

Industrial Organization

Location: MAT 103

Time: Tuesday & Thursday 11:45AM - 1:40PM (Period 5&6)

Instructor

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- Office Hours: Monday & Wednesday 4:30PM - 5:30PM

Course Description Industrial Organization is the study of imperfect competition, in which there are few competitors. Industrial economists are interested in markets that we actually encounter in the real world. There is a wide range of possibilities of the real world markets. The goal of this course is to develop a way of thinking about frameworks for the various circumstances. These frameworks will permit students to form hypotheses about the mechanisms when facing the real markets.

Firms in imperfectly competitive industries need to make strategic decisions that will have an identifiable impact on other participants in the market such as rival firms, suppliers, or distributors. As a result, making any such choice must inevitably involve some consideration of how these other players in the game will react. We will discuss the modern analysis of market situations involving such strategic interaction.

Our interest is more than just determining the profit-maximizing strategies that firms in a particular market context would adopt. We will discuss the market outcomes that result when firms adopt such strategies, and whether those outcomes are close to those of the competitive ideal. We will then study whether and how public policy can improve market allocations.

Microeconomics, basic Game Theory and basic Calculus will be our tools to study firm behavior, market structure and performance of industries. The course combines theoretical models with some noteworthy real world applications and briefly considers antitrust law. We will start with a review of basic calculus and the theory of firm. We will then analyze the conduct and performance of monopolies; oligopolistic firm behavior in a variety of scenarios, ranging from simple forms of static competition to complex dynamic games; entry deterrence; horizontal and vertical mergers; If time permits, we will also discuss specific issues regarding advertising; patents; network issues; auctions; international trade;

This course is one of the high-level elective courses for juniors or seniors who major in economics or business. Students will be able to think like economists when facing the real world phenomena at the end of this course.

Prerequisites The prerequisites for this course are: Intermediate Microeconomics (ECO 3101) and Survey of Calculus (MAC 2233) or higher level of math courses. Since this course will deal with firms' profit-maximizing strategies, most discussion will be application of basic calculus to the real firm behaviors in various situations. Thus, you are expected to have familiarity with basic microeconomic theory, linear algebra and basic calculus. Also, you should be comfortable with drawing and interpreting graphs, taking simple partial derivatives and using algebra to manipulate equations. If you have any questions on this matter, I will be happy to discuss this in the first week of this semester.

Course Materials The required textbook for this course is Pepall, Richards and Norman, "Industrial Organization: Contemporary Theory and Applications," 2014, Fifth Edition. Most of the topics will be from the textbook. You are also responsible for materials from class that are not covered in the textbook, which will mostly be real world cases and practice problems. Also, I will provide my lecture slides on Canvas. If you miss a class, however, it is your responsibility to catch up with the materials by asking classmates for notes or coming to my office for any questions.

The course will cover topics in basic Game Theory. A separate textbooks which is recommended but not required is Aliprantis and Chakrabarti, "Games and Decision Making," 2011, Second Edition.

Evaluation Your grade will depend on your performance on 3 exams and 3 assignments. Your final grade will be calculated as follows:

Exam 1	20
Exam 2	30
Exam 3	30
Assignments	15
Research Project	5

Your final letter grade¹ will be determined as follows:

93 – 100	<i>A</i>
90 – 92.99	<i>A–</i>
87 – 89.99	<i>B+</i>
84 – 86.99	<i>B</i>
80 – 83.99	<i>B–</i>
75 – 79.99	<i>C+</i>
70 – 74.99	<i>C</i>
65 – 69.99	<i>C–</i>
60 – 64.99	<i>D+</i>
55 – 59.99	<i>D</i>
0 – 54.99	<i>E</i>

¹More information on grades and grading policies is here: <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Exam Dates

Exam 1: Tuesday, Sep 24th in class.
Exam 2: Thursday, Oct 24th in class.
Exam 3: Tuesday, Dec 3rd in class.

If you have an excused conflict (e.g., a religious holiday) with any exam this semester, please email me by the end of the first week of class.

Make-up exams will be administered only on those circumstances in which you cannot take an exam for a valid reason according to UF policy. In that case, you should notify me prior to the start of the examination. In addition, you will need to provide valid documentation (within a week) justifying your absence. Supporting documentation related to excuses for missed exams must include contact information for verification purposes. Failure to comply with these rules will result in a zero score in the missed exam. Providing false documentation or creating a false excuse constitutes cheating under the University guidelines. UF's policy on academic honesty will be strongly enforced.

Exams The exams will involve discussing economic intuitions, solving problems and interpreting results. You will be fully able to prepare for the exams by reading the textbook and lecture slides, attending and participating actively in every class, and working seriously on assignments.

Assignments There will be 3 assignments. These assignments are for your deeper understanding of class topics. Also, these will help you to prepare for the exams.

Assignment 1: Tuesday, Sep 17th before the class starts.
Assignment 2: Thursday, Oct 17th before the class starts.
Assignment 3: Tuesday, Nov 19th before the class starts.

I encourage you to work together, but each student has to submit their own solutions. All assignments are due in class before the class starts on the due date. Late submissions will not be accepted and will receive zero credit.

Research Project You can describe a real world firm behavior or market situations by using concepts we discuss in class. Or, you can raise a question which cannot be explained based on theories we discuss in class. This project will help you understand and relate what you study in class with the real world phenomena. You can choose either a presentation or a written report.

Choose one: $\left\{ \begin{array}{ll} \text{Presentation} & : \text{Any class before Nov 12th.} \\ \text{Report} & : \text{Tuesday, Nov 12th before the class starts.} \end{array} \right.$

For presentations, you can use “Reality Checkpoint” in each chapter of the textbook. You can write 2–5 slides, and then present those for about 5–10 minutes at the beginning of a class. To arrange presentation dates and topics, please email me by the end of August.

For written reports, you can describe firm strategies or market structure by using concepts we discussed in class. 150–600 words.

You can form a group of 2 with a classmate to do this research project.

Practice Problems After each chapter, I will solve several practice problems in class. These will help you expand your problem-solving skills. It is your responsibility to ask your classmates for these problems and answers if you miss a class.

Class Attendance Class attendance is expected. Excused absences are consistent with university policies in the undergraduate catalog² and require appropriate documentation.

Other Important Dates

There will be no class on Tuesday, November 26th. (SEA conference.)

Course Communications You are responsible for all information made available through classes and Canvas. Please check Canvas frequently. I will not use the Canvas messaging feature, nor respond to these messages. You can communicate with me via email or come to my office hour.

Students with Disabilities Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented 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. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. 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 <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

University Honesty Policy UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code.” On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code³ specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor in this class.

Counseling and Wellness Center Contact information for the Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc/Default.aspx>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

²<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

³<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>

Course Outline (Blanks are chapters in the textbook.)

We will cover 1–2 chapters of the textbook each week.

1. Introduction

- What is Industrial Organization? (Chapter 1.)
- Basic calculus review.
- Basic microeconomics review. (Chapter 2,3,4.)

2. Monopoly Power in Theory and Practice

- Price Discrimination. (Chapter 5,6.)
- Product Variety. (Chapter 7.)
- Bundling and Tie-In sales. (Chapter 8.)

3. Strategic Interaction and Basic Oligopoly Models (with Game theory.)

- Static Games. (PRN: Chapter 9. AC: Chapter 2.)
- Cournot and Bertrand Competition. (PRN: Chapter 9,10. AC: Chapter 2.)
- Dynamic Games. (PRN: Chapter 11. AC: Chapter 3, 4.)
- Repeated Games. (PRN: Chapter 14. AC: Chapter 7.)

4. Anticompetitive Behavior and Antitrust Policy

- Entry Deterrence. (Chapter 12,13.)
- Price Fixing. (Chapter 14.)
- Antitrust Policy. (Chapter 14.)

5. Contractual Relations Between Firms

- Horizontal Mergers. (Chapter 15.)
- Vertical Mergers. (Chapter 16.)
- Vertical Restraints. (Chapter 17,18.)

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

- Advertising. (Chapter 19.)
- R&D. (Chapter 20.)
- Patents. (Chapter 21.)

7. Networks, Auctions, and Strategic Policy Commitment (only if time permits)

- Network. (Chapter 22.)
- Auctions. (Chapter 23.)
- International Trade. (Chapter 24.)