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: setting prices and output levels; advertising; investments 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 in PDF format is available on the Stellar course site, labelled “15.013 Course Reader.” These readings include my lecture notes, along with various articles and book chapters. In addition, we will assign a number of HBS (and other) cases; they are not available on Stellar, but instead can be purchased via StudyNet. (A link to the Study.net site, along with access information, is on the Materials page of the 15.013 Stellar site.) Also, from time to time we will post additional readings on Stellar.

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, measured by your cumulative profits, in this semester-long game. Your performance will be evaluated 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. To receive credit, exercises must be submitted on time, and as hard copies.

- **Final exam** (25% of grade) — This will be an in-class exam. (Closed-book, but you can bring an 8.5 x 11” sheet of paper with notes, formulas, etc. on both sides.)
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. The same rules apply to iPads, PDAs, smartphones, etc.

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, Sept. 8  
Please submit via the template on Stellar a short (1- or 2-paragraph) “biography” describing your background and interests. Include a photograph, and the phonetic spelling of your name.

Wednesday, Sept. 10  
Exercise 1 is due. In addition, you should turn in a note on your choice of partner for the strategic oligopoly game.

Monday, Sept. 22  
Trial Play of Strategic Oligopoly Game. (Submit by 5:00 pm.)

Monday, Sept. 29  
First real play of Strategic Oligopoly Game.

Monday, Oct. 13  
NO CLASS, Columbus Day. However, game play is due at 5:00 pm.

Monday, Oct. 20  
NO CLASS, SIP week. However, game play is due at 5:00 pm.

Wednesday, Oct. 22  
NO CLASS, SIP week.

Monday, Nov. 10  
NO CLASS, Veterans Day Holiday. However, game play is due at 5:00 pm.

Monday, Dec. 1  
Last play of Strategic Oligopoly Game.

Monday, Dec. 8  
FINAL EXAM (90 minutes, in-class).

Wednesday, Dec. 10  
Debriefing, and results of strategy game. Discussion of additional topics as time permits.
TENTATIVE OUTLINE

Sept 3  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. Competing in the market versus competing for the market.


Turn in brief biography and photo via Stellar/Google form. Be prepared to answer questions on learning curve and oil well problem.


Exercise 1 due. Hand in choice of game partner.


Read:  Notes on Internet Economics and Market Structure.

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

Exercise 2 due.


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

Trial play of Strategic Oligopoly Game. Submit by 5:00 pm.


Read: Lecture Notes on Vertical Structure, Sections 1, 3 and 4.
Pindyck & Rubinfeld, Review Section 11.4.


Read: Lecture Notes on Game Theory, Sections 1—6. (Section 7 optional.)

Exercise 3 due.
First real play of Strategic Oligopoly Game. Submit by 5:00 pm.

Read: Lecture Notes on Information and Strategic Timing of Investments.


Exercise 4 due.

Oct 13 Mon  NO CLASS. (Columbus Day.) However, game play is due by 5:00 pm.


Read: Lecture Notes on Entry and Reaction to Entry.

Oct 20 Mon  No Class. (SIP week.) However, play of strategic oligopoly game is due by 5:00 pm.

Oct 22 Wed  No Class. (SIP week.)


Exercise 5 due.


Read: Lecture Notes on Game Theory, Section 8. Readings on Commercial Aircraft Industry.


Exercise 6 due.


Read: Pindyck & Rubinfeld, review Section 11.5. Lecture Notes on Bundling and Brand Proliferation, Sections 1-2.

Nov 10 Mon  NO CLASS. (Veterans Day.) However, game play is due by 5:00 pm.

Nov 12 Wed  Deterrence via Brand Proliferation. 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.


Exercise 7 due.
**Nov 17  Mon**  

   
Lecture Notes on Network Externalities, Sections 1-5.
   “Philips’ Compact Disk Introduction (A).” [HBS Case #9-792-035]

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**Nov 19  Wed**  
**Network Markets: Credit Cards.** Credit card networks as two-sided platforms. Economics of the credit and bank card industry. “Chicken and egg problems” in the evolution of card networks. Acquirers, issuers, and the interchange rate.


   
Lecture Notes on Network Externalities, Section 6.

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**Nov 24  Mon**  
**Network Markets: Credit Cards (continued).** Strategic aspects of card issuance. Pricing and profitability. Competition and market dynamics in card issuance. Discussion of Capital One Financial Corporation. The impact of electronic money, including “bitcoins.”

Read:  “Capital One Financial Corporation.” [HBS Case # N9-700-124]
   
Readings on Credit Cards

*Exercise 8 due.*

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**Nov 26  Wed**  

Read:  Lecture Notes on Pricing
Dec 1  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. Patents as options. Sleeping patents and the decision to adopt a new innovation. Licensing decisions. The use of licensing to gain market power.

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

Exercise 9 due.
Last play of Strategic Oligopoly Game. Submit by 5:00 pm.


Read: Lecture Notes on R&D and Patent Licensing.
“Economics of Patent Pools”

Dec 8  Mon  FINAL EXAM. (Closed-book, but you can bring an 8.5 x 11” sheet of paper with notes, formulas, etc. on both sides.)

Dec 10 Wed  Wrap-Up Class. Results of strategic oligopoly game – meet your competitors! General discussion of topics related to course.