Course Description

The goal of this course is to give you some insight into how markets work. The course is structured in two parts. In the first part of the course, we study decision making by consumers and firms. We explore the fundamentals of demand and identify categories of costs that firms must consider when taking critical business decisions like pricing, exit or market entry. We study how supply and demand determines prices in efficient markets. We learn about market power and how the interplay between cost and demand fundamentals determines profit-maximizing decisions for firms. The second part of the course focuses on situations where, for one reason or another, markets don’t work efficiently. Here, we emphasize the importance of strategic behavior, as modeled by game theory. Strategic interactions between firms in markets can be represented as games and we learn to predict the outcomes of such games and analyze how best firms can respond to their rivals’ strategies. We discuss the basics of competition (how do firms compete on price?) and cooperation (how do firms collude?), asymmetric information (what happens when sellers know more than buyers?) and unintended effects (externalities).

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.

Our experience with students in prior years is that much of this is intuitive. But much is not, and our hope is that the combination of theoretical structure and practical examples will be useful in the years to come. It will not make you a success on its own, but it might give you an edge a few times when it matters.
Prerequisites

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

Course Materials

- Lecture notes. They review the theory relevant to most classes. In a few pages, they outline and explain the conceptual issues for the day, define terms, give examples, and (where it makes sense) work through numerical problems.

- Textbook. There is no required textbook for this course. However, if you want to have a reference text, I recommend Michael Baye’s Managerial Economics and Business Strategy (McGraw-Hill, 5th edition), which is available in the bookstore.

- Slides. The slides are a forecast of where the class will head, but if the discussion moves in another interesting direction we will generally let it run its own course.

- Additional materials. On occasions, I will post additional materials on Blackboard, such as newspaper articles or research papers.

The notes, slides and assignments will be handed out on the first day of class and posted on the course management system (http://newclasses.nyu.edu).

Deliverables

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.

- Exams. There will be two in-class exams, one in the middle and the other at the end of the course (see course outline for dates). The format will be similar to the practice exams that I will distribute in due course.

- 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 be marked with a
check (and possibly a plus or minus). You are expected to hand these in and make a reasonable attempt, failure to do so will be penalized.

- Group work will be an important component of the course, as there is a lot we can learn from each other’s different experiences and perspectives. Group work is to be done in groups of about 5 students and will include a combination of the following.
  - Projects: Two generally more complex and realistic quantitative assignments that use and extend the principles and tools developed in class.
  - Presentations: Every group will make a presentation to the class on a topic selected from a list described in a separate document. The goals are to apply economic principles to a real problem and to hone your communication skills. The content is generally more qualitative than assignments and projects.

Your grade for the course will be based on your contributions to all of these deliverables, weighted as follows:

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Weight</th>
</tr>
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<tbody>
<tr>
<td>Class participation</td>
<td>10%</td>
</tr>
<tr>
<td>Individual problem sets</td>
<td>“check+/–”</td>
</tr>
<tr>
<td>Group projects (2)</td>
<td>25%</td>
</tr>
<tr>
<td>Group presentation</td>
<td>15%</td>
</tr>
<tr>
<td>Mid-term exam</td>
<td>20% (only if it helps you!)</td>
</tr>
<tr>
<td>Final exam</td>
<td>30% (or 50%)</td>
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Your performance in terms of problem sets will serve as a tiebreaker if you are on the border between two grades.

The mid-term only counts if it increases your grade. This means that if you do better in the final than the mid-term, then the mid-term will not count. The reason for doing this is that the course will move fast 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 guideline for core courses: no more than 35% of the class will receive A or A–. This guideline was instituted in response to student concerns that different sections of a course might be graded by different standards.

Dates and deadlines for all assignments can be found in the detailed course outline.
Exams and re-grading
You are responsible for checking the midterm exam dates and avoid any conflict with other commitments. During the exams, you are not allowed to consult class notes, books, or any other material. However, you may consult one page of notes (a standard-size sheet of paper written on two sides). Questions about grading must be made in writing and no more than a week after the exams are returned. You should send me an email and then give me the exam with a written note describing the problem.

Honor Code

The Stern community believes that honesty and integrity are necessary for rewarding academic and professional experiences. These qualities form the basis for the strong trust among members of the academic community (students, faculty, and administrators) that is essential for excellence in education. The Honor Code requires that each student act with integrity in all academic activities and endeavor to hold his or her peers to the same standard.

In this course, you may discuss assignments with anyone, but any written work submitted for a grade should be your own. On exams, you may bring in and consult one piece of paper with anything on it you like, but your answers should be entirely your own work.

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.

Assistance & Communication

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. Please send me an email (agavazza@stern.nyu.edu) or stop by my office (KMC 7th floor, room 81). I try my best to respond promptly to email. My office hours are before and after class. If this doesn’t work for you, feel free to email me and set up an alternate time.

You can also get help from the teaching assistant, TBA. You can email her at (TBA) with questions, or set up a mutually convenient time to meet.

All announcements regarding the course will be made on Blackboard. Besides administrative issues, I may post clarifications on the class material (arising out of our discussion in class or following from a fellow student’s questions). You are responsible
for checking Blackboard for announcements on a regular basis (i.e. at least a couple of times a week).
A preliminary list of topics to be covered

Supply and demand. Supply and demand curves, market forces, curves and shifts.


Economic cost analysis. Opportunity cost, sunk cost, marginal costs; economic costs and cash flows.

Market Equilibrium. Short run and long run competition.

Basic pricing. Profit maximization and the elasticity rule.


Price discrimination. Market segmentation.

Issues in Pricing. Versioning and Bundling.

Strategy and games. Strategies and payoffs, normal and extensive-form games (tables and trees), best responses, Nash equilibrium. The Prisoners’ Dilemma, the pricing game and other important games.

Hazards of price competition. Price setting in “commodity” markets: the “Bertrand trap” and how to avoid it.

Competition and cooperation. Cooperative situations and how to produce them, trigger strategies, factors that make cooperation easier.

Commitment Credibility. The value of a credible commitment. First mover advantages. Entry and Exit.

Asymmetric information. What happens when the seller knows more than the buyer? When the manager knows more than the owner? The agency problem. The lemons problem. Signaling and reputation. Actions and beliefs.

Where in Baye are the Topics that We Cover in Class?

*Firms and Markets* does not follow any of the existing textbooks closely (and that is why we have developed and updates notes to supplement the lectures). However, many have found it useful to have additional supplementary materials and sources for examples and practice questions, though many have found that they can manage the course very well without much reference to textbooks.

In addition to differing in coverage, Baye’s presentation is in a somewhat different order and style from ours.

This is a guide to the textbook. It is designed to help you find the bits in Baye that are relevant for the topics covered in class. When you read Baye, use the lectures as a guide to what is important: in some bits Baye goes into more detail than I think is useful. There are a number of Editions of Baye floating around (we can discuss in class why …)

Loosely, corresponding to our topics you will find the relevant material from Baye (5th and 6th Editions) as follows:

**Supply and Demand:**
36-64 (5th Edition)  
36-65 (6th Edition)

**Consumer Demand:**
36-44, 74-95, 117-135 (this last section is a good example of where Baye goes into a little too much detail, at times) (5th Edition)  

**Economic Costs:**
45-52, 177-191 (5th Edition)  
46-52, 177-190 (6th Edition)

**Competitive Markets:**
267-280 (5th Edition)  
266-279 (6th Edition)

**Basic Pricing:**
236-256 (very good background), 280-296, 397-399, 509-518 (5th Edition)  

**Advanced Pricing:**
Market Power:
280-284, 509-518 (5th Edition)

Auctions:
455-466 (5th Edition)
456-466 (6th Edition)

Strategy and Games:

Pricing Games:
315-338 (but particularly 336-338) (5th Edition)
315-338 (but particularly 336-338) (6th Edition)

Repeated Games and Cooperation:

Commitment:
378-386, 484-486, 491-494 (5th Edition)

Asymmetric Information:
449-455, 220-228 (5th Edition)

Externalities and public goods:
518-526 (5th Edition)
520-528 (6th Edition)