

Syllabus
Spring 2021

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. We will introduce economics as a discipline and as a way of thinking.

We will first study the behavior of individual consumers and firms. Then we will provide 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 does it mean for a market to work) and strategic behavior (how to predict and respond to your rivals' decisions).

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

Teaching fellows:

Section	Fellow	Email
(05) Mon, 2:00pm-3:15pm	Daniel Stackman	dstackma@stern.nyu.edu
(06) Mon, 3:30pm-4:45pm	Daniel Stackman	dstackma@stern.nyu.edu
(07) Wed, 2:00pm-3:15pm	Anna Airoidi	aairoidi@stern.nyu.edu
(08) Wed, 3:30pm-4:45pm	Anna Airoidi	aairoidi@stern.nyu.edu
(09) Thurs, 9:30am-10:45am	Agata Farina	afarina@stern.nyu.edu
(10) Thurs, 11:00am-12:15pm	Agata Farina	afarina@stern.nyu.edu

Textbook: Robert S. Pindyck, and Daniel L. Rubinfeld: *Microeconomics* (9th Edition), Prentice-Hall Series in Economics. The book is available at the NYU Bookstore.¹

Course Site: The course's website can be found on NYU Classes. We will run all communication through this site, and you can post comments on assignments and lectures here. There you will be able to find:

1. Lecture notes
2. Problem sets and solution keys
3. Sample exams
4. Announcements

¹ Previous editions will work as well, provided you follow carefully any differences in chapter contents.

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

Teaching Fellow Sessions: In addition to our lectures twice a week, a Teaching Fellow (TF) will conduct a recitation every week. TF sessions start in the **second** week of class.

Grading: Your grade will be determined by the following:

Homework assignments	20%
Quizzes	10%
Midterm	30%
Final	40%

Class attendance and professionalism. You should come to class prepared to discuss assigned topics. Your thoughtful participation makes the course more interesting and productive for everyone, including your instructors.

You can contribute to the course by:

- Listening attentively and answering discussion questions.
- Arriving to class on time and turning on your video during online lectures.
- Demonstrating interest in your peers' comments and questions.
- Advancing the discussion by contributing insightful comments and questions.

Homework Assignments: There will be 10 homework assignments. Homework assignments will consist of problems and short answer questions based on the material presented in class. The objective of these assignments is to give you the opportunity to practice the concepts. Students should submit homework assignments electronically to the Assignments tab on NYU Classes on or before the weekly due dates. We will not accept late assignments but we will count only the highest 8 of 10 assignment grades when calculating the homework portion of the final grade.

Quizzes: There will be 2 quizzes. There are absolutely no make-ups for missed quizzes. They will be held on Wednesday, February 24 and Monday, April 5.

Examinations: There will be a midterm and a final exam. Tests are written and will be taken online. They will consist of problems similar to the ones in the problem sets, including short answer questions. The final exam will be cumulative.

No Make-up Exams: If you miss the midterm for a justified reason and provide sufficient evidence, your final exam 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 you miss the final exam for a justified reason you will receive an incomplete, which must be removed in the earliest possible semester.

Review Sessions: We will run a review session before both the midterm and the final exam. The midterm review will be held on Wednesday, March 10. The final exam review will be held on Wednesday, May 5.

Your final exam: If you want to examine a copy of your final exam scores after the course is over you will need to make an appointment with me.

Errors: The TFs and I will make every effort to grade fairly, but some errors in grading may occur. Please check your exams and in case of grading errors, please return your exam to the grader with a written note explaining where the error is. We may keep copies of all, or of a fraction of graded exams, prior to handing them back. The entire exam will be re-graded in the case of a re-grade request. Please keep copies of your exams until the semester is over.

How to do well in this course: Practice problems. As many as you can! Work with your friends on the difficult problems. Learn from each other. Seek help from me or from the TFs. We are here to help you.

Stern Undergraduate College Policies

Academic Integrity. Our undergraduate [Academics Pillar](#) states that *we take pride in our well-rounded education and approach our academics with honesty and integrity*. Indeed, integrity is critical to all that we do here at NYU Stern. As members of our community, all students agree to abide by the NYU Stern Student Code of Conduct, which includes a commitment to:

- Exercise integrity in all aspects of one's academic work including, but not limited to, the preparation and completion of exams, papers and all other course requirements by not engaging in any method or means that provides an unfair advantage.
- Clearly acknowledge the work and efforts of others when submitting written work as one's own. Ideas, data, direct quotations (which should be designated with quotation marks), paraphrasing, creative expression, or any other incorporation of the work of others should be fully referenced.
- Refrain from behaving in ways that knowingly support, assist, or in any way attempt to enable another person to engage in any violation of the Code of Conduct. Our support also includes reporting any observed violations of this Code of Conduct or other School and University policies that are deemed to adversely affect the NYU Stern community.

The entire Stern Student Code of Conduct applies to all students enrolled in Stern courses and can be found here: www.stern.nyu.edu/uc/codeofconduct

To help ensure the integrity of our learning community, prose assignments you submit to NYU Classes will be submitted to Turnitin. Turnitin will compare your submission to a database of prior submissions to Turnitin, current and archived Web pages, periodicals, journals, and publications. Additionally, your document will become part of the Turnitin database.

Grading Guidelines.

- [Grading Information for Stern Core Courses](#)

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. In core classes of less than 25 students, the instructor is at liberty to give whatever grades they think the students deserve, while maintaining rigorous academic standards.

- [Grading Information for Stern Elective Courses](#)

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 agreed that for elective courses the individual instructor or department is responsible for determining reasonable grading guidelines.

Classroom Conduct and Behavior. Students are also expected to maintain and abide by the highest standards of professional conduct and behavior. Please familiarize yourself with Stern's Policy in Regard to In-Class Behavior & Expectations (<http://www.stern.nyu.edu/portal-partners/current-students/undergraduate/resources-policies/academic-policies/index.htm>) and the NYU Student Conduct Policy (<https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/university-student-conduct-policy.html>).

Student Accessibility. If you will require academic accommodation of any kind during this course, you must notify me at the beginning of the course and provide a letter from the Moses Center for Student Accessibility (212-998-4980, mosescsa@nyu.edu) verifying your registration and outlining the accommodations they recommend. If you will need to take an exam at the Moses Center for Student Accessibility, you must submit a completed Exam Accommodations Form to them at least one week prior to the scheduled exam time to be guaranteed accommodation. For more information, visit the CSA website: <https://www.nyu.edu/students/communities-and-groups/student-accessibility.html>

Reading List and Tentative Course Schedule

Week 1:

Problem Set 1 (Due Feb 10)

Monday Feb 1: Introduction and Preliminaries: What is economics? The study of how a society uses its limited resources to produce, trade and consume goods and services.

Chapter 1: pp. 3-19, Sections 1.1, 1.2, 1.3, 1.4

Wednesday Feb 3: The Basics of Supply and Demand. The demand curve describes consumers' choice, while the supply curve describes how much firms will produce. Equilibrium of supply and demand through price.

Chapter 2: pp. 22-48, Sections 2.1, 2.2, 2.3, 2.4, 2.5

NO Recitation Section

Week 2:

Monday Feb 8: Consumer Behavior (1): preferences and their representation by a utility function. How do consumers make a decision given the alternatives that are available?

Chapter 3, pp. 67-81: Section 3.1

Wednesday Feb 10: Consumer Behavior (2): Utility and budget constraints.

Chapter 3, pp. 82-86: Section 3.2

Problem Set 1 Due

Recitation Section: Math review on derivatives and algebra

Week 3: *Legislative day on Thursday Feb 18

Problem Set 2 (Due Feb. 22)

Monday Feb 15: No Class, President's Day

Wednesday Feb 17: 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.

Chapter 3, pp. 86-92, 95-100: Sections 3.3, 3.5

Thursday Feb 18: Individual 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).

Chapter 4, pp. 109-122, Sections 4.1, 4.2

Recitation Section: Solutions to Problem Set 1, on math tools and supply and demand

Week 4: (Quiz 1, Wed Feb 24, at the beginning of lecture)

Problem Set 3 (Due March 1)

Monday Feb 22: Market Demand: add up individual demands to get market demand.

Discuss Elasticity of Demand, the responsiveness of demand to price.

Chapter 4, pp. 122 -132, pp. 137-141, Sections 4.3, 4.4, 4.6. Chapter 2, pp. 33-39,
Section 2.4

Problem Set 2 Due

Wednesday Feb 24: 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.

Chapter 6, 188-201, Sections 6.1, 6.2

Recitation Section: Solutions to Problem Set 2

Week 5:

Problem Set 4 (Due March 8)

Monday March 1: Production Part II: Production with two inputs. The tradeoff between using more labor or capital is called the marginal rate of technical substitution. As well we discuss returns to scale, i.e. are larger plants more productive?

Chapter 6, pp. 202-212, Sections 6.3, 6.4

Problem Set 3 Due

Wednesday March 3: The Cost of Production: We discuss the difference between sunk costs and fixed costs and costs in the short run versus the long run.

Chapter 7, pp. 215-245, Sections 7.1, 7.2, 7.3, 7.4, Appendix 7 pages 261-265

Recitation Section: Solutions to Quiz 1, Problem Set 3

Week 6:

Monday March 8: 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.

Chapter 8, pp. 267-283, Sections 8.1, 8.2, 8.3, 8.4, 8.5

Problem Set 4 Due

Wednesday March 10: Midterm Review

Recitation Section: Solutions to Problem Set 4

Week 7:

Monday March 15: Midterm at 6:30-8:00 PM

Wednesday March 17: 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. Pareto Efficiency.

Chapter 9, pp. 305-319, pp. 333-340, Sections 9.1, 9.2, 9.3, 9.6

No Recitation Section

Week 8:

Problem Set 5 (Due March 29)

Monday March 22: 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.

Chapter 18, pp. 653-670, pp. 681-687, Sections 18.1, 18.2, 18.5, 18.6

Wednesday March 24: Market Power: Monopoly and Monopsony (I). We analyze firms with market power that do not take the market price as given but can choose the price of their products.

Chapter 10, pp. 347-358, Section 10.1

Recitation Section: Solutions to Midterm

Week 9:

Problem Set 6 (Due April 5)

Monday March 29: Market Power: Monopoly and Antitrust (II): The social cost of monopoly and laws against monopoly.

Chapter 10, pp. 358-372, Sections 10.2, 10.3, 10.4

Problem Set 5 Due

Wednesday March 31: 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).

Chapter 11, pp. 391-402, Sections 11.1, 11.2

Recitation Section: Solutions to Problem Set 5

Week 10: (Quiz 2, Monday April 5, at the beginning of lecture)

Problem Set 7 (Due April 12)

Monday April 5: 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)?

Chapter 5, pp. 158-174, Sections 5.1, 5.2, 5.3

Problem Set 6 Due

Wednesday April 7: 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.

Chapter 13, pp. 479-490, Sections 13.1, 13.2, 13.3

Recitation Section: Solutions to Problem Set 6

Week 11:

Problem Set 8 (Due April 21)

Monday April 12: Game Theory II: Games Trees, Commitment & Threats. We look at sequential games in this lecture and the strategic role of commitment and threats.

Chapter 13, pp. 495-508, Sections 13.5, 13.6, 13.7

Problem Set 7 Due

Wednesday April 14: Oligopoly (I). We examine how firms set price or quantity when they have a single competitor (Bertrand and Cournot Competition)

Chapter 12, pp. 448-456, Sections 12.2

Recitation Section: Solutions to Problem Set 7

Week 12:

Problem Set 9 (Due April 26)

Monday April 19: No Class

Wednesday April 21: Oligopoly (II). We examine how firms set price or quantity when they have a single competitor (Bertrand and Cournot Competition)

Chapter 12, pp. 456-460, Section 12.3

Problem Set 8 Due

Recitation Section: Solutions to Problem Set 8

Week 13:

Problem Set 10 (Due May 3)

Monday April 26: Asymmetric Information I: Adverse Selection & Signaling. Frequently a seller or producer knows more about the quality of the product than the buyer does. How does asymmetric information affect economic outcomes?

Chapter 17, pp. 624-635, Sections 17.1, 17.2

Problem Set 9 Due

Wednesday April 28: Asymmetric Information II: Games with Hidden Actions. We examine the concept of moral hazard through the example of incentive pay for employees and managers.

Chapter 17, pp. 636-644, Sections 17.3, 17.4

Recitation Section: Solutions to Problem Set 9

Week 14:

Monday May 3: Applications of Game Theory: Auctions

Chapter 13, pp. 508-516, Section 13.8

Problem Set 10 Due

Wednesday May 5: Final Review Lecture

Recitation Section: Solutions to Problem Set 10

Final Exam: TBA