



**STERN SCHOOL
OF BUSINESS**

Firms and Markets

Executive MBA Program
March 2017-May 2017

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This course provides an intensive overview of the economic analysis of firms, industries, and markets. The overriding general constraint is the scarcity of resources. We examine the rationales for decisions by individual buyers and sellers, as well as how these decisions are aggregated through markets. Among other things, we explore the forms that competition can take, the role of industry structure, and the influences of government policies.

The course is intended to provide the participants with tools and conceptual frameworks that they can use to better understand and analyze business decision-making and the market and government-policy environment within which businesses operate. In addition, the course develops analytical tools and logic that are useful in the study of finance, strategy, marketing, and other business areas.

Some of the key concepts we will introduce include opportunity cost (which costs matter), economic incentives, optimizing within constraints imposed by scarcity, marginal analysis, strategic behavior (how to predict and respond to your rivals' decisions), market efficiency (what does it mean for a market to work really well), externalities (spillover costs or benefits, beyond standard market exchange), and asymmetric information (what happens when others know something you do not).

Required Reading

Most of the required reading is in the textbook for the course:

Managerial Economics & Business Strategy, Ninth Edition by Michael R. Baye and Jeffrey T. Prince (McGraw-Hill Irwin, 2014). [called Baye in designating the required reading for each session]

A booklet has two chapters from *International Economics, Sixteenth Edition*, by Thomas A. Pugel (McGraw-Hill Irwin, 2016).

Excerpts from several other books are also assigned. Digital versions of these three excerpts are posted on the NYU Classes course web site (click on Reading Excerpts).

I suggest that you read (perhaps quickly) the assigned reading before the class discussion of the topic. In the class discussion I will usually cover the concepts and issues that are most important and most challenging, *reinforcing* and *extending* what is in the required reading. I suggest that after the class session you review the assigned reading to solidify your understanding.

It is highly recommended to keep up with current economic developments, both for class purposes and for your own benefit. You can do this by reading the relevant articles in a good newspaper (e.g., *Financial Times*, *Wall Street Journal*, *New York Times*) or weekly magazine (e.g., *Economist*).

Problem Sets and Slides Used in Class

Our ultimate goal is that you build your ability to *use and apply* the concepts and tools developed in the course. The best way to do this is to *practice actively outside of the class sessions*.

- Several problem sets will be distributed, with suggested answers attached. The problem sets are for your use in your efforts to master the material; answers need not be turned in.
- I will post examples of in-class exam questions along with suggested answers, on the NYU Classes course web site.
- Questions and problems in the textbook are another source of practice items. *If an entire chapter is assigned as required reading, then all questions and problems at the end of this chapter are relevant.* If only a part of a chapter is assigned as required reading, then the course outline indicates the relevant questions and problems.

One way to get active with this material is to work with a few other people in the class (as a study group) to discuss the problem sets, the sample quiz questions, and/or the text questions.

Hard copies of the slides used in the class sessions will be distributed at the beginning of the discussion of each topic.

Course Requirements and Evaluation

Evaluation is based on the following items, with weights noted.

In-class Exam #1, session 6	45%
Take-home Exam #2	19%
Take-home Exam #3	26%
Contributions to class discussion	10%

Exams

The in-class exam #1 covers demand, costs, monopoly, and perfect competition, the material for Sessions 1, 2, 3, and 4. For the in-class exam #1:

- Each participant is permitted to bring two sheets of paper (8½ by 11 inches) with notes on both sides, to refer to during the exam.
- You may also use a calculator. But, you may not use any device that is capable of wireless transmission.
- Otherwise, the in-class exam #1 is closed-book.

Take-home exam #2 covers oligopoly (including applications of game theory). It will be distributed at Session #7 and due at 9:00 AM on Friday, May 19, 2017.

Take-home Exam #3 covers material on economic efficiency, market failures, government policies that can reduce efficiency, and international trade. It will be distributed at Session 9 and due at 9:00 AM on Saturday, June 3, 2017.

You may find the exams difficult. My goal in creating an exam is to provide you with a substantial *challenge*. I want to see how far you can go with the material. The best answers to exam questions often are based on the abilities:

- to apply concepts and tools
- to use judgment
- to develop new insights about problems that you have not seen before the exam
- to make connections to find the most relevant concepts and tools to use in your answers
- to answer the question that is asked, not some other question

Class Participation

Class participation will be evaluated on the basis of contributions to class discussions. In the evaluation, quality is more important than quantity. In addition, the evaluation of class participation could be affected adversely by lack of attendance or creating negative classroom externalities.

Responsibilities

As the teacher I have the *responsibility* to organize and present the material and to facilitate your learning. As a student you have *responsibility* for your own learning.

Furthermore, you are responsible for complying with Stern's Code of Conduct. The Code requires each student to act with integrity in all academic activities. No cheating or plagiarism of published work, work posted on the web, or work done by other students will be tolerated. Any suspected case can be referred to the School's Judiciary Committee.

Actions that have negative effects on others will not be tolerated in the classroom. If you must arrive late or leave early, you must do so as quietly as possible. No cell phones should be audible during class sessions. If you want to use a laptop during class sessions, please take a seat in one of the back two rows.

Tutor and On-line Review Sessions

Mr. Jacopo Perego, an NYU Ph.D. student in economics, will serve as the group tutor for the course. He will run most of the optional review sessions for the course, and he will be available to answer questions about the course concepts and analysis. The best way to reach him with a question or a request to meet or talk is by e-mail: jacopo.perego@nyu.edu.

Jacopo will run five optional on-line review sessions. These sessions are scheduled:

- Monday, April 3, 7:00 PM.
- Monday, April 10, 7:00 PM.
- Monday, April 17, 7:00 PM.
- Wednesday, April 26, 7:00 PM.
- Monday, May 1, 7:00 PM.

We will make best efforts that these review sessions are recorded, with the recorded streams available to students by web links.

Course Web Site

I will maintain the web site for the course using NYU Classes. The web site will include announcements, downloadable files with nearly all class handouts, sample exam questions and suggested answers, and links to videostreams (best efforts) of the class sessions and the review sessions.

SESSION 1: INTRODUCTION DEMAND ANALYSIS

March 25, PM

Topical Outline

Introduction

Market demand

Determinants of quantity demanded by household consumers [or by user firms]

Product price

Buyer income [or quantity of user-firm output]

Substitutes and complements

Preferences and the role of advertising [or technologies available to user firms]

Responsiveness: elasticities

Consumer surplus

Required Reading

Baye, chapter 1. Two things to note:

- On pp. 12-16, there is a presentation of present value. I will presume that you know what present value is and what are some of the key implications (e.g., money received further in the future is worth less today than would be the same amount of money received sooner), but I will not ask you to make detailed present value calculations. (You should know how to make these calculations, but that is for other courses.) For the Problems on pp. 23-28, the following can be omitted: 2, 4, 5, 10, 11, 12, 15, 16, 17, 18, and 20.
- The Appendix to Chapter 1 is useful to understand or review the mathematics of maximization, but such math is not essential to our course. I will teach the course mostly using graphs and verbal explanations, with some algebra, and these tools are the important ones for everyone to learn and master. It is possible to learn the material for the course using calculus-based mathematics. If calculus and algebra help you to learn the material, then please use the calculus and algebra that is provided in various places in the textbook.

Baye, pp. 31-39. [Relevant Problems on pp. 58-63 are 1, 4, and 5.]

Baye, pp. 65-83. [Relevant Problems on pp. 95-100 are 1, 2, 3, 4, 5, 6, 11, 13, 14, 15, 16, and 21.]

SESSION 2: COST ANALYSIS

April 7, PM

Topical Outline

Opportunity cost: explicit and implicit

Generic cost analysis: short-run

 Total, fixed, and variable costs

 Average and marginal costs

Generic cost analysis: long run

 Economies of scale

 Economies of scope

 Learning economies

Industry analysis

Required Reading

Baye, pp. 136-138 (begin at “The Production Function”, and stop at the top p. 138 before ‘Measures of Productivity’), and 152-166 (stop after the top two lines of p. 166).
[Relevant Problems on pp. 167-172 are 4, 6, 7, 8, 16, 17, 18, and 22.]

Baye, chapter 7.

SESSION 3: MONOPOLY: USING SELLER'S MARKET POWER

April 8, PM

Topical Outline

Monopoly: structural conditions

Pricing for profit maximization: base case

Uniform price to all buyers

Pricing for profit maximization: strategies that may yield greater profit

Perfect (or first-degree) price discrimination

Group or segment (or third-degree) price discrimination

Indirect segment price discrimination

Discrete schedule of declining prices (second-degree price discrimination)

Two-part pricing

Block pricing

Advertising for profit maximization

Required Reading

Baye, pp. 241-253 (begin at “Monopoly” and stop at “Implications of Entry Barriers”), and 260-262 (stop at “Answering the Headline”). [Relevant Problems on pp. 263-268 are 4, 8, 14, 15, 18, 19, 21, and 23.]

Baye, pp. 340-344, 347-360 (stop at “Transfer Pricing”), and 366 (section “Answering the Headline”). [Relevant Problems on pp. 367-371 are 2, 3, 4, 5, 6, 7, 10, 11, 12, 13, 14, 15, 16, 18, and 20.]

SESSION 4: COMPETITIVE INDUSTRY: NO MARKET POWER

April 21, PM

Topical Outline

Perfect competition: structural conditions

Firm profit maximization

Individual firm supply curve

Short run market supply curve

Responsiveness: price elasticity of supply

Producer surplus

Demand and supply

 Competitive market equilibrium: short run

 Long-run competitive market equilibrium

 Dynamics: supply shift, demand shift; short run and long run

Product differentiation and monopolistic competition

Required Reading

Baye, pp. 230-241 (begin at “Perfect Competition” and stop at “Monopoly”). [Relevant Problems on pp. 262-268 are 1, 2, 11, 12, and 20.]

Baye, pp. 30 (section “Headline”), 39-47 (begin at “Supply” and stop at “Price Restrictions...”), and 53-58 (begin at “Comparative Statics”). [Relevant Problems on pp. 58-63 are 3, 9, 11, 12, 13, 14, 15, 17, 19, and 20.]

Baye, pp. 229 (section “Headline”), 255-260 (omit the paragraph on p. 259 that begins “As in the case of monopoly...” and ends “...concern with profits.”), and 262 (section “Answering the Headline”). [Relevant Problems on pp. 263-268 are 3, 5, 7, 13, and 16.]

SESSION 5: OLIGOPOLY AND STRATEGY: COMPETITION AMONG A SMALL NUMBER OF FIRMS

April 22, PM

Topical Outline

Firm decision-making: strategy

Game theory

Defending sellers' market power: barriers to entry

Scale economies

Absolute cost advantages

Aspects of product differentiation

Government policies

Required Reading

Baye, pp. 371-373 (begin at “Conditions for Oligopoly” and stop at “Profit Maximization...”).

Baye, Chapter 10 (you can essentially ignore the discussion of secure strategy on p. 305-306, this is generally not the correct way to play a game).

Richard E. Caves, *American Industry: Structure, Conduct, Performance*, seventh edition (Prentice Hall, 1992), pp. 22-30.

SESSION 6: OLIGOPOLY (continued)

May 5, PM

First 120 minutes: Exam #1

[Note: The break on this day will be 30 minutes later than usual, immediately after the exam.]

Topical Outline

Oligopoly pricing

Rivalry: prisoners' dilemma

Coordination and repetition

Networks and (one version of) penetration pricing

Oligopoly: non-price decisions

Rivalry: first-mover advantage

Required Reading

Baye, pp. 362-365 (begin at "Price Matching").

Baye, pp. 406-407 (section "Headline") and pp. 421-429. [Relevant Problems on pp. 430-434 are 3, 4, 6, 8, 10, 11, 14, 19, and 20.]

**SESSION 7: ECONOMIC EFFICIENCY
MARKETS MAY FAIL: MONOPOLY, EXTERNALITIES, AND PUBLIC
GOODS**

May 6, PM

Topical Outline

Economic efficiency

Monopoly, competition laws, and regulation

Externalities

Resolving externalities

 Internalize by expansion, acquisition, or merger

 Joint private action

 Government policies

Public goods

Distribute Take-home Exam #2

Required Reading

Luis M. B. Cabral, *Introduction to Industrial Organization* (MIT Press, 2000), pp. 26-29.

Baye, pp. 253-254 (sub-section “Implications of Entry Barriers”). [Relevant Problem on pp. 263-268 is 6.]

Baye, pp. 435-444, and 461 (section “Answering Headline”). [Relevant Problems on pp. 462-466 are 1, 2, 5, 8, 11, 12, 13, and 23.]

Jeffrey M. Perloff, *Microeconomics*, seventh edition (Pearson, 2015), pp. 595-610.

SESSION 8: MARKETS MAY FAIL: ASYMMETRIC INFORMATION GOVERNMENT POLICIES CAN DESTROY EFFICIENCY

May 19, AM

Take-home Exam #2 due by 1:30 PM

Topical Outline

Asymmetric information, adverse selection, and moral hazard
Signaling, screening, and regulation
Government policies when there are no market failures
The effects of taxation: excise tax
Price floor

Required Reading

Baye, pp. 384-390 (stop at “Auctions”). [Relevant Problems on pp. 400-404 are 5, 8, 10, 13, 15, 17, 18, 22, and 23.]

Baye, pp. 448-457 (stop at “Government Policy...”). [Relevant Problems on pp. 462-466 are 4, 5, 9, 10, 14, 16, 17, and 21.]

Baye, pp. 41-42 (sub-section “Taxes”) and 47-52 (begin at “Price Restrictions...”). [Relevant Problems on pp. 58-63 are 2, 6, 7, 8, 10, 16, 18, 22, and 23.]

**SESSION 9: GOVERNMENT POLICIES CAN DESTROY EFFICIENCY (continued)
INTERNATIONAL TRADE**

May 20, AM

Topical Outline

Price support with government purchase

Price ceiling

International trade: gains from trade, winners and losers

Government policies that limit imports: effects of a tariff

Quotas and other nontariff barriers

World Trade Organization

Distribute Take-home Exam #3

Required Preparation

Thomas A. Pugel, *International Economics, Sixteenth Edition* (Irwin, McGraw-Hill, 2016),
chapters 8 and 9.