

ECP 3403 (1D42)
Industrial Organization
Syllabus

University of Florida

Fall 2022

Instructor: Germán Bet

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Course location: Room MAT 16

Course time: Mondays & Wednesdays 11:45AM-1:40PM (Periods 5 & 6)

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TA: Pedro de Sousa Almeida

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TA Office Hours: Fridays 11AM-1PM in MAT 301A

Course Description and Goals:

Industrial organization is the branch of Microeconomics that is concerned with the study of imperfect competition (i.e., functioning of markets with few competitors). The presence of a small number of competitors creates situations of strategic interactions among the market participants. The course will explore the wide range of possible

market structures and the competitive and cooperative strategies employed by profit-maximizing firms when there are few firms, entry barriers, differentiated products, and/or imperfect information. The course uses Microeconomics and basic Game Theory to study firm behavior, market structure and performance of industries. We will start with a review of the theory of the firm (cost and demand functions) and the conduct and performance of monopolies. The course proceeds with the analysis of game theoretic methods to study oligopolistic firm behavior in a variety of scenarios, ranging from simple forms of static competition to complex dynamic games involving strategic behavior. We will also study entry barriers, entry deterrence, predatory conduct, mergers, collusion, and different modes of non-price competition (such as advertising or Research and Development). The course combines theoretical models with some noteworthy real world applications and briefly considers antitrust law.

Prerequisites:

Principles of Microeconomics (ECO 2023), Principles of Macroeconomics (ECO 2013), Intermediate Micro (ECO 3101) or Managerial Economics (ECP 3703), and Survey of Calculus (MAC 2233). I will assume familiarity with basic microeconomic theory, linear algebra and basic calculus. We will be studying a number of calculus-based profit maximization models so you should be comfortable drawing and interpreting graphs, taking simple partial derivatives, finding Nash Equilibria, and using algebra to manipulate equations. The course includes brief refreshers on basic microeconomic theory and basic game theory. However, if you are not familiar with these topics, you should make time out of class to review them in detail.

Textbook and Readings:

The required textbook for this course is:

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

This textbook covers antitrust (legal) cases, analyzed from an industrial organization perspective. Students will have to present to the class cases that will be assigned from this textbook.

A recommended (but not required) textbook on industrial organization is Pepall, Richards and Norman, *Industrial Organization: Contemporary Theory and Applications*, 2014, Fifth Edition (PRN). The textbook not only provides a look into the problems, but also applications and examples. Most (but not all) of the material from class will be covered in the textbook. You will be responsible for material from class that is not covered in the textbook.

The course will cover topics in Basic Game Theory. A separate textbook which is recommended but not required, and covers the same topics in Basic Game Theory is Gibbons, *Game Theory for Applied Economists*.

Lectures and Course Communication

We will have face-to-face instructional sessions. You can find the schedule for the course in the weekly class schedule (at the end of the syllabus). Exams will take place in class during our assigned class time: Mondays and Wednesdays during 5th and 6th periods.

Announcements concerning the class will typically be made in class and through Canvas. You are responsible for all information made available through all of these avenues of communication.

Evaluation and Grading:

Evaluation will be based on:

- Problem sets: 10% of the total grade.
- Two midterm examinations. The exams will be closed book/closed note exams administered in class.
 - The first midterm examination (30% of the total grade) will take place on Wednesday October 12th at 11:45am (Eastern Standard Time zone).
 - The last exam (30% of the total grade) will be held the last day of class, on Wednesday December 7th at 11:45am (Eastern Standard Time zone).
- Student presentations: 20% of total grade. Students will have to present to the class cases that will be assigned from the required textbook for this course (*The Antitrust Revolution: Economics, Competition, and Policy*, by John Kwoka and Lawrence White, Seventh Edition).

- Class participation: 10% of total grade (see details below).

The course is divided into two parts, each followed by an exam that focuses mostly on the current part. Make-up exams will be administered only on those circumstances in which you cannot take an exam for a valid reason, such as illness or emergency (see [UF policy](#) on this). **In that case, you should notify me prior to the start of the examination. A zero exam score will be assigned if you miss an exam for an unexcused reason.** Please also note that providing false documentation or creating an excuse to be excused from class that cannot be verified constitutes cheating under the University guidelines. UF policy on academic honesty will be strongly enforced.

There will be at least 6 problem sets. Due dates for the assignments will be announced in class (all times announced in class will be according to Eastern Standard Time). **All assignments are due on Canvas before the deadline on the due date. Late submissions will not be accepted and will receive zero credit.** As a general advice, make sure to submit your assignment at least several hours before the due date/time. In addition, after submitting your problem set through Canvas, make sure your submission is correct and contains all pages. If necessary, you will be able to replace your initial submission with an updated version before the deadline. You are responsible for verifying that any online assignment submission has properly been submitted through Canvas. Your lowest problem set grade will be dropped.

Class participation accounts for 10% of the total grade. Class participation means not only class attendance, but also asking and answering questions in class. You will only get partial credit if you attend classes but you do not actively participate in class. I will keep track of who comes to class and participates in class starting the second week of classes (once the roster is fixed). Requirements for class attendance and make-up exams are consistent with university policies (see UF policy [here](#)). Your class participation grade will be determined as follows:

- Your class participation grade will be zero if you miss more than 25% of the lectures (7 classes or more) for an unexcused reason. In this case, your score will be zero independently of whether you have actively participated in class or not during the lectures you have attended.
- If you attend classes regularly (i.e., you attend at least 75% of the lectures or skip less than 7 classes) but you do not actively participate in class (asking and answering questions), your class participation grade will be 70.

- If you attend classes regularly (i.e., you attend at least 75% of the lectures or skip less than 7 classes) and you actively participate in class (asking and answering questions), your class participation grade will be between 70 and 100, depending on how much you participated (I will use a curve to determine your final score).

If you miss a class for a valid and excused reason (see [UF policy](#) on this) and you do not want your class absence to count against your class participation grade, you need to provide valid documentation (within a week of your absence) justifying your absence. This documentation must include contact information for verification purposes. Providing false documentation or creating an excuse to be excused from class that cannot be verified constitutes cheating under the University guidelines. UF's policy on academic honesty will be strongly enforced.

Your final letter grade will be determined as follows:

93 – 100	<i>A</i>
90 – 92.99	<i>A –</i>
87 – 89.99	<i>B +</i>
83 – 86.99	<i>B</i>
80 – 82.99	<i>B –</i>
77 – 79.99	<i>C +</i>
73 – 76.99	<i>C</i>
70 – 72.99	<i>C –</i>
67 – 69.99	<i>D +</i>
60 – 66.99	<i>D</i>
0 – 59.99	<i>E</i>

Information on current UF grading policies for assigning grade points is available [here](#).

Academic Honesty

You are expected to comply with the University of Florida's rules for academic honesty (which can be found [here](#)). Failure to comply with this commitment will result in disciplinary action. UF policy on academic honesty will be strongly enforced.

Students with Disabilities

Students with disabilities requesting classroom accommodation must first register with the Disability Resource Center. The Disability Resource Center will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via ufl.bluer.com/ufl/. Summaries of course evaluation results are available to students [here](#).

Topics

1- Introduction

- Introduction to Industrial Organization: PRN Chapter 1.
- Review of Basic Microeconomic Theory:
 - Technology and Costs. PRN Chapter 4.1 (excluding 4.1.3).
 - Competition versus Monopoly. PRN Chapter 2 (excluding 2.3 and 2.4).

2- Market Structure and Market Power

- Concentration Measures and Evidence. PRN Chapter 3.
- Cost and Non-Cost Determinants of Market Structure. PRN Chapter 4 (excluding 4.1.1, 4.1.2, and 4.6).

3- Basic Oligopoly Models

- Game Theory: Static Games. PRN Chapters 9.1-9.3 or Gibbons Chapter 1 (pp 1-12).
- Static Competition:
 - Homogeneous Goods: PRN Chapters 9.4-9.5 and 10.1. or Gibbons Chapter 1.2.A.
 - Differentiated Goods: PRN 10.2-10.3, or Gibbons Chapter 1.2.B.
- Game Theory: Dynamic Games. PRN Chapter 11 (excluding 11.5), or Gibbons Chapters 2.1, 2.2 and 2.3 (skip the complex applications).

4- Anticompetitive Behavior and Antitrust Policy

- Entry Deterrence. PRN Chapters 12 (excluding 12.2.2, 12.3.1, and 12.5), 13.2.2 and 13.3.2.
- Predatory Conduct. PRN Chapter 13 (excluding 13.3.1, 13.3.3, and 13.6).
- Price Fixing, Repeated Interaction, and Antitrust Policy. PRN Chapter 14 (excluding 14.4.1 and 14.5) and Appendix to Chapter 1.

5- Mergers

- Horizontal Mergers. PRN Chapter 15 (excluding 15.5.2, and 15.7).
- Vertical and Conglomerate Mergers. PRN Chapter 16 (excluding 16.3, 16.4, 16.6, and 16.7).

6- Non-Price Competition (only if time permits)

- Advertising. PRN Chapter 19 (excluding 19.5 and 19.6).
- Innovation (Research and Development). PRN Chapter 20 (excluding 20.3, 20.5, and 20.6).

7- Monopoly Pricing Schemes (if time permits)

- Durable Goods. PRN Chapters 2.3.3, and 2.3.4.
- Third degree price discrimination. PRN Chapter 5 (excluding 5.6).
- First degree price discrimination. PRN Chapter 6 (excluding 6.1.2, and 6.4).
- Second degree price discrimination. PRN Chapter 6(excluding 6.1.2, and 6.4).
- Tie-in sales and bundling. PRN Chapter 8 (excluding 8.1.1, 8.1.2, 8.1.3, and 8.5).

Table 1: Course Schedule

Week	Date	Topic
1	24-Aug	Syllabus & Intro to IO
2	29-Aug	Foundations: Demand and Costs
2	31-Aug	Foundations: Perfect Competition and Monopoly
3	5-Sep	No class (Holiday)
3	7-Sep	Market Structure and Market Power
4	12-Sep	Costs and Non-costs Determinants of Market Structure
4	14-Sep	Intro to Game Theory
4		Assignment 1 due*
5	19-Sep	Game Theory (cont'd)
5	21-Sep	Oligopoly Models
5		Assignment 2 due*
6	26-Sep	Oligopoly Models (cont'd)
6	28-Sep	Dynamic Games
6		Assignment 3 due*
7	3-Oct	Entry Deterrence
7	5-Oct	Entry Deterrence (cont'd)
8	10-Oct	Exam Review
8	12-Oct	Midterm I
9	17-Oct	Predatory Conduct
9	19-Oct	Predatory Conduct (cont'd)
10	24-Oct	Mergers
10	26-Oct	Mergers (cont'd)
10		Assignment 4 due*
11	31-Oct	Collusion
11	2-Nov	Advertising
11		Assignment 5 due*
12	7-Nov	Advertising (cont'd)
12	9-Nov	Case Studies (I) & Students Presentations
13	14-Nov	Case Studies (II) & Students Presentations
13	16-Nov	Case Studies (III) & Students Presentations
13		Assignment 6 due*
14	21-Nov	Case Studies (IV) & Students Presentations
14	23-Nov	No Class (Holiday)
15	28-Nov	Case Studies (V) & Students Presentations
15	30-Nov	Case Studies (VI) & Students Presentations
16	5-Dec	Exam Review
16	7-Dec	Midterm II

* Assignment due dates are tentative and subject to change depending upon class progress. Students will be informed of any changes made to the schedule.