

# PPHA 36940: STRATEGIC BEHAVIOR AND REGULATION OF FIRMS

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**Office Hours: Wed 11:00-12:00, Harris 176**

**Fall 2017**  
**Course time: T,Th 9:00 – 10:30**  
**Course location: Harris 289A**  
**Course website TBD**

**Teaching assistant: TBD**  
**TA email: TBD**  
**TA office hours: TBD**

PPHA 36940 is a course in what economists call *industrial organization*: the study of firm behavior and public policy in imperfectly competitive markets. We will examine the strategies that firms use to increase profits, the effects of those strategies on consumers, and the cases for and against regulatory intervention in markets.

The course will address topics and questions such as:

- Unilateral exercise of market power. When will competition amongst a small number of firms drive prices down to marginal cost, and when will firms be able to maintain high price-cost margins despite competition?
- How can firms use nonlinear pricing schemes – i.e. price discrimination -- to increase profits?
- Under what circumstances might we expect firms to collude to fix prices?
- How do vertical relations between firms affect prices, profits, and welfare?
- When and how should government intervene in markets?

We will approach this subject from both theoretical and applied perspectives. The course will rely in particular on the use of game theory, which is a wonderful tool for thinking about strategic interactions among firms and their effects on consumers.

Throughout the course, we will consider important business and regulatory case studies that illuminate public policy questions related to firm behavior. Cases we will cover include:

- The California electricity crisis and electricity industry restructuring
- Cases concerning Google's search engine and related websites
- Net neutrality
- Merger analyses
- Collusion (OPEC, lysine, airlines...)

## Textbooks and readings

There is no required textbook for this course, but I recommend a number of texts that are excellent complements to the course material:

- *Industrial Organization: Contemporary Theory and Empirical Applications* by Lynne Pepall, Daniel J. Richards, and George Norman. Great IO text on firm strategy that blends cases and examples with rigorous theory. The chapter numbers listed on the course schedule correspond to the 4<sup>th</sup> edition, published in 2008 (ISBN-13: 978-1405176323). The more recent 5<sup>th</sup> edition is different primarily in that it has moved all calculus to appendices at the end of each chapter (there is a 2010 *Contemporary Industrial Organization: A Quantitative Approach* that keeps the calculus).
- *Economics of Regulation and Antitrust, 4<sup>th</sup> edition*, by Kip Viscusi, Joseph Harrington, and John Vernon. Focuses on regulatory issues and antitrust.
- *The Antitrust Revolution: Economics, Competition, and Policy* by John Kwoka and Lawrence White. Excellent series of books on the economics behind key antitrust cases of the past several decades. I have both the 6<sup>th</sup> (2013) and 4<sup>th</sup> (2004) editions on my own bookshelf; they're great reads, and some of our case studies will be discussed in these editions.

Throughout the course, I will assign several applied, **required** readings, usually consisting of short news articles on specific business and antitrust cases. You are responsible for doing ALL assigned readings before coming to class, as these form the basis for class discussions.

## Deliverables

### A. COMPETITIVE STRATEGY GAME: 30% OF FINAL GRADE

An important component of this course is participation in the Competitive Strategy Game (CSG), a group project that will be played over all but the first few weeks of the course. The CSG is a computer-based market simulation that uses an internet interface and is designed to provide hands-on experience with the challenging decisions firms face in oligopolistic markets.

Each student will be randomly assigned to a firm. Starting with a bank account of \$1,000,000, each firm will decide which of four different markets to enter, the amount of production capacity to install in each market, how much to produce, and what price to charge. To make sound decisions, you will have to evaluate where your competitive advantages lie and anticipate the strategies of the other firms. The CSG will be played over ten rounds: in each round, every firm will be required to submit an investment, production, and pricing profile for each of the four markets.

Each firm will be required to write a “benchmark exercise” at the start of the game, a brief pricing memo in round 4, and then a final strategy memo at the end of the game. The benchmark exercise will ask you to estimate consumers’ demand in each market, conduct profit maximization calculations, and propose a strategy for market entry. The pricing exercise will ask you to explain your pricing decisions for one of the markets in which you have entered. In the final strategy memo, you will explain your reasoning behind the strategies you executed during the CSG. Why did you enter the markets you entered? What deviations did you make from the original strategy you laid out in the benchmark exercise, and why? How did you react to the actions of other teams, and why? Were there decisions you made that turned out to be wrong in hindsight? Why? Which elements of your strategy worked best, and why?

Your CSG grade will be based entirely on your benchmark exercise, pricing memo, and final strategy memo (40%, 20%, and 40% of your CSG grade, respectively). You will not be directly graded based on how much money you make or on your rank relative to the other firms (but the winner will enjoy bragging rights!)

Additional information regarding the CSG will be provided and discussed in class early in the term. The CSG website is <https://csg.haas.berkeley.edu/>, where public information for games currently being played can be viewed.

#### ***B. PAPER OR EXAM: 30% OF FINAL GRADE***

You have the option of either completing a research paper or writing an exam.

Paper option: you write a 10-15 page paper on a current regulatory policy issue of your choice. If you choose to write a paper, you must submit a 2 page proposal by the start of class on [DATE TBD]. The proposal must be approved by the TA and me in order for you to proceed with the paper.

Exam: Students not writing a paper will take an exam during the final exam period. The exam will be on Tuesday, December 5, from 8:30 – 10:30 in room 289A.

#### ***C. POLICY DEBATE: 10% OF FINAL GRADE***

We will have an in-class team policy debate on a current policy issue late in the term. The grade will be based on the quality of the economic logic behind your team’s arguments and counter-arguments.

#### ***D. CLASS PARTICIPATION: 20% OF FINAL GRADE***

All students are expected to actively participate in class, especially during case discussions.

### *E. PROBLEM SETS: 10% OF FINAL GRADE*

Three problem sets will be handed out over the course of the term. You may discuss problem sets and work out solutions together with other classmates. However, you should write your own solutions and perform calculations independently. All identical write-ups on problem sets will be given zero credit. Problem sets will be collected at the start of class on the day they are due; they can be turned in by hand or uploaded to Canvas. Late assignments will NOT be accepted. Due dates are listed on the course schedule.

You will get full credit for a completed problem set if your problem set shows that you have made a serious effort to solve all the problems. I will post solutions to each problem set; it is your responsibility to compare your solutions with those that I post to Canvas.