

ECON 4697-001 INDUSTRIAL ORGANIZATION AND REGULAION

Instructor: Assistant Professor Scott Savage

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Office hours: TR 9.30-10.30am or by appointment

Class time and location: TR 11am-12.15pm, MUEN E131

Class website: *CULearn*, see <https://culearn.colorado.edu/>

Personal website: <http://www.colorado.edu/Economics/people/faculty/savage.html>

Course Description

Industrial Organization and Regulation studies industry structure, and how firms behave in markets where the assumptions of perfect competition do not hold. The main focus is on the firm's choice of price, quantity and quality, and how public policy is used to promote competitive outcomes and control market power. The course comprises four parts. Part I reviews microeconomics principles and introduces some basic game-theoretic concepts. Part II examines monopoly markets and regulation. Oligopoly behavior is studied in Part III, while Part IV investigates firm's price and non-price strategies.

Objectives

Use the economic tools learned in *ECON 3070 Intermediate Microeconomic Theory* to understand the economics of firms and markets, and optimal decision making by firms and policy makers under conditions of imperfect competition.

Become comfortable using algebra, calculus, diagrams and logic and to model different kinds of firm interactions in an applied setting.

Develop critical thinking, oral and written communication skills with class room interaction, homework questions and examinations.

Prerequisites

Available to students who have completed *ECON 3070 Intermediate Microeconomic Theory*. Students should be familiar with microeconomic principles, algebra, calculus and statistics covered in prerequisite classes.

Textbooks

The required textbook is *Introduction to Industrial Organization* by Luis Cabral, 2000, MIT Press, ISBN# 0-262-03286-4.

Your textbook from *ECON 3070 Intermediate Microeconomic Theory* will be useful for revising several of the introductory topics. References to other appropriate readings will be indicated during lectures as the course progresses.

Class requirements

The class meets Tuesday and Thursday from 11am to 12.15pm. Although there is no grade for attendance, attendance and class participation will be duly noted. To receive a passing grade, you are required to attend a minimum of 80 percent of the lectures. A sign-in sheet will be circulated during each class, and it is your responsibility to make sure that you have signed in by the end of class.

Please be aware that the critical thinking required for successful completion of this course may not come naturally for many students. Class exposure to model building, applied problems and solutions is the best way to become proficient in the application of microeconomic theory and the way economists think and solve problems.

Feel free to form study groups to review and discuss lecture/reading material, homework assignments etc., but you must submit individual work for grading (hint: if you work with a study group or individual class mates on assignments, please list the names of these persons on the front page of your submitted assignment).

Students should:

- (a) attend two 75 minute classes per week;
- (b) review and augment notes after lectures;
- (c) complete (a minimum of 4 out of 5) homework assignments;
- (d) complete one quiz
- (e) complete one mid-term examination; and
- (f) complete one final examination

Students are expected to be punctual, polite and prepared to engage in discussion with the instructor and class mates. See <http://colorado.edu/policies/classbehavior.html> for University of Colorado policies on student classroom and course-related behavior

Grading

There will be five homework assignments (with the lowest score dropped from the overall grade), one quiz, one mid-term examination, and one final examination. The weightings for these assessments are:

Homework assignments	(4×7.5%)	30 %
Quiz	(1×10%)	10 %
Mid-term exam	(1×30%)	30 %
Final exam	(1×30%)	30 %

Homework questions will consist of short-answer and problem solving questions that require students to use diagrammatic, mathematical and written skills to prove their answers. The presentation of your homework solutions will count in your assignment grade. Please take the time to clearly and neatly write out mathematical and graphical answers. Basic requirements for presentation include: name on first page; staple pages; place page numbers on each page; clearly title and label any graphs, tables, etc.; and

ensure mathematical notation is clearly legible and readable. Obviously, a word document helps to ensure neat presentation, but it is not necessary.

The mid-term and final examination will consist of short-answer and problem solving questions similar to homework questions and class applications.

There will be no make-up homework assignments or mid-term examination unless there is a proven emergency or other unusual circumstances that have been discussed with the instructor prior to submission/completion dates. If you aware of any problems that may hinder your performance in the class please discuss with the instructor sooner than later. Any student that misses the mid-term examination due to proven emergency or other circumstances may have their final exam re-weighted with instructor approval.

The final examination is scheduled for Monday, May 5, 1.30-4pm. See http://registrar.colorado.edu/calendar/exam_sched_spring08.html.

Important dates for assessment

Jan 29	Quiz
Feb 14	Homework 1
Feb 28	Homework 2
Mar 11	Mid-term examination
Mar 20	Homework 3
April 10	Homework 4
April 24	Homework 5
May 5	Final examination

Campus policies

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. See polices at <http://www.colorado.edu/policies/classbehavior.html> and at http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code

The University of Colorado at Boulder policy on Discrimination and Harassment, the University of Colorado policy on Sexual Harassment and the University of Colorado policy on Amorous Relationships apply to all students, staff and faculty. Any student, staff or faculty member who believes s/he has been the subject of discrimination or harassment based upon race, color, national origin, sex, age, disability, religion, sexual orientation, or veteran status should contact the Office of Discrimination and Harassment (ODH) at 303-492-2127 or the Office of Judicial Affairs at 303-492-5550. Information about the ODH, the above referenced policies and the campus resources available to

assist individuals regarding discrimination or harassment can be obtained at <http://www.colorado.edu/odh>.

All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council (honor@colorado.edu; 303-725-2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). Other information on the Honor Code can be found at <http://www.colorado.edu/policies/honor.html> and at <http://www.colorado.edu/academics/honorcode/>.

Disability Services' letters for students with disabilities indicate legally mandated reasonable accommodations. The syllabus statements and answers to Frequently Asked Questions can be found at <http://www.colorado.edu/disabilityservices>.

Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, please indicate by email, near the beginning of the semester, if there is a conflict. See full details at http://www.colorado.edu/policies/fac_relig.html.

Class schedule, lectures, homework etc.

Proposed topics are provided in the table below. Class lectures will closely follow the presentation of topics by Cabral (2000). Additional examples and case studies will be provided by the instructor to enhance your understanding of concepts and models.

Please note that the outline of topics is subject to change during the term depending on how fast we work through the proposed topics. All changes will be announced in class and online via CULearn, <https://culearn.colorado.edu/>. Please check CULearn and syllabus regularly for changes.

Class lecture handouts, assignment questions, solutions and additional reading materials will be made available when appropriate via CULearn.

Table 1. Proposed course outline

Week	Date	Topic	Reading
1.	Jan 15 Jan 17	Part I. Review - Introduction - What is Industrial Organization (IO)?	Ch 1
2.	Jan 22 Jan 24	- Microeconomic principles - The firm	Ch 2 Ch 3
3.	Jan 29 Jan 31	- <i>Quiz</i> - Game theory	Ch 4
4.	Feb 5, 7	- Game theory	Ch 4
5.	Feb 12 Feb 14	Part II. Monopoly - Monopoly - Dominant firm, competitive fringe model	Ch 5 Ch 5
6.	Feb 19, 21	- Price regulation	Ch 5
7.	Feb 26, 28	Part III. Oligopoly - Price (Bertrand) competition	Ch 7
8.	Mar 4, 6	- Quantity (Cournot) competition	Ch 7
9.	Mar 11 Mar 13	- <i>Mid-term examination</i> - Collusive behavior	Ch 8
10.	Mar 18 Mar 20	- Collusive behavior - Market structure & market power	Ch 8 Ch 9
11.	Mar 25, 27	- <i>No classes, Spring break</i>	
12.	Apr 1 Apr 3	- Market structure & market power Part IV. Price & non-price behavior - Price discrimination, non-linear pricing	Ch 9 Ch 10
13.	Apr 8 Apr 10	- Price discrimination, non-linear pricing - Versioning, tie-in sales	Ch 10 Ch 10
14.	Apr 15 Apr 17	- Versioning, tie-in sales - Product differentiation	Ch 10 Ch 12
15.	Apr 22, 24	- Product differentiation	Ch 12
16.	Apr 29, May 1	- Last week of class, catch up & review	
17.	May 5	- Final examination	