

Economics 121A

Industrial Organization

Anna Ignatenko

Summer Session I, 2018

Monday, Tuesday, Wednesday, 6.10 - 7.50 PM
Roesler Hall 66

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Office Hours: MW 4.00 - 5.00 PM

Office: SS&H 125 (basement level)

Overview

This course is an introduction to industrial organization (IO). Industrial organization studies imperfectly competitive markets and the behavior of firms in those markets. Questions IO economists often ask:

- Why are markets organized or structured the way they are?
- How does the market structure affect firm behavior?
- What implications does strategic interaction of firms have for consumers and social welfare?

Developments in industrial organization since the 1980s have been highly influential in shaping antitrust enforcement across several countries. These developments have shaped the 1982 Merger Enforcement Guidelines in the U.S., and then further refined them again in 2010. As such, IO economists are in high demand at government agencies such as the Department of Justice, Federal Trade Commission and Federal Communications Commission. Relatedly, consulting firms house dozens of renowned IO economists that advise private industry on antitrust matters and advocate for firms in court.

In this class, you will be introduced to a number of models that are useful in thinking about various topics like price discrimination, mergers, collusion, the strategic design of product lines, etc. My goal is to help train you in the process of solving and thinking through models to develop insights about the real world.

The exams in this class are designed to test how well you *understand* these models and can *apply* them to the real world situations. Memorization will not help you much on your exams because memorization will not help you in the real world.

Prerequisites

ECN1A, ECN100, and basic Calculus (MAT 16A or equivalent). Basic Calculus means you have an understanding of optimization (finding the maximum of a function) and are familiar with the chain rule. This course also uses algebra extensively. I will explain the math as we go, but you are expected to know these concepts already.

Course Policies

Academic Honesty

I have absolutely no tolerance for cheating. I refer every case of even apparent cheating in ECN121A to Student Judicial Affairs, and seek the harshest penalties possible. If you suspect other students are cheating in the class, inform me and I will investigate.

During the quarter I will be taking various steps to prevent cheating that may or may not include dividing the classroom into separate lecture halls, using multiple versions of exams, assigning seating, and other methods I do not reveal. Taking these steps to prevent cheating is costly to everyone, but if you are an honest student I hope you appreciate this to help protect the integrity of your grade.

Attendance

Lectures: It is your choice whether to attend lectures or not. Attendance will not be taken and it will not be factored into your grade. Lecture slides will be posted on-line, but parts of the lecture notes may be missing, especially diagrams presented on the chalkboard.

Sections: Although your attendance is not taken, sections are designed to become an invaluable resource for you. These sections will be used to go over practice problems relevant to the week's lecture notes and/or go over exam solutions. The TAs' contact information is below:

TA	E-mail	Office Hours
Xuan Fei	xuafei@ucdavis.edu	Thu 9.00 - 11.00 am @ SSH 116
Xiaotong Su	xtsu@ucdavis.edu	Fri 9.00 - 11.00 am @ SSH 116

Exam Rules

- The exams will be distributed face down, and you are not allowed to turn them until I declare that the exam begins.
- When I declare that time is up, you must stop writing and you are not allowed to speak until you have exited the classroom.
- UC Davis rules for academic integrity will apply and can be found here:

<http://sj.ucdavis.edu/academic-integrity.html>

Violation of either of these rules will be followed by the referral to the Student Judicial Affairs.

Grading and Re-grading

No late submissions are accepted. If you are unable to come to class on the day a homework is due, make sure to submit your homework before then.

If you have a problem with a grade on your problem set or midterm, first contact the TA(s) for a resolution. If that does not resolve the issue then you can discuss it with me. You have **one week** from the time the problem set/midterm is returned to request a re-grade. Also, I do not accept re-grade requests after the final exam because the final grades must be sent to the registrar as soon as possible.

Your final grades will be **curved**. The Economics department mandates that the average grade in the course be a B- (2.7). If your performance in this class is average, you will receive a B-. If you perform better than the average, your letter grade will be higher and vice-versa. When evaluating your own performance on the course material, you should always be comparing yourself to the average.

E-mail policy

I will respond to questions over e-mail. However, these questions must be asked in such a way that I can provide a quick answer. This especially means that I do not have to type any algebra or draw any graphs. I will try my best to respond within 24 hours, but I cannot guarantee it over the weekend.

Course Structure

Topics covered

1. Introduction to market power
2. Measures of market power, market definition
3. Price discrimination
4. Introduction to game theory
5. Cournot oligopoly and horizontal mergers
6. Bertrand oligopoly with homogeneous products
7. Bertrand oligopoly with differentiated products
8. Stackelberg's model of oligopoly
9. Collusion and repeated games
10. Product differentiation and Hotelling's model of geographic competition

11. Vertical mergers and introduction to vertical contracts
12. Predatory pricing and entry deterrence (if time permits)

Textbook

There is no required textbook for the course. You will be evaluated based on material covered in the lecture notes and in problem sets. As an auxiliary resource, I recommend *Industrial Organization: a Strategic Approach* (2000). This textbook is available for free on-line:

<http://works.bepress.com/jeffreychurch/23>

Assessments

The course grade is determined based on two problem sets, two midterms, and a final exam, in the following proportions:

Two Problem sets (equal weight): 15%

- PS1 due Monday, July 2
- PS2 due Monday, July 16

Two midterm exams (equal weight): 40%

- Midterm 1 on Tuesday, July 3, **7.00 - 7.50 PM**
Topics: 1, 2, 3
- Midterm 2 on Wednesday, July 18, **7.00 - 7.50 PM**
Topics: 4, 5, 6, 7, 8

Final exam: 45%

- Wednesday, August 1, **6.10 - 8 PM**
Topics: 1 - 12

Problem sets are due **at the beginning of the class on the stated dates**. They are graded on the **pass/fail basis** and are intended to motivate you to practice the course material.

All exams will be held in the lecture hall; **the final exam is cumulative**.

NOTE: The grade of your worst midterm will be replaced with your grade on the final (provided this improves your overall grade). **I do this for you automatically at the end of the quarter; there is no need to e-mail me to request this.** If you must miss a second exam, then I require proof of your excuse (usually a doctor's note). Once I receive this, then I will allow you to transfer the weight of that exam to the final, otherwise you receive a grade of zero. **There will not be any make-up exams.**