, Dec 14: Course wrap-up and review

Monday, Dec 19: Final Exam, 2:00-3:50 PM in T-UC 50 (our class location)