This subject is designed to provide a working knowledge of the analytical tools of industrial economics that bear most directly on the strategic decisions that firms must make. The kinds of decisions that will be of interest to us include: pricing and output; advertising; investment in new production capacity; the introduction of new products, brands, and quality variations; investments in R&D; and the use of patents. Throughout the course, our emphasis will be on industry structure, its relationship with the way firms interact strategically, and its implications for market power. The analysis of industry structure, strategic interactions among rival sellers, and strategies for entering an industry, or for deterring entry or controlling its impact, will be covered with a mix of theory and case material.

Students taking this course should have a good background in microeconomics — specifically, course 15.010 or its equivalent. In addition, some background in finance (course 15.401 or the equivalent) is strongly recommended.

No textbook will be assigned for this course. However, a set of readings and cases should be purchased from Copy Technology Center, which is in the basement of the Sloan Building.

Grading in the course will be based on four different aspects of your performance:

- **Classroom participation (28% of grade)** — All students are expected to have read the assigned materials, to attend class, and to participate actively in class discussions.

- **Strategic oligopoly game (15% of grade)** — You and your teammate will be graded on your performance in this semester-long game. Your performance will be measured relative to the overall average performance of both sections of 15.013, not the performance of your industry.

- **Exercises (32% of grade)** — We will assign 9 written “exercises” over the course of the semester. *You are only required to turn in 8 of these exercises.* (If you do all 9, we will drop the lowest grade.) You may do these exercises individually or in groups of up to three students.

- **Final exam (25% of grade)** — This will be an in-class exam.
Class Attendance: Students are expected to attend all classes, and to arrive in class promptly. Students are also expected to have done the required reading and be prepared to participate actively in class discussion. I will begin most classes by “cold calling” on two or three students.

Laptop Computers: Given the importance of classroom participation, we ask that you do not open your laptop computer during class. There are only two exceptions to this rule: (1) presentations and discussions of exercises, where spreadsheets or other results are on your computer; (2) students with special needs (e.g., handwriting difficulties), who get permission in advance to use their computers.

Group Work: You are expected to participate fully in any exercise or other assignment that has your name on it. It is absolutely unacceptable to “rotate” assignments among members of a group, or to take credit for an assignment in which you were not substantially involved. You may allocate the work needed to complete an assignment (e.g., one person does the internet research, another develops a spreadsheet model, etc.), but every member of the group must be substantially involved in the assignment.

DATES TO REMEMBER

Monday, September 14  Please turn in a short (1- or 2-paragraph) “biography” describing your background and interests. Include a photograph (your biocard photo is fine), and the phonetic spelling of your name.

Wednesday, September 16  Exercise 1 is due. In addition, you should turn in a note on your choice of partner for the strategic oligopoly game.

Monday, September 28  Yom Kippur. NO CLASS. However, trial play of strategic oligopoly game due by 5:00pm.

Monday, October 5  First real play of strategic oligopoly game must be submitted by 5:00pm. With a few exceptions, game will be played every Monday.

Monday, October 12  NO CLASS, Columbus Day. However, game play to be submitted by 5:00pm.

Tuesday, October 13  Regular class. (Monday schedule.)

Monday, October 19  NO CLASS, SIP week. However, game play must still be submitted by 5:00pm.

Wednesday, October 21  NO CLASS, SIP week.

Wednesday, November 11  NO CLASS, Veterans Day

Friday, December 4  Last play of strategic oligopoly game.

Monday, December 7  FINAL EXAM (90 minutes, in-class).

Wednesday, December 9  Debriefing, and results of strategy game. Discussion of additional topics as time permits.
TENTATIVE OUTLINE

Sept 9 Wed  Introduction: Sources and Uses of Market Power. Overview of the course. Market structure, market power and the value of the firm. Strategic decisions that affect market structure and market power.


Lecture Notes on Intertemporal Production and Pricing.
Sections 1 – 4.

*Turn in brief biography.*
*Be prepared to answer questions on learning curve and oil well problem.*


Readings on beer.
Lecture Notes on Market Definition and Concentration.

*Exercise 1 due.*
*Hand in choice of game partner.*


Read:  Note on Internet Economics and Market Structure.

Read:  Apple, Inc.: iPods and iTunes. [Ivey Case #9B05M046]
Readings on Internet music stores.

Exercise 2 due.

Sept 28 Mon  Yom Kippur - No Class. However, trial play of strategic oligopoly game is due by 5:00pm.


Read:  “WebMD (A).” [HBS Case #9-701-007]
“WebMD (B).” [HBS Case #9-701-133]
Readings on WebMD.

Exercise 3 due.


Read:  Lecture Notes on Vertical Structure, Sections 1 – 3.
Pindyck & Rubinfeld, Sections 10.5 & 10.6

First real play of Strategic Oligopoly Game.


Read:  Lecture Notes on Vertical Structure, Section 4.
Lecture Notes on Game Theory, Section 1.

Exercise 4 due.
Oct 12    Mon    Columbus Day, No Classes. However, game play is due by 5:00pm.


Lecture Notes on Game Theory, Sections 2 – 3. (Section 4 is optional).


Read: Lecture Notes on Entry and Reaction to Entry, Section 2-4.
“The Disposable Diaper Industry in 2003” [HBS Case #9-703-491]
“Kao Corporation.” [HBS Case #9-591-012]

Exercise 5 due.

Oct 19    Mon    NO CLASS (SIP Week)

However, play of strategic oligopoly game is due by 5:00pm.

Oct 21    Wed    NO CLASS (SIP Week)

Oct 26    Mon    Part I: Information and the Strategic Timing of Investments. Additional material on real options. Learning from nature and learning from others: oil, real estate, and R&D. Investment cascades and “wisdom after the fact.” Rational bubbles.


Read: Lecture Notes on Information and Strategic Timing of Investments.
Readings on Airlines.
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<th>Date</th>
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<td></td>
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<td>Read: “American Airlines Value Pricing” (A) [HBS Case #9-594-001] and (B) [HBS Case #9-594-019].</td>
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<td><strong>Exercise 6 due.</strong></td>
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<td><strong>Exercise 7 due.</strong></td>
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<td>Nov 9 Mon</td>
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<td><strong>Deterrence via Bundling and Brand Proliferation.</strong></td>
<td>The use of bundling to deter entry and gain market power. Pricing and bundling complementary goods. Product line pricing. Bundling and monopoly leveraging. Bundling in the computer software industry: Microsoft in operating systems and office suites. Bundles competing against bundles.</td>
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<td>Read: Lecture Notes on Bundling and Brand Proliferation: Sections 1-2.</td>
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<td>Nov 11 Wed</td>
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<td><strong>Veterans Day, no classes.</strong></td>
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<td>Nov 16 Mon</td>
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<td><strong>Deterrence via Bundling and Brand Proliferation (continued).</strong></td>
<td>Discussion of attribute space and its use in economic analysis. Local competition among brands in attribute space. Choosing the attributes for new brands. Brand proliferation, entry deterrence, and market power. Analysis of the breakfast cereal industry.</td>
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Lecture Notes on Network Externalities, (Section 4 is optional).
“Philips’ Compact Disk Introduction (A).” [HBS Case #9-792-035]

Exercise 8 due.


“Capital One Financial Corporation.” [HBS Case #N9-700-124]


Read:  Lecture Notes on Pricing

Nov 30  Mon  R&D, Patenting, and Licensing. Implications of R&D and innovation for industry evolution and market structure. The race to innovate. Making the R&D investment decision: strategic and non-strategic aspects. Sleeping patents and the decision to adopt a new innovation. Licensing decisions.

Read:  Lecture Notes on R&D and Patent Licensing.

*Exercise 9 due.*
Dec 2  Wed  R&D, Patenting, and Licensing (continued). Continued discussion of R&D and patent licensing decisions. Licensing to raise prices vs. licensing to lower prices. Complementary patents: cross-licensing versus the formation of “patent pools.” Intel in computer processors.

Read:  Lecture Notes on R&D and Patent Licensing.

Dec 4  Fri  Last play of Strategic Oligopoly Game. Submit by 5:00pm

Dec 7  Mon  FINAL EXAM.

Dec 9  Wed  Wrap-Up Class. Results of strategic oligopoly game – meet your competitors! General discussion of topics related to course.