Microeconomics (Econ-UB2)
Professor Walker Hanlon
Office Hours: Tues. 2:00pm-3:30pm
OH link: nyu.zoom.us/j/2657504047
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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**
Tuesday 2:00-3:15	Pietro Reggiani	preggian@stern.nyu.edu
Tuesday 3:30-4:45	Pietro Reggiani	preggian@stern.nyu.edu
Thursday 2:00-3:15	Melanie Friedrichs	mf2975@stern.nyu.edu
Thursday 3:30-4:45	Melanie Friedrichs	mf2975@stern.nyu.edu
Monday 9:30-10:45	François Miguet	fmiguet@stern.nyu.edu
Monday 11:00-12:15	François Miguet	fmiguet@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 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 in class and attending discussion sections.
- 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 hand in homework assignments to a box in the front of the lecture hall on assignment 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 no make-ups for missed quizzes, but excused absences are granted in advance for legitimate reasons. The quizzes will be held on Thursday, February 25 and Tuesday, April 6.

Examinations: There will be a midterm and a final exam. Tests are written and will be taken without books or notes. 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 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 Thursday, March 11. The final exam review will be held on Thursday, May 6.

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.

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 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.

GENERAL CONDUCT & 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).

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.

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 0:
Thursday Jan 28: 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

No Recitation Section

Week 1:
Problem Set 1 Assigned (Due Feb 10, 9am)
-- the last problem will be covered in recitation in Week 2

Tuesday Feb 2: 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

Thursday Feb 4: 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

No Recitation Section

Week 2:
Tuesday Feb 9: Consumer Behavior (2): Utility and budget constraints.
Chapter 3, pp. 82-86: Section 3.2

Wednesday Feb 10: Problem Set 1 due at 9am

Thursday Feb 11: Consumer Behavior (3): utility maximization. How 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
Problem Set 1 Due

Recitation Section: Math review on derivatives and algebra

Week 3:
Problem Set 2 Assigned (Due Feb 22, 9am)

Tuesday Feb 16: 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

Thursday Feb 18: No Class, Legislative Day
Recitation Section: Solutions to Problem Set 1, on math tools and supply and demand

Week 4: (Quiz 1, Thursday Feb 25 at the beginning of lecture)
Problem Set 3 Assigned (Due March 1, 9am)

Monday Feb 22: Problem Set 2 due at 9am

Tuesday Feb 23: 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

Thursday Feb 25: **Quiz.** 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 Assigned (Due March 8, 9am)

Monday March 1: Problem Set 3 due at 9am

Tuesday March 2: 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

Thursday March 4: 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: Problem set 4 due at 9am

Tuesday March 9: 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

Thursday March 11: Midterm Review

Recitation Section: Solutions to Problem Set 4

Week 7:

Monday March 15: Midterm at 5:30-7:00 PM

Tuesday March 16: No Class

Thursday March 18: 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 Assigned (Due March 29, 9am)

Tuesday March 23: 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

Thursday March 25: 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 Assigned (Due April 5, 9am)

Monday March 29: Problem Set 5 due at 9am

Tuesday March 30: Monopoly, Market Power and Antitrust (II): The social cost of monopoly and laws against monopoly: the antitrust laws.

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

Thursday April 1: 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, Tuesday April 6, at the beginning of lecture)
Problem Set 7 Assigned (Due April 12, 9am)

Monday April 5: Problem Set 6 due at 9am

Tuesday April 6: **Quiz.** 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

Thursday April 8: 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 Assigned (Due April 20, 9am – a Tuesday due to Presidents Day)

Monday April 12: Problem Set 7 due at 9am

Tuesday April 13: 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

Thursday April 15: 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 Assigned (Due April 26, 9am)

Tuesday April 20: Problem Set 8 due. **No Class** – to stay on schedule with Monday/Wednesday sections

Thursday April 22: 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

Recitation Section: Solutions to Problem Set 8

Week 13:
Problem Set 10 Assigned (Due May 3, 9am)

Monday April 26: Problem Set 9 due at 9am

Tuesday April 27: 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

Thursday April 29: Asymmetric Information II: 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. 636-644, Sections 17.3, 17.4

Recitation Section: Solutions to Problem Set 9

Week 14:

Monday May 3: Problem set 10 due at 9am

Tuesday May 4: Applications of Game Theory: Auctions
Chapter 13, pp. 508-516, Section 13.8

Thursday May 6: Final Review Lecture

Recitation Section: Solutions to Problem Set 10

Final Exam: TBA [During final exam week]