

ECONOMICS 445
INDUSTRIAL ORGANIZATION
FALL 2018

Instructor: Luca Maini	Email: lmaini@email.unc.edu
	Office: Gardner 301
	Office Hours: Tu. 11:00-12:15 and by appt.
Class time & location:	TR 8:00 - 9:15; Gardner 106 (Section 001) TR 12:30 - 1:45; Gardner 307 (Section 002)
Midterm Exams	Midterm 1: Sept. 27th Midterm 2: Nov. 1st
Final Exam Times	Thursday, December 13th, 8:00am (Section 001) Friday, December 7th, 12:00pm (Section 002)

Course Goals and Approach

Prerequisites: ECON 400 and 410; a grade of C or better in ECON 400 and 410 is required.

In this class we will study the causes and consequences of firms' strategic behavior, focusing on situations in which the assumptions behind perfect competition do not hold. Our main analytical tools will be microeconomic theory and game theory, and we will use some basic econometrics as well. We will supplement our theoretical work with empirical evidence from academic research and the popular press.

Topics we will study include, but are not limited to: pricing, product design, imperfect competition, collusion and cartels, firm-to-firm supply relationships, and mergers. Within each topic we will consider the impact of firms' actions on market efficiency and consumer welfare. We will also discuss the role of US antitrust law in these settings.

Economics is more a way of thinking rather than a collection of facts, and industrial organization (IO) is no exception. Our main objective is to develop the ability to use economic models to understand a broad range of problems. These models, when constructed well, can be both simple and powerful. Your ability to construct, analyze, and interpret models is best developed through practice, and our class meetings, assignments, and exams will focus on providing this practice.

I will require you to use basic calculus during this course. If you remember what a derivative is and how to obtain one, you will not have any problems with the math that we use here.

Readings

The required textbook for the class is Introduction to Industrial Organization by Luis Cabral (2nd edition), available at the UNC bookstore. This is not the same textbook that was adopted in previous years. If for any reason you prefer using the old textbook for this class (Industrial Organization: Contemporary Theory and Empirical Applications by Pepall, Richards, and Norman, 5th edition) you are welcome to do so. However, keep in mind that it will be your responsibility to locate the chapters that match the assigned readings for the class.

You should use the textbook as a reference for the work that is done in class. You will not be required to read chapters in advance of class. However, you may find that doing so will help you follow class discussion.

We will often supplement class notes and the textbook with readings collected from the popular press (newspapers, magazines, etc.). When assigned, these readings are **mandatory**, and I will occasionally assign short online quizzes (to be completed before class) that will test your understanding of these readings.

I also encourage you to keep up with current economics-related events. Good popular press sources include the Economist, the New York Times, the Washington Post, and the Wall Street Journal. There are also many online news sources and podcasts that are worth checking out: Planet Money, Freakonomics, FiveThirtyEight, and many more. While not all of these resources focus on IO, they are likely to provide interesting opportunities to think about the economic forces common to IO and other microeconomics areas.

Grading

Your grade will be based on three exams and homework assignments. The course grade is divided as follows:

Midterm 1	20%
Midterm 2	20%
Final Exam	40%
Homework + Quizzes	20%

Grades will be curved so that final course grades will have a similar distribution to previous versions of this class.

Sakai

I will use Sakai to distribute notes, readings, homework assignments, etc. Please verify that you can log on to Sakai and access the information for this class.

All course grades will be stored and displayed on the Sakai course page. It is your responsibility to insure that the grades on this course page are accurate.

Exams

There will be two midterm exams and a final exam. The exams will be closed-notes and closed-book.

If you need to miss a midterm you must inform me at least 48 hours in advance. The weight of that midterm in the course grade will be added to the weight on your final. An exception will be made for University-approved absences (see <http://catalog.unc.edu/policies-procedures/>

[attendance-grading-examination/](#)). Students with this type of absence may request a make-up examination at a time convenient to both student and instructor. Unexcused absences will result in a grade of zero.

Re-grade policy: For simple scoring or adding-up mistakes, return the exam to me with a brief explanation. For more substantial cases where you think you deserve credit for an answer, write a short paragraph explaining why you believe you deserve a higher score, and then return the exam to me. When you submit an exam for a re-grade, the whole exam will be re-scored and your grade may go up or down. All re-grade requests must be provided within one week of receiving your score.

Homework Assignments

I will post assignments to Sakai at least one week before they are due. You are welcome to work with other students on the assignments, but everyone must turn in his/her own version of the homework. Your assignment must clearly reflect your own work and cannot contain verbatim passages from your classmates' assignments.

Solutions will be posted at the same time the assignment is due. As a consequence, **no late work will be accepted**. To compensate for this you will be allowed to drop your lowest problem set score (meaning that in practice you have the option not to turn in one of the problem sets). In addition, many problem sets will contain questions worth bonus points.

Classroom etiquette

My goal is to maintain a classroom environment that provides a good learning environment for everyone. If you'd rather take notes on a laptop you may do so. However, to minimize distractions, you must turn off all phones and other electronic devices during class. I expect you to arrive on time and prepared for the day's class.

Academic integrity

You are encouraged to work together with other students on the homework. However, each student must write up his or her own version of the homework assignment. Exams are taken individually, without any help from other students or unapproved resources. Each student is expected to maintain academic integrity and follow the UNC Honor System.

Course Outline

The number in parentheses is the approximate (i.e. possibly subject to change) number of class meetings we will spend on a topic. I have included the relevant textbook chapters for each topic. Notice however that you should use class lectures and slides as your main guide for what sections within a chapter are most relevant to the material covered in class. You are not responsible for any material in Cabral that we do not discuss in class.

1. Introduction (1 lecture)
2. Review of perfect competition and monopoly (~2 lectures)
 - *Readings: Cabral 2, 3, 4, 5*
3. Price discrimination (~5 lectures):
 - *Readings: Cabral 6*
4. Game Theory (~2 lectures):
 - *Readings: Cabral 7*

Midterm 1 (covers 1-4)

5. Competition with homogeneous products (~5 lectures):
 - *Readings: Cabral 8*
6. Competition with differentiated products (~3 lectures):
 - *Readings: Cabral 14*

Midterm 2 (covers 1-6)

7. Market structure and outcomes (~1 lecture):
 - *Readings: Cabral 10*
8. Dynamic games and collusion (~2 lectures):
 - *Readings: Cabral 9*
9. Mergers and vertical relationships (~4 lectures):
 - *Readings: Cabral 11, 12, 13*
10. Topics (if time allows)

Final Exam (covers 1-10)