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 strategy, finance, marketing, and other business areas.

Microeconomics (as the topic of this course is frequently referred to) is an important component of an MBA program. First, microeconomics focuses on specific dimensions of optimal firm decision-making, such as pricing and entry and exit. Second, the formal economics perspective on business plays an important role in other areas of MBA study, such as finance or marketing. Finally, by studying public policy towards market failures, microeconomics highlights important factors conditioning firm strategy.

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).

Prerequisites

You are expected to be comfortable with basic algebra and calculus, including systems of equations, NPV calculations, and simple derivatives.

Required Reading

Most of the required reading is in the textbook for the course. The standard textbook is the eighth edition of Baye and Prince (and all references to Baye in the standard sections “Required Reading” refer to this eighth edition): Managerial Economics & Business Strategy, Eighth Edition by Michael R. Baye and Jeffrey T. Prince (McGraw-Hill Irwin, 2014). [called Baye in designating the required reading for each session]
(It is also acceptable to use the seventh or sixth edition of Baye [then without Prince as a co-author]. The last pages of the syllabus show the relevant information for the Baye assignments for the required reading if you are using the seventh or sixth edition.)

I suggest that you read the assigned material before the class discussion of that 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.

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 quiz 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.

Deliverables and grades

The various “deliverables” in the course are designed to develop different skills:

- **Class participation.** It is important to integrate what you learn and be able to express it effectively. Moreover, there is a great deal of collective insight and experience in the class and we all benefit from sharing it. But the quality of your contributions is more important than the quantity. Your attendance, punctuality, and overall citizenship in class are all also relevant dimensions of your participation performance.
- **Individual problem sets.** Problem sets emphasize quantitative applications of the principles and tools developed in class. They are due at the start of class. They will not be graded, but will be marked with a check (and possibly a plus or minus). You are expected to hand these in and to make a reasonable attempt; failure to do so will be penalized. Most of the problems are quantitative, while some are qualitative and may not have definitive “right” or “wrong” answer—it is understanding the underlying issues that is key. You should also note that the problem sets are the best preparation for the exams. Dates and deadlines for all assignments can be found in the detailed course outline.
- **Group projects.** Working with classmates will be an important component of the course, as there is much we can learn from each other’s different experiences and perspectives. Group work will consist of two projects. Each project is like a “big” exercise that aims to help you learn to apply the economic concepts from the course to real-world situations. They are more challenging than the usual problem sets, and so need efforts from all group members.
- **Exams.** There will be two in-class exams, a midterm and a final. Generally, each exam will feature three or four questions similar to those in the problem sets and in the additional practice
problems. Your grade for the course will be based on your contributions to all of these deliverables, weighted as follows:

- Group projects 30% (15% for each)
- Midterm exam 35% (or 20%)
- Final exam 35% (or 50%)

Your performance in terms of class participation and in problem sets will serve as a tiebreaker if you are on the border between two grades. The midterm counts 35% if it increases your grade but only 20% if it does not. This means that if you do better in the midterm than in the final, then the midterm will count 35%. By contrast, if you do better in the final than the midterm, then the midterm will count only 20%. The reason for doing this is that the course will move quickly and I am sensitive to the fact that some students may need some time to familiarize themselves with what economics is about. Ultimately I care about what you learn by the end of the course—the grading scheme is intended to be consistent with that concern.

Final grades will follow the School’s guidelines for core courses: no more than 35% of the class will receive an A or A-. These guidelines were instituted to address student concerns that different sections of a course might be graded by different standards.

**Exams**

The midterm exam covers material listed in Sessions 1, 2, 3, and 4 of this syllabus. The final exam covers material in Sessions 5 through 10 (assuming that you have already mastered the material in Sessions 1 through 4).

For the midterm exam, each participant is permitted to bring one sheet of paper (8½ by 11 inches) with notes on both sides, to refer to during the exam. For the final exam, 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. For each exam, you may also use a calculator. But, you may not use any device that is capable of wireless transmission. Otherwise, the exams are closed-book.

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

**Exams and re-grading**

You are responsible for checking the exam dates and avoid any conflict with other commitments. Exams will not be re-administered on other dates. Questions about grading must be made in writing and no more than a week after the exams are returned.
Responsibilities

As the instructor 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.

Course Web Site

I will maintain a 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.

Students with disabilities

If you have a qualified disability and will require academic accommodation during this course, please contact the Moses Center for Students with Disabilities (CSD, 998-4980) and provide me with a letter from them verifying your registration and outlining the accommodations they recommend. If you will need to take an exam at the CSD, you must submit a completed Exam Accommodations Form to them at least one week prior to the scheduled exam time to be guaranteed accommodation.

Getting help

I would like each of you to learn and gain as much as you can from this course. If you are stuck, or have any difficulty with the material, don’t hesitate to ask for assistance.
SESSION 1: INTRODUCTION AND DEMAND ANALYSIS
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. 14-19, 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. 27-33, the following can be omitted: 2, 4, 5, 10, 11, 12, 15, 16, 17, 18, and 20.
- Read the Appendix to Chapter 1 is optional.

Baye, pp. 38-48. [Relevant Problems on pp. 69-75 are 1, 4, and 5.]
Baye, pp. 78-99. [Relevant Problems on pp. 114-121 are 1, 2, 3, 4, 5, 6, 11, 13, 14, 15, 16, and 21.]

SESSION 2: COST ANALYSIS; PROCURING INPUTS; PRINCIPAL-AGENT ISSUES
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
The firm: acquiring and using resource inputs
Transaction costs
Specialized investments and asset specificity
Opportunism
Spot exchange, long-term contract, vertical integration
Principal-agent problems
Ideal resolution and why it is unlikely
Partial resolution

Required Reading
Baye, pp. 164-165 (begin at “The Production Function”, and stop at the bottom of p. 165), and 183-198 (stop after the top two lines of p. 198; also, omit the box “Fringe Benefits and Input Substitution” at the top of p. 184). [Relevant Problems on pp. 200-206 are 4, 6, 7, 8, 16, 17, 18, and 22.]
Baye, chapter 6 (excluding Appendix).
SESSION 3: MONOPOLY: USING SELLER’S MARKET POWER

Industry analysis
Monopoly: structural conditions
Pricing for profit maximization
Uniform price to all buyers
Perfect (or first-degree) price discrimination
Group or segment (or third-degree) discrimination
Indirect segment discrimination
Discrete schedule of declining prices (second-degree price discrimination)
Two-part pricing
Block pricing
Advertising for profit maximization

Required Reading
Baye, chapter 7.
Baye, pp. 287-301 (begin at “Monopoly” and stop at “Implications of Entry Barriers”), and 310-312 (stop at “Answering the Headline”). [Relevant Problems on pp. 314-321 are 4, 8, 14, 15, 18, 19, 21, and 23.]
Baye, pp. 409-414 (stop at “A Simple Pricing Rule…”), 416-431 (stop at “Transfer Pricing”), and 437-438 (section “Answering the Headline”). [Relevant Problems on pp. 439-445 are 2, 3, 4, 5, 6, 7, 10, 11, 12, 13, 14, 15, 16, 18, and 20.]

SESSION 4: COMPETITIVE INDUSTRY: NO MARKET POWER

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. 275-287 (begin at “Perfect Competition” and stop at “Monopoly”). [Relevant Problems on pp. 314-321 are 1, 2, 11, 12, and 20.]
Baye, pp. 37 (section “Headline”), 48-56 (begin at “Supply” and stop at “Price Restrictions…”), and 62-68 (begin at “Comparative Statics”). [Relevant Problems on pp. 69-75 are 3, 9, 11, 12, 13, 14, 15, 17, 19, and 20.]
Baye, pp. 274 (section “Headline”), 303-310 (omit the paragraph on p. 308 that begins “As in the case of monopoly…” and ends “…concern with profits.”), and 312 (section “Answering the Headline”). [Relevant Problems on pp. 314-321 are 3, 5, 7, 13, and 16.]
SESSION 5: EXAM AND OLIGOPOLY & STRATEGY: COMPETITION AMONG A SMALL NUMBER OF FIRMS
First 100 minutes: Midterm exam (covers material shown in Sessions 1, 2, 3, and 4)
Firm decision-making: strategy
Game theory
Defending sellers’ market power: barriers to entry
Scale economies

Required Reading
Baye, pp. 326-328 (begin at “Conditions for Oligopoly” and stop at “Profit Maximization…”).
Baye, chapter 10 (you can essentially ignore the discussion of secure strategy on p. 368, this is generally not the correct way to play a game).

SESSION 6: OLIGOPOLY (continued)
Absolute cost advantages
Aspects of product differentiation
Government policies
Oligopoly pricing
Rivalry: prisoners’ dilemma
Coordination and repetition
Limit-pricing, predatory pricing, penetration pricing
Oligopoly: non-price decisions
Rivalry: first-mover advantage

Required Reading
Baye, pp. 434-437 (begin at “Price Matching” and stop at “Answering the Headline”).

SESSION 7: ECONOMIC EFFICIENCY; MARKETS MAY FAIL: MONOPOLY
Economic efficiency
Monopoly, competition laws, and regulation

Required Reading
Baye, pp. 301-303 (sub-section “Implications of Entry Barriers”). [Relevant Problem on pp. 314-321 is 6.]
Baye, pp. 523-534, and 552 (section “Answering Headline”). [Relevant Problems on pp. 554-560 are 1, 2, 5, 8, 11, 12, 13, and 23.]

SESSION 8: MARKETS MAY FAIL: EXTERNALITIES, PUBLIC GOODS, AND ASYMMETRIC INFORMATION
Externalities
Resolving externalities
Internalize by expansion, acquisition, or merger
Joint private action
Government policies
Public goods
Asymmetric information, adverse selection, and moral hazard
Signaling, screening, and regulation
Required Reading
Baye, pp. 462-468 (stop at “Auctions”). [Relevant Problems on pp. 480-486 are 5, 8, 10, 13, 15, 17, 18, 22, and 23.]
Baye, pp. 538-548 (stop at “Government Policy...”). [Relevant Problems on pp. 554-560 are 4, 5, 9, 10, 14, 16, 17, and 21.]

SESSION 9: PRICE COMPETITION AND COOPERATION
Bertrand Game, Bertrand trap.
Avoiding the Bertrand trap: product differentiation, limiting capacity, cooperation and repeated games.

Required Reading
TBA.

SESSION 10: OTHER IN OLIGOPOLY
Visibility and Credibility.
Commitment and Entry Deterrence.

Required Reading
TBA.

SESSION 11: GOVERNMENT POLICIES CAN DESTROY EFFICIENCY
Government policies when there are no market failures
The effects of taxation: excise tax
Price floor
Price support with government purchase
Price ceiling

Required Reading
Baye, pp. 50-51 (sub-section “Taxes”) and 56-62 (begin at “Price Restrictions...” and stop at “Comparative Statics”). [Relevant Problems on pp. 69-75 are 2, 6, 7, 8, 10, 16, 18, 22, and 23.]

SESSION 12: FINAL EXAM
First 15 minutes: Optional last-minute question session. (The only thing that I will do is answer questions that you raise about material from the course.)

Beginning 20 minutes after the start of the class: Final exam (focuses on material in Sessions 5 through 11; but I will assume that you know and can use all material from the first part of the course.)
Syllabus Appendix
Baye assignments for the Required Reading, if you are using the Seventh Edition

SESSION 1: INTRODUCTION AND DEMAND ANALYSIS
Baye, chapter 1.
Baye, pp. 36-46. [Relevant Problems on pp. 66-72 are 1, 4, and 5.]
Baye, pp. 74-95. [Relevant Problems on pp. 110-116 are 1, 2, 3, 4, 5, 6, 11, 13, 14, 15, 16, and 21.]

SESSION 2: COST ANALYSIS; PROCURING INPUTS; PRINCIPAL-AGENT ISSUES
Baye, pp. 156-157 and 175-190 (through the top two lines of p. 190; also, omit the box “Fringe Benefits and Input Substitution” at the top of p. 176). [Relevant Problems on pp. 191-198 are 4, 6, 7, 8, 16, 17, 18, and 22.]
Baye, chapter 6 (excluding Appendix).

SESSION 3: MONOPOLY: USING SELLER’S MARKET POWER
Baye, chapter 7.
Baye, pp. 265-277. [Relevant Problems on pp. 303-310 are 1, 2, 11, 12, and 20.]
Baye, pp. 35 (Headline), 46-54, and 60-65. [Relevant Problems on pp. 66-72 are 3, 9, 11, 12, 13, 14, 15, 17, 19, and 20.]
Baye, pp. 264 (Headline), 293-300 (omit the paragraph on p. 298 that begins “As in the case of monopoly...” and ends “...concern with profits.”), and 302 (Answering the Headline). [Relevant Problems on pp. 303-310 are 3, 5, 7, 13, and 16.]

SESSION 5: OLIGOPOLY AND STRATEGY
Baye, pp. 314-316.
Baye, chapter 10 (you can essentially ignore the discussion of secure strategy on p. 354, this is generally not the correct way to play a game).

SESSION 6: OLIGOPOLY (continued)
Baye, pp. 420-423.

SESSION 7: EXAM; ECONOMIC EFFICIENCY; MARKETS MAY FAIL
Baye, pp. 291-293. [Relevant Problem on pp. 303-310 is 6.]
Baye, pp. 507-518, and 536-537 (Answering Headline). [Relevant Problems on pp. 538-544 are 1, 2, 5, 8, 11, 12, 13, and 23.]

SESSION 8: MARKETS MAY FAIL
Baye, pp. 448-454. [Relevant Problems on pp. 466-472 are 5, 8, 10, 13, 15, 17, 18, 22, and 23.]
Baye, pp. 522-532. [Relevant Problems on pp. 538-544 are 4, 5, 9, 10, 14, 16, 17, and 21.]

SESSION 11: GOVERNMENT POLICIES CAN DESTROY EFFICIENCY
Baye, pp. 48-49 (sub-section on taxes) and 54-60. [Relevant Problems on pp. 66-72 are 2, 6, 7, 8, 10, 16, 18, 22, and 23.]

Baye assignments for the Required Reading, if you are using the Sixth Edition

SESSION 1: INTRODUCTION AND DEMAND ANALYSIS
Baye, chapter 1.
Baye, pp. 36-46. [Relevant Problems on pp. 67-72 are 1, 4, and 5.]
Baye, pp. 74-95. [Relevant Problems on pp. 110-116 are 1, 2, 3, 4, 5, 6, 9, 11, 12, 13, 14, and 19.]

SESSION 2: COST ANALYSIS; PROCURING INPUTS; PRINCIPAL-AGENT ISSUES
Baye, pp. 157-158 and 177-191 (omit the box “Fringe Benefits and Input Substitution” at the top of p. 178). [Relevant Problems on pp. 192-199 are 4, 6, 7, 8, 14, 15, 16, and 20.]
Baye, chapter 6 (excluding Appendix).

**SESSION 3: MONOPOLY: USING SELLER’S MARKET POWER**
Baye, chapter 7.
Baye, pp. 278-292 and 301-303. [Relevant Problems on pp. 304-311 are 4, 8, 12, 13, 16, 17, 19, and 21.]
Baye, pp. 397-401, 404-419 (stop at the sub-section on “Transfer Pricing”), and 426 (Answering the Headline). [Relevant Problems on pp. 427-433 are 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 16, and 18.]

**SESSION 4: COMPETITIVE INDUSTRY: NO MARKET POWER**
Baye, pp. 266-278. [Relevant Problems on pp. 304-311 are 1, 2, 9, 10, and 18.]
Baye, pp. 35 (Headline), 46-54, and 60-65. [Relevant Problems on pp. 67-72 are 3, 9, 10, 11, 12, 13, 15, 17, and 18.]
Baye, pp. 265 (Headline), 294-301 (omit the paragraph on p. 299 that begins “As in the case of monopoly...” and ends “...concern with profits.”), and 303 (Answering the Headline). [Relevant Problems on pp. 304-311 are 3, 5, 7, 11, and 14.]

**SESSION 5: OLIGOPOLY AND STRATEGY**
Baye, pp. 316-318.
Baye, chapter 10 (you can essentially ignore the discussion of secure strategy on p. 354, this is generally not the correct way to play a game).

**SESSION 6: OLIGOPOLY (continued)**
Baye, pp. 422-426.

**SESSION 7: EXAM; ECONOMIC EFFICIENCY; MARKETS MAY FAIL**
Baye, pp. 292-294. [Relevant Problem on pp. 304-311 is 6.]
Baye, pp. 509-520, and 539 (Answering Headline). [Relevant Problems on pp. 540-545 are 1, 2, 5, 8, 9, 10, 11, and 21.]

**SESSION 8: MARKETS MAY FAIL**
Baye, pp. 450-456. [Relevant Problems on pp. 468-473 are 5, 8, 11, 13, 15, 16, 20, and 21.]
Baye, pp. 524-534. [Relevant Problems on pp. 540-545 are 4, 5, 12, 14, 15, and 19.]

**SESSION 11: GOVERNMENT POLICIES CAN DESTROY EFFICIENCY**
Baye, pp. 48-49 (sub-section on taxes) and 54-60. [Relevant Problems on pp. 67-72 are 2, 6, 7, 8, 14, 16, 20, and 21.]