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. They are intended to complement the lectures rather than substitute for them.

- 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), 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. Also, I will amend the slides from time-to-time to keep the course up-to-date with current research and events. I will use blackboard to post the most up-to-date slides.

- 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://sternnewclasses.nyu.edu).
Deliverables and Grades

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

- 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. Your grade will be based on such measures as the quality of your contributions, attendance, punctuality, and whether you are doing the problem sets, in addition to your overall citizenship in class.

- 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). Making a bona fide attempt at problem sets will contribute to your participation grade. Most of the problems are quantitative; some require a qualitative answer (the latter typically refer to mini-cases that my colleagues and I have written over the years) and for these there may be no definitive right or wrong, it is understanding the issues that is key. The problems marked “challenge problems” are harder than most and need not be perfect to get a check. Your overall performance on problem sets will also serve as an informal tie-breaker if you are on the border between two grades. You should also note that the problem sets are the best preparation for the exams.

- Group projects. Generally more complex and realistic quantitative assignments that use and extend the principles and tools developed in class.

- Mid-term exam. Generally three or four problems, similar to the practice questions that I will distribute during the course.

- Final exam. Generally three or four problems, similar to the practice questions that I will distribute during the course.

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>
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<tbody>
<tr>
<td>Class participation</td>
<td>10%</td>
</tr>
<tr>
<td>Individual problem sets (4)</td>
<td>“check+/–”</td>
</tr>
<tr>
<td>Group projects (2)</td>
<td>20%</td>
</tr>
<tr>
<td>Mid-term exam</td>
<td>35%</td>
</tr>
<tr>
<td>Final exam</td>
<td>35%</td>
</tr>
</tbody>
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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, Adam Redstone. You can email him at (adam.redstone@gmail.com) 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).
Firms and Markets: Tentative Outline and Calendar (Fall 2010)

This contains information for Firms and Markets, Fall 2010, Monday session.

Notes:
* denotes that an assignment or group project is due at the beginning of that class, and 
** denotes a midterm in that class.

1. September 27: First Half
   Introduction and Competition. Brief intro then get cracking.

1. September 27: Second Half
   Overview of Competition. Market Equilibrium Demand Curve. Supply Curve

2. October 4: First and Second Half *
   DUE AT START OF CLASS: INDIVIDUAL PROBLEM SET 1 (MATH REVIEW).
   Consumer demand. Preferences, Budget Set. Demand elasticity

3. October 11*: First and Second Half
   DUE AT START OF CLASS: INDIVIDUAL PROBLEM SET 2 (DEMAND AND COSTS).
   Economic costs. Opportunity cost, sunk cost, marginal costs; economic costs and cash flows.

4. October 18: First Half

4. October 18: Second Half
   Monopoly pricing. Profit maximization and the elasticity rule.
5. **October 25*: First Half

**DUE AT START OF CLASS:** INDIVIDUAL PROBLEM SET 3 (COMPETITIVE MARKETS AND MONOPOLY).
**DUE AT START OF CLASS:** GROUP PROJECT 1 (CALIFORNIA ELECTRICITY MARKET).
**Advanced pricing, I.** Market segmentation.

5. **October 25: Second Half**

**Advanced pricing, II.** Versioning. Bundling.

**Practice / Review.**

6. **November 1: First and Second Half**

**Strategy and games, I.** Strategies and payoffs, normal and extensive-form games (tables and trees), best responses, Nash equilibrium.

**Strategy and games, II.** The prisoner’s dilemma and other important games.

7. **November 8**: First Half

**Midterm examination (in class).** You may consult one sheet of notes (a standard-size piece of paper, double sided, with anything on it you like) and a calculator.

7. **November 8: Second Half**

**Strategy and games, I.** Strategies and payoffs, normal and extensive-form games (tables and trees), best responses, Nash equilibrium.

8. **November 15: First Half**

**Pricing games.** The Bertrand model and applications.

8. **November 15: Second Half**

**Asymmetric Information:** The agency problem. The lemons problem.

9. **November 29*: First Half

**DUE AT START OF CLASS:** INDIVIDUAL PROBLEM SET 4 (GAMES).

**Asymmetric information, II.** The agency problem. The lemons problem.

Auctions: Auction Formats and bidding.

10. December 6: First Half*

DUE AT START OF CLASS: GROUP PROJECT 2 (NEWSPAPERS).

Repeated Games and Cooperation.

10. December 6: Second Half


11. December 13*: First Half

Advanced Topics according to interest. Either:
1. Networks, Externalities and public goods.
2. Economics of Taxation
3. Product Positioning and Differentiation

11. December 13: Second Half

Review session. Come with question.

12. December 20**: First Half

Final examination (in class). You may consult two pages of notes (a standard-size piece of paper with anything on it you like, you can use both sides) and a calculator.

12. December 20: Second Half

Advanced Topics according to interest. Either:
1. Networks, Externalities and public goods.
2. Economics of Taxation
3. Product Positioning and Differentiation
Where in Baye are the Topics that We Cover in Class?

[Baye 5th Edition]

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.

- Demand
  Pages: 36-45, 73-89, 117-145 (this last section is a good example of where Baye goes into a little too much detail, at times)
- Costs
  Pages: 45-52, 177-89
- Competitive Markets
  Pages: 52-64, 267-280
- Monopoly
  Pages: 236-256 (very good background), 280-296, 397-399, 509-518
- Advanced Pricing
  Pages: 404-414

As you can see the organization of Baye is somewhat different from how we run through things in class. After topic 5 things diverge a little more.

- Auctions
  Pages 455-466
- Strategy and Games
  Pages 352-365, 378-386
- Hazards of Price Competition
  Pages 315-338 (but particularly 336-338)
- Asymmetric Information
  Pages 449-455
- Competition and Cooperation
  Pages 330-332, 339-340, 365-377
- Product Differentiation and Positioning
  Baye is not helpful
- Entry and Exit
  Pages 474-486
- Networks and Standards
  Pages 494-500, 518-522