UNIVERSITY of **HOUSTON**

Empirical Industrial Organization– Econ 4376
Fall Semester – 2025
Monday-Wednesday: 02:30 PM - 04:00 PM
Bates Law, Room 3

Contact information

Instructor:

Prof. Andrea Szabo

E-mail: aszabo2@uh.edu
Office hours: By appointment only.
You can schedule an appointment at
http://www.uh.edu/~aszabo2/appointments.htm

Teaching Assistant:

TBA

E-mail: TBA
Office hours: TBA

Course Description

Welcome to Economics 4376! This course will cover the basic tools and issues in the field of empirical industrial organization. While the standard competitive model covered in Intermediate Micro is an extremely powerful tool, it often fails to characterize much of what is observed in many markets. Each of our topics will cover different cases where one or more of the assumptions of competitive markets fails.

We focus on models where market power of individual firms is created either by the nature of the product, because buyers have limited information about the product, or because firms are able to price discriminate among consumer groups. We close the class by looking at some features of natural monopolies and discuss how public utilities behave on the market, as well as the effects of some regulations on consumer welfare.

This course will emphasize real world case studies, but we will also develop theoretical models that will help us analyze the behavior we see in the case studies. An additional goal of this class is to introduce you to academic research. You will learn how to use library resources and statistical software for data analysis.

Prerequisites

Students are expected to have taken Intermediate Microeconomics (ECON 3332) and Introduction to Econometrics (Econ 3370). These prerequisites will be strictly enforced. You will need to be familiar with economic models of perfect competition and monopoly. I will assume that you learned the basics of the statistical software STATA during your Introduction to Econometrics.

Textbook
Mainly, we will discuss a number of journal articles in the field of industrial organization. There is no textbook for this class which covers all discussed topics. Attending classes is a must. Th *recommended* textbooks are

Luis M. B. Cabral: Introduction to Industrial Organization, 2nd edition (2017), Mit Press, ISBN-13: 978-0262035941

Victor Aguirregabiria: Empirical Industrial Organization: Models, Methods, and Applications which is available for free here:
http://aguirregabiria.net/wpapers/book_dynamic_io.pdf

Course Requirements
This course will be time intensive. You should come prepared to discuss the readings in detail. Assuming that the size of the course is manageable, a significant amount of class time will be devoted to the discussion of the readings.

There will be 10 homework assignments and 3 midterms. Please prepare and submit all your homework assignments knowing that it is possible that I will share it with other students enrolled in the class (without your name or grade).

All homework assignments will be done online through the University of Houston Canvas site. All Problem Sets are due on the day listed below by 9.00 am.

Homework assignments have multiple goals. First, they help you internalize the economic models we discuss in class. Second, you will need to do your own work to get more hands-on experience with research. You will gather data; analyze data using a statistical software; collect, read and summarize newspaper articles and academic papers on specific questions. All these skills will equip you to successfully start your own research in the future.

Midterms will be given in class on the dates listed in the calendar.

All exams are open book and open notes (hard copies only). No cooperation is allowed during the tests. Academic misconduct will not be tolerated and any instances of it will be dealt with according to the appropriate University channels.
If you disagree with the grading of a midterm, submit it for further review. You must submit a written argument for why you deserve more points for the specific question(s) you would like re-graded. If you do not specify this, the entire test will be re-graded and it is possible that you may lose points. You must submit these arguments within one week after the midterm has been returned.

Class Website
All assignments and handouts will be posted on the class website in Canvas.

All technical and login help for Blackboard is provided by UH IT.

Email: support@uh.edu
Phone: 713-743-1411, every day 8 am to 8 pm (except University holidays)
Live chat: http://www.uh.edu/infotech/livechat Monday-Friday 8 am to 8 pm (not available Saturday-Sunday and on university holidays)

Statistical software package

You will be required to use *Stata*, a statistical software package. Students can purchase various products at much reduced rates directly from *Stata*. The current version is *Stata 19*. I suggest that you buy *Stata/BE* which will be able to handle all of the problems that I will assign in the course. The current pricing for a 6 month license is $48 for *Stata/BE*. For more detail and to order *Stata* online see the website below.
https://www.stata.com/order/new/edu/profplus/student-pricing/

Grading

Course Component	*Percentage from the final grade*
Problem Sets	40
Midterm 1	20
Midterm 2	20
Midterm 3	20
Total	100

I will drop your two lowest homework score to allow for some flexibility. Thus you will have 8 problem sets that count towards your final grade.

The numerical course grade will be converted to a letter grade according to the following scale:

92%-100%	A
90%-91%	A-
88%-89%	B+
82%-87%	B
80%-81%	B-
70%-79%	C+
50%-69%	C
40%-49%	C-
38%-39%	D+
33%-37%	D
30%-32%	D-
-29%	F

There is no curve for the class. This means that you are not competing with other students, and you will always know exactly where you stand in the class based on your performance.

Tentative Course Schedule:

Note: The listed papers will be discussed during class and it will be clear to what extent you need to know them for the exams. If you have any doubt about what is required from you, you need to ask. Recommended readings are in purple.

Week	Class #	Date/Day			Date/Day	Problem Sets
Week 1	1	Aug	25	M	Welcome to IO! Introduction and syllabus **Cabral: Chapter 1**	
	2		27	W	Review of some intermediate micro concepts. Competition, Monopoly, Welfare: Perfect Competition vs. Monopoly **Use your intermediate microeconomics book** **Cabral: Chapter 4**	
Week 2	3	Sept	1	M	**NO CLASS** **Labor Day Holiday, UH closed**	
	4		3	W	Oligopoly, Cournot model, some game theoretic concepts. **Use your intermediate microeconomics book** **Cabral: 5.2, 7.2, 8.2**	PS 0 Due
Week 3	5		8	M	Product differentiation, The effect of differentiated products on competition **Cabral: Chapter 14.1, 14.2**	
	6		10	W	Measuring consumer preferences, Demand systems in product space, Demand systems in characteristics space **Aguirregabiria: 2.2.1, 2.2.3, 2.2.4, 2.3.1, 2.3.2**	PS 1 Due
Week 4	7		15	M	Estimation of demand for differentiated products Nevo, A. (2001): "Measuring Market Power in the Ready-to-Eat Cereal Industry," *Econometrica*, 69(2), 307-342. **Aguirregabiria:2.4.1**	
	8		17	W	Estimating cereal demand using STATA – an application, Part I	PS 2 Due
Week 5	9		22	M	Petrin A. (2002): "Quantifying the Benefits of New Products: The Case of the Minivan", *Journal of Political Economy*, 110, 705-729. **Aguirregabiria:2.4.3, 2.4.4, 2.4.5**	
	10		24	W	Introduction of a new product: the cereal application, Part II	

Week 6	11		29	M	Goeree, M.S. (2008): "Limited Information and Advertising in the US Personal Computer Industry," *Econometrica*, 76(5), 1017–1074. **Cabral: Chapter 14.3**	PS 3 Due
	12	Oct	1	W	PS 0-3 Discussion / Midterm I review	
Week 7	13		6	M	**Midterm I**	
	14		8	W	Collecting survey data to estimate demand: practical advice and examples Leung, T.C. (2013): "What is the True Loss Due to Piracy? Evidence from Microsoft Office in Hong Kong," *The Review of Economics and Statistics*, 95(3): 1018–1029 **Cabral: Chapter 6 (Introduction)**	
Week 8	15		13	M	A. Szabo and V. Pham (2022): "Net Neutrality and Consumer Demand in the Video On-demand Market," Information Economics and Policy 61, 1-20. **Cabral: Chapter 6.5**	PS 4 Due
	16		15	W	Estimating demand using survey data – an application using STATA	
Week 9	17		20	M	Price discrimination, 3rd degree price discrimination, 2nd degree price discrimination	
	18		22	W	Stefano DellaVigna and Matthew Gentzkow (2019): "Uniform Pricing in US Retail Chains," *The Quarterly Journal of Economics*, 134, 4, 2011–2084 **Cabral: Chapter 6.1**	PS 5 Due
Week 10	19		27	M	Grocery store pricing: an application using STATA I	
	20		29	W	Grocery store pricing: an application using STATA II	
Week 11	21	Nov	3	M	PS 4-6 Discussion / Midterm II Review	PS 6 Due
	22		5	W	**Midterm II**	
Week 12	23		10	M	Public Utilities / Pricing of public utilities **Cabral: Chapter 6.3**	

	24		12	W	S. Borenstein (2012): "The Redistributional Impact of Nonlinear Electricity Pricing," *American Economic Journal: Economic Policy*, 4(3): 56–90	PS 7 Due
Week 13	25		17	M	Mansur, E. T. and S. M. Olmstead (2012): "The Value of Scarce Water: Measuring the Inefficiency of Municipal Regulations," *Journal of Urban Economics*, 71(3), 332-346.	
	26		19	W	Szabo, A. (2015): "The Value of Free Water: Analyzing South Africa's Free Basic Water Policy, *Econometrica*, 83(5), 1913–1961.	PS 8 Due
Week 14	27		24	M	Kelsey Jack and Grant Smith: Charging Ahead: Prepaid Metering, Electricity Use, and Utility Revenue, *American Economic Journal: Applied Economics*, 2020.	
	28		26	W	**NO CLASS, Thanksgiving Holiday UH closed**	
Week 15	29	Dec	1	M	PS 7-9 Discussion / Midterm III Review	PS 9 Due
	30		3	W	**Midterm III**	