

PPHA 36941

Strategic Behavior and Regulation of Firms

Winter 2022

Day ◇ Time ◇ Location

Professor Katherine Baird
katherine.baird@uchicago.edu
Time and Location TBD

TA: TBD
Time and Location TBD

Please note that office hours will start the second week of class.

Course Description and Goals

PPHA 36941 is a course in industrial organization, the study of firms in imperfectly competitive markets. This field analyzes the acquisition and use of market power by firms, strategic interactions among firms, and the role of government regulation. 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?

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
- Merger analyses
- Cartels and collusion (OPEC, lysine, AC Treuhand, others...)

Textbook and Readings

There is no required textbook for this course. However, the following include texts that complement the course material:

- Industrial Organization: Contemporary Theory and Empirical Applications by Lynne Pepall, Daniel J. Richards, and George Norman.
- Economics of Regulation and Antitrust, 4th edition, by Kip Viscusi, Joseph Harrington, and John Vernon.

- The Antitrust Revolution: Economics, Competition, and Policy by John Kwoka and Lawrence White.

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.

Grading and Class Deliverables

Your final grade will be weighted as follows:

Class Participation	15%
Homework	10%
Policy Debates	15%
Competitive Strategy Game	30%
Final Exam or Paper	30%

The final letter grade received will be based somewhat on the distribution of grades in the class. However, in order to help you benchmark your grade throughout the quarter, the cutoffs below show the initial grading scale that I will use. The cutoffs may be moved down to adjust for the final distribution of the class grades.

A	A-	B+	B	B-	C+
93 or above	90-92	87-89	82-86	76-81	70-75

1. Competitive Strategy Game

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 - 40% of your CSG grade
- A pricing memo - 20% of your CSG grade
- A final strategy memo - 40 % of your CSG grade

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. 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.

2. Paper or Exam

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 Thursday February 6th. The proposal must be approved by the TA and me in order for you to proceed with the paper. The paper is then due on Thursday March 19th at 9am, and should be submitted on Canvas.

Exam: For students not writing a paper, there will be an in-class exam on Thursday March 19th from 9am to noon in Room 0010.

3. Policy Debate

We will have up to 3 in-class team policy debates on various chosen topic pertaining to firm regulation throughout the quarter. Please see the course schedule for the dates and topics. The grade will be based on the quality of the economic logic behind your team's arguments and counter-arguments.

4. Class Participation

All students are expected to actively participate in class. Case-study days present a good opportunity for students to contribute to discussion.

5. Problem Sets

Three problem sets will be assigned this quarter. You may discuss problem sets and work out solutions together with other classmates. However, you should write your own solutions and perform calculations independently. Identical write-ups on problem sets will not be accepted. All assignments should be scanned or typed and uploaded to Canvas. Late assignments will NOT be accepted.

Problem sets will be graded upon the basis of completion. If you have made a serious effort to solve all of the problems, then your problem set will receive full credit. Solutions will be posted on Canvas, and it is up to each individual student to compare their own work to the suggested solutions.

Contesting a Grade

If you would like to contest a grade, you must do so in writing within one week of receiving your grade for that assignment or exam. Please follow the following process for contesting a grade:

- Submit an email to the Teaching Assistant including a scanned copy of the assignment or exam. Include your reasoning for why you are requesting a re-grade, referencing the suggested solutions.
- The TA will respond by re-grading your **entire assignment or exam** according to their grading rubric. Note that this could result in your grade going up, going down, or staying the same.
- If you choose not to accept the TA's response and re-grade, then you may forward your request to the professor who will then do a final re-grade of your assignment or exam.

Missed Exams

Should you choose to take the exam rather than write the final paper: If you miss an exam without a valid, approved excuse, you will receive zero credit for the exam. All missed exams must be approved by Student Affairs and your advisor. After Student Affairs has received your reasoning and approved it, please forward this to the TA, who will work with Student Affairs to provide a time and day for a make-up exam.

Class Conduct and Professionalism

Students are expected to act with professionalism and respect throughout this course. This includes, but is not limited to: being on time to class and for any outside-the-classroom study group meetings, not using cell phones in class, and generally acting in a fashion consistent with professional expectations. You may use your laptop or tablet in class to take notes or consult readings, but please keep your usage limited to class-relevant materials.

Academic Integrity

All University of Chicago students are expected to uphold the highest standards of academic integrity and honesty. Among other things, this means that students shall not represent another's work as their own, use un-allowed materials during exams, or otherwise gain unfair academic advantage. All students suspected of academic dishonesty will be reported to the Harris Dean of Students for investigation and adjudication. The disciplinary process can result in sanctions up to and including suspension or expulsion from the University. In addition to disciplinary sanctions, the student will receive a grade of 0 on the exam or problem set in question and cannot earn higher than a B- in the course, regardless of their performance on other assignments and exams.

The Harris policy and procedures related to academic integrity can be found at <https://harris.uchicago.edu/gateways/current-students/policies>.

The University of Chicago Policy on Academic Honesty Plagiarism can be found at <https://studentmanual.uchicago.edu/academic-policies/academic-honesty-plagiarism/>

Please note that these expectations apply to all assignments and deliverables in this class, in which your submitted work represents your commitment that it is your own independent work and that you have relied on no other individuals or resources, except as explicitly specified in the assignment instructions, in producing this work. I might also note that any chart, graph, or table you create should also contain

complete source information as indicated. I encourage any students with specific questions regarding attribution, citations, etc. to contact me directly.

Diversity and Inclusion

One of my main teaching goals is to work towards presenting materials and activities that are respectful of diversity: gender, sexuality, age, disability, ethnicity, socioeconomic status, and culture. Our aim is that students from all diverse backgrounds and perspectives be well supported and served by this course, and that the diversity that students bring to this class be viewed as a strength and as a resource. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, while I expect there to be rigorous discourse during our class discussions, I ask that you engage with care and empathy for the other members in the classroom.

Accommodations for Students with Disabilities

Any students requesting accommodations related to disabilities should contact their advisor and Eman Alsumara (ealsamara@uchicago.edu) to make proper arrangements. Eman will then coordinate with myself and the Head TA to make arrangements for exams and any accommodations for in-class participation.

Schedule for Strategic Behavior and Regulation of Firms

Week	Class #	Topic	CSG	Assignments	Reading assignments	Textbook
1	1	Overview; monopoly vs. competition; static game theory recap				PRN 9.1-9.3
	2	Cournot quantity competition				PRN 9
2	3	Cournot quantity competition II; horizontal mergers			Merger article	PRN 9, 10.1, 16 VHV 7 KW 6th ed, Ch 4,6
	4	Electricity markets; CA electricity crisis and market manipulation	CSG benchmark exercise posted		Electricity market and California crisis articles	PRN 10
3	5	CSG briefing and Bertrand			CSG instructions	
	6	Differentiated product Bertrand competition; dynamic games; Stackelberg model				PRN 10, 11.1, 11.2
4	7	Capacity, entry, entry deterrence I	CSG 1 due 5:00pm the night before class		Airline entry and competition articles	PRN 11.3, 12 VHV 6 PRN 12, 13
	8	Entry deterrence II; predation	CSG 2 due 5:00pm the night before class		Airline predation articles	VHV 9 KW 6th ed, Ch 10
5	9	Cartels and price fixing I	CSG 3 due 5:00pm the night before class	Problem set 1 due		PRN 14, 15 VHV 5 KW 6th ed. Ch 11
	10	Cartels and price fixing II; Price discrimination I	CSG 4 due 5:00pm the night before class	Paper proposals due		PRN 5,6,14,15 VHV 9
6	11	Team policy Debate 1	CSG 5 due 5:00pm the night before class	Policy debate 1	Sprint - T-Mobile articles	
	12	Price discrimination II	CSG 6 due 5:00pm the night before class		Airline calculated misery article	PRN 5,6
7	13	Price discrimination II, continued	CSG 7 due 5:00pm the night before class	Problem set 2 due		
	14	Consumer search; vertical relations I	CSG 8 due 5:00pm the night before class. CSG Pricing Memo Due at 8am		Toys R Us articles	PRN 17.1, 18 VHV 8 KW 4th ed, Ch 15
8	15	Vertical relations II	CSG 9 due 5:00pm the night before class			PRN 18, 19 VHV 8
	16	Vertical relations II, continued	CSG 10 due 5:00pm the night before class			
9	17	Team policy debate 2		Policy debate 2	Google search articles	
	18	Natural monopoly regulation / CSG debriefing	CSG strategy memo due	Problem Set 3 Due		VHV 11, 12
10		Exam Week				