Course Description

The goal of this course is to teach you how to use the tools of microeconomics to understand your business environment. There are two ways in which microeconomics is useful to managers. First, it will help you understand markets. Since business is filled with markets—from product markets to input markets to labor markets to financial markets—this tool will be useful in many contexts. Second, an understanding of microeconomics in general and markets in particular can help you think systematically about managing your firm’s resources. This, in turn, will help you formulate strategic decisions to create and capture value.

We will analyze many practical questions faced by managers, including: How should the presence of uncertainty affect my decision process? How should I account for costs in deciding whether or not to enter a market or how to price a product? What are the effects of different pricing strategies? We will use readings, in-class exercises and cases to equip you with the economic tools to manage for competitive advantage.

Policies and Procedures

Attendance and Preparation: Most of the topics we will cover in microeconomics are cumulative, meaning that new topics build on previous topics. As a result, you should avoid missing class if at all possible and you should do your best to keep up with the material. If you must miss class, you should arrange to copy a classmate’s notes. During several classes we will discuss cases. In order for you and your classmates to get the most out of the case discussion, it is essential that you prepare the case. Preparation means that you have read the case, that you have taken time to think about the discussion questions, and that you are prepared to discuss them thoughtfully in class. All five cases have quantitative components, so answering the discussion questions will require working through some numbers. If you come to class unprepared, please let me know before class starts.

Textbook and Other Readings: There are two different types of readings for this course: textbook and cases/mini-cases. Textbook materials are drawn from both Managerial Economics by William F. Samuelson and Stephen G. Marks, 6th edition and from Lecture Notes for 201a, by Benjamin Hermalin.1 All readings besides the Samuelson and Marks textbook are contained in the course reader.

As mentioned above, you are responsible for reading and preparing the cases before the class for which they are assigned. We will discuss the assigned newspaper articles as mini-cases, so you should read those ahead of time as well. The textbook readings are not required. They

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1 If you find a used version of the 5th edition of Samuelson & Marks, I would be happy to provide a cross-walk between the assignments for this course and that text.
contain useful alternative presentations of class material. You may use them as a preview of what we will be discussing in an upcoming class, as a review after we have discussed the material in class, or not at all, as you see fit.

**Problem Sets and Sections:** Homework problem sets will be posted on the course website, usually on Thursday, and answer sheets will be posted a week after they’re distributed. The Graduate Student Instructor (GSI) will hold optional sections on Friday where the problem set solutions will be discussed. The sections meet at 10-11:30AM for the blue cohort and 11:30AM-1:00PM for the gold cohort, both in room C210.

Problem sets will not be graded. They are entirely discretionary, but they are very useful aids to learning the material and are likely to reflect very closely some of the material on the exams. I strongly recommend that you work on them before getting the answer sheets and that you go over the answer sheets to make sure that you understand each problem. Feel free to work on the problem sets in teams. Often trying to explain the material to someone else can either enhance your own grasp of it or point out holes in your understanding. Be wary, however, of allowing others’ understanding of the material to substitute for your own. Remember that on the exams, you’re on your own.

**Team Assignment:** Much of the work of business takes place in teams. To enhance your experience with teams and with your classmates, you will be asked to write a short memo analyzing a company’s cost structure and pricing policies. Further details about the assignment are at the end of the syllabus.

**Exams and Grading:** Grading will be based on exams and the team assignment. There will be two exams: a midterm exam on Friday, September 18th 10AM to noon (in Andersen Auditorium) and the final exam on Friday, October 16th 10AM to 1PM (in Andersen Auditorium). The final exam covers material from the entire course.

Your grade for the course will be based on the higher of two possible averages:

\[
\text{A} = \begin{cases} 
0.2 \cdot \text{Midterm} + 0.5 \cdot \text{Final} + 0.2 \cdot \text{Team Assignment} + 0.1 \cdot \text{Class Participation} \\
0.7 \cdot \text{Final} + 0.2 \cdot \text{Team Assignment} + 0.1 \cdot \text{Class Participation}
\end{cases}
\]

Note that the second average ignores the midterm exam score. The midterm affects your grade only if you do better on it than on the final.

**Key dates:**

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pricing Project Company Due</td>
<td>Tuesday, September 8th</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>Friday, September 18th</td>
</tr>
<tr>
<td>Pricing Project Due</td>
<td>Tuesday, October 6th</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Friday, October 16th</td>
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How to do well in this class: (1) *Keep up.* The class will build momentum quickly and each lecture’s material will form the foundation for later material, so it is important that you feel comfortable with the material the week we cover it and that you do not fall behind. (2) *Do the homework assignments.* These provide an opportunity to practice using the material we’ve gone over in class and to sharpen your skills and understanding. You should work through them over the course of the week and then check your answers versus the posted answer keys.

**Contact Information and Course Website:**
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The course website is located at: [http://faculty.haas.berkeley.edu/wolfram/201a/index09.html](http://faculty.haas.berkeley.edu/wolfram/201a/index09.html). The website will have electronic versions of all the materials handed out in class (including syllabus, class overheads, in-class exercises, and problem sets). Around exam time, I will also post previous years’ exams and practice problems.
COURSE SCHEDULE

Module I: Basic Tools

Class 1 (8/27): Introduction to Markets and the Basics of Problem Solving

Readings:

- Mankiw, Chapter 1: Ten Principles of Economics
- Lecture Notes for 201a, Preface and Sections 1.1-1.3
- Samuelson and Marks, Chapter 1, Chapter 7 to p. 269

Thought Exercises:

- Think of several goods that are scarce. Now think of several goods that are not scarce.
- Would you expect the prices for a commodity to be different at two different locations? By how much could the prices differ?
- If you reduce your price, what happens to demand for your product? To the quantity demanded?
- Do you think the perfectly competitive market model describes the market for California tomatoes well? Does it describe the market for Diet Coke well? Does it describe the industry you worked in well? Why or why not?
- What happens if the price of a good is above the perfectly competitive equilibrium price? What happens if it is below it?
- Remind yourself about factors that shift demand for and supply of a product.

Section 1 (8/28): Math tools review
Class 2 (9/1): Decision-making under Uncertainty: The Value of Information

Readings:
- Lecture Notes for 201a, Sections 1.4-1.7
- Samuelson & Marks, Chapter 12 to p. 487 and Chapter 13 to p. 511
- Krasker, “Freemark Abbey Winery” CASE

Thought Exercises:
- Write down a decision tree for a set of choices you or the company you came from faced.
- Can you think of an example where obtaining new information would have changed a decision? Could you or your company have waited until it received the information to make the decision?

Module II: Production and Costs

Class 3 (9/3): Real Options and Introduction to Costs

Readings:
- Lecture Notes for 201a, Sections 1.8-1.9, 2.1-2.2
- Samuelson & Marks, Chapter 6 to p. 221
- “‘Winglets’ Help Planes Lift Off, Save Fuel,” Wall Street Journal, 2/4/05
- “Eyes on the Road: Cashing in that Clunker is No Easy Ride,” Wall Street Journal, 07/29/09

Thought Exercises:
- How is the real option concept related to the value of information?
- Can you think of an example from your own experience where the opportunity cost of a good is very different from the accounting cost?
- Have you ever made a decision on the basis of sunk costs?
- Draw a simple decision tree that reflects a sunk cost. Hint: Try changing the amount of the sunk cost and make sure that the decision suggested by the tree does not change.

Section 2 (9/4): Problem Set 1
Class 4 (9/8): Economic Costs

Readings:
- Lecture Notes for 201a, Sections 2.3-2.6
- Samuelson & Marks, Chapter 6, pp. 221-238

Thought Exercises:
- In words, what’s the difference between average cost and marginal cost?
- Take the total cost function $TC(Q)=10+2Q+.5Q^2$. How much are fixed costs in this example? Write down expressions for the ATC, AVC, MC for this function.
- For the cost function above, solve algebraically for the level of $Q$ where ATC is minimized.
- Does this cost function exhibit economies of scale (this is a bit tricky…)?
- Draw an average cost curve (AC) and a marginal cost curve (MC) on the same axes.
- Look at the graph you just drew: is the relationship between AC and MC correct?

Class 5 (9/10): Accounting for Costs

Readings:
- Lecture Notes for 201a, Section 2.7-2.8
- March & Kaplan, “John Deere Component Works (A)” CASE
- “Fixed Costs Chafe at Steel Mills --- Capital-Intensive Producers Are Raising Prices Despite Weak Demand,” Wall Street Journal, 6/10/09

(No Thought Exercises for case-based classes.)

Section 3 (9/11): Problem Set 2 and exam review
Module III: Demand and Pricing

Class 6 (9/15): Demand & Price Setting by a Monopoly

Readings:
- Lecture Notes for 201a, Chapter 3
- Samuelson & Marks, Chapter 3 to p. 96, Chapter 6, pp. 238-245
- Optional: Samuelson & Marks, Chapter 8 to p. 314

Thought Exercises:
- Which demand curve do you think is more elastic, the one faced by Kellogg’s Crispix cereal, or the one faced by all ready-to-eat breakfast cereals?
- Which do you think is more elastic, the demand for gasoline in the short run or the demand for gasoline in the long run?
- Is demand elasticity related to whether the good is a big-ticket item, like a car, or an inexpensive item, like a pack of gum?
- What tradeoffs does a monopolist face as it lowers its price?
- Write down the expression for the marginal revenue for a firm facing a demand curve of \( Q=10-2P \). Just to make sure you got it right, graph the demand curve and your marginal revenue curve on the familiar axes.

Class 7 (9/17): Colonial Homes & Introduction to Price Discrimination

Readings:
- Lecture Notes for 201a, Sections 4.1-4.5
- Samuelson & Marks, Chapter 3, pp. 96-105
- Hashem & Bell, “Colonial Homes” CASE

Thought Exercises:
- Why can’t a firm price discriminate if it’s operating in a perfectly competitive market? Why can’t a firm price discriminate if its consumers can resell the product?
- Think of several examples of third-degree price discrimination other than those discussed in class. Can you think of any examples of first-degree price discrimination?
- Would you as a buyer ever want a supplier to price discriminate?

NO SECTION 9/18: MIDTERM EXAM, 10AM
Class 8 (9/22): Versioning and Packaging

Readings:

- Lecture Notes for 201a, Section 4.6
- Optional: C. Shapiro and H. Varian, Information Rules, Chapter 3

Thought Exercises:

- Think of several ways in which Colonial Homes could have used a price discrimination strategy.
- Explain how versioning is a special example of second-degree price discrimination.
- When pricing automobiles, car companies typically charge a much higher markup over costs for luxury options (such as leather trim) than for more basic options (such as power steering). Explain why.

Class 9 (9/24): Bundling and Competitive Pricing

Readings:

- Lecture Notes for 201a, Section 4.7-4.9
- Samuelson & Marks, Chapter 7, pp. 269-290
- “Ever Heard of Indium? Screen Makers Have, And Some Are Worried,” Wall Street Journal, 8/9/04

Thought Exercises:

- Think of two examples of products that you think are bundled to allow their seller to price discriminate. Do you think consumers’ preferences for the components of the bundles negatively correlated?
- What would a perfectly competitive firm want to do if the market price were below its marginal cost? Above its marginal cost? (Assume that the firm’s marginal cost is increasing in output.)
- What would a perfectly competitive firm want to do if the market price were below its average cost?
- Explain why a perfectly competitive firm decides how much to produce based on its marginal costs and not its average costs.

Section 4 (9/25): Problem Set 3
Class 10 (9/29): Competitive Market Dynamics, Entry and Exit in the Long Run and Monopolistic Competition

**Readings:**

- *Samuelson & Marks*, Chapter 8, pp. 314-318
- “Food Firms Warn of Sugar Shortage,” *Wall Street Journal*, 8/13/09

**Thought Exercises:**

- Why do perfectly competitive firms stay in business if they’re earning zero economic profits?
- Explain to yourself using graphs what happens in a perfectly competitive industry when the price is above the long-run average cost (LRAC).
- Why might an industry served by a monopoly be in a long-run equilibrium?

Class 11 (10/1): Aluminum Industry Case

**Readings:**

- Corts, “The Aluminum Industry in 1994,” *CASE*
- Corts, “Aluminum Smelting in South Africa: Alusaf’s Hillside Project,” *CASE*

**Section 5 (10/2): Problem Set 4**
Module IV: Strategy

Class 12 (10/6): Introduction to Strategic Thinking

Readings:

- Lecture Notes for 201a, Section 5
- Samuelson & Marks, Chapter 10

Thought Exercises:

- Make-up a 2-player, simultaneous move game and depict it in a two-by-two matrix. Do either of your players have a dominant strategy? How many equilibria are there to your game?
- Why isn’t the Winner’s Curse an issue in a second-price auction?

Class 13 (10/8): Bertrand Trap

Readings:

- Lecture Notes for 201a, Section 6
- “In a Tech Backwater, A Profit Fortress Rises,” Wall Street Journal, 7/10/07
- “United Plans Huge Jet Order,” Wall Street Journal, 06/04/09
- “Collusion Inquiry Targets Ice Companies,” Wall Street Journal, 07/08/08

Thought Exercises:

- Convince yourself that p = mc is a best-response if the assumptions underlying the Bertrand Trap hold.
- Explain how customer switching costs would help firms avoid the Bertrand Trap.
- Explain how concerns about future profitability would help firms avoid the Bertrand Trap.

Section 6 (10/9): Problem Set 5
Class 14 (10/13): Asymmetric Information & Externalities

Readings:

- Samuelson & Marks, Chapter 14 to 554, Chapter 11, pp. 424-435

FINAL EXAM FRIDAY 10/16, 10AM
CORPORATE PRICING PROJECT

Summary: You are to analyze the pricing policies of a specific firm. The analysis will take the form of a short memo (max 8 pages).

When it is due: Memos are due on Tuesday, October 6th.

Format: Memos should be in standard word processing format. This means comparable to a Times New Roman 12 font, double-spaced document with standard margins. Memos should be no longer than 8 pages, including any charts and tables.

A successful project memo will include

- A qualitative assessment of the market demand for the firm’s products (e.g. elasticity of demand relative to other comparable products, extent to which the products are differentiated from that of potential competitors).
- A qualitative characterization of the firm’s cost structure (e.g. high fixed cost, low marginal cost, etc.). Discuss factors that could cause the firm’s marginal costs to change. A detailed quantitative analysis is NOT REQUIRED.
- A description of the firm’s current pricing strategy. This means a qualitative assessment of the firm’s approach to pricing rather than a quantitative overview of its actual current prices.
- An assessment of the usage of (or potential for) advanced pricing methods by this firm (e.g. price discrimination, versioning, etc.).
- You may want to discuss any special considerations that impact the firm’s pricing strategies (e.g. learning by doing, reputation).
- Recommendations about the firm’s pricing strategy. Should they stay the course or should they adopt a different strategy? If they should change, how?

How to Pick a Good Company

Below is a list of several companies and the associated products that groups have analyzed in the past. Given the vast array of products that many firms produce, in some cases it may be advisable to pick a specific subset of a firm’s products. A good company will satisfy at least the following three criteria:

- You can readily obtain information about the prices of its products.
- It charges different prices to different consumers. Examples of this abound, but include bulk discounts, periodic sales, advanced purchase discounts, senior citizen discounts, etc.
- It does not sell into a perfectly competitive market. In other words, the firm faces some competition, but no other company produces the identical good. (When you think about it, this doesn’t rule out that many companies, since even if the company is producing a commodity, it may be differentiated from its competition spatially. It would rule out, for instance, a Central Valley orange grower.)
Past companies: Southwest Airlines, Carrot & Stick Press (specialty letterpress printing), Netflix, TiVo, San Francisco Giants, Starbucks, Pebble Beach (greens fees), Clif Bar, match.com.

Sources of Information

In part, this project is a test of your resourcefulness and skill in obtaining information. To keep the problem manageable, you must, however, limit your data search to materials contained in the U.C. Berkeley library system or which are freely available via the Internet.

Suggested Timeline

By Sept. 8th: One person from each team must send me an email indicating which company you will analyze.
By Sept. 15th: Research and write-up the firm’s cost structure.
By Sept. 29th: Research, analyze and write-up the firm’s demand and pricing strategy.
By Oct. 6th: Finalize memo.