

ECON 4697-001 INDUSTRIAL ORGANIZATION & REGULATION

Instructor: Professor Scott James Savage

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Class time and location: TTH 12.30pm to 1.45pm, ECON 117

Course Description

The course studies firm behavior in markets where the assumptions of perfect competition do not hold. The focus is on the firm's choice of price, quantity of output, quality, and location, and how public policy is used to promote competitive outcomes and control market power. The course comprises four parts: (i) introduction; (ii) monopoly power; (iii) price discrimination; and (iv) oligopoly competition.

Advanced questions are asked about the choices of firms, consumers and policy makers. Theory will be used to obtain insight on economic behavior and to conduct theoretical experiments with comparative statics analysis. In these experiments, the economic model will be shocked with an economic or policy "treatment" and the pre- and post-treatment equilibria results will be compared.

Objectives

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

Become comfortable using algebra, calculus and diagrams to model different kinds of firm interactions.

Continue to develop critical thinking, oral and written communication skills with classroom interaction, office hours, homework assignments, and examinations.

Understand the philosophy of economics. Identify errors in economic analysis in the popular press and the wider community.

Prerequisites

Available to students who have completed *ECON 3070 Intermediate Microeconomic Theory*. Students should be familiar with microeconomic principles, algebra, calculus, optimization techniques and probability covered in their prerequisite classes (*ECON 1088 Math Tools for Economists 2* and *ECON 3818 Intro to Economic Statistics & Computer Applications*). Be comfortable expressing these concepts in short-answer questions in homework assignments and examinations.

You will need access to a high-speed Internet connection, a printer and a scanner to complete this course.

Instruction Mode and Office Hours

I will conduct in-person classes on Tuesday and Thursday that will include lectures, problems and answers to your questions. Lecture notes, problems, solutions, etc. will be available through Canvas.

The spring term will begin on January 11 with fully remote instruction for the first two weeks of the semester. See Canvas for the Zoom link.

There will be no in-person office hours this semester. Virtual office hours will be held on Tuesday and Thursday from 2.15 to 3.45pm. Please email your carefully written questions and I will answer them by email and, if necessary, organize a Zoom call.

Textbooks

There is no required textbook. Appropriate readings will be indicated during lectures and updated on Canvas. Outlines of my notes will be provided on Canvas. *Introduction to Industrial Organization* by Luis Cabral (MIT Press) and *Industrial Organization: Contemporary Theory and Empirical Applications* by Lynne Pepall, Dan Richards and George Norman (John Wiley & Sons) are useful supplementary textbooks. Your textbook from *ECON 3070 Intermediate Microeconomic Theory*, for example, *Microeconomics* by David Besanko and Ronald Braeutigam (John Wiley & Sons), or *Intermediate Microeconomics: A Modern Approach* by Hal Varian (W.W. Norton and Company).

Class requirements

The critical thinking required for successful completion of this course may not come naturally for many students. Classroom exposure to model building, group exercises, 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.

For safety and administration reasons, please try to sit in the same seat throughout the semester. I may take attendance for my administrative records, but there will be no formal penalty for non-attendance.

Please inform me immediately if an unforeseen emergency, illness or safety concern impacts your performance. I can help, but I need to know your circumstances as soon as possible to consider suitable alternative arrangements.

Feel free to form study groups to review and discuss lecture/reading material, homework assignments etc. However, you must submit your own individual work for grading. If you work with classmates on assignments, please list the names of these persons on the front page of your individually submitted assignment.

To successfully complete the class, each student should:

- (a) attend two 75-minute classes each week;
- (b) review and augment lecture notes after class;
- (c) be punctual, polite and respectfully engage in class discussion;
- (d) complete (a minimum of six out of seven) homework assignments;
- (e) complete one mid-term quiz;
- (f) complete one mid-term examination;
- (g) complete one final examination;
- (h) cooperate with your classmates and your Professor; and
- (i) carefully practice the University's health and safety measures.

Cellular phones, laptops, tablets and other devices. You may use your devices for learning, e.g., electronic notetaking, photographs of the chalk board, etc., and to practice appropriate health and safety measures. If you use your devices for activities that distract me or other students, I will ask you to leave the class immediately.

Grading

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

Homework assignments	$(6 \times 10 \%)$	60 %
Mid-term quiz	$(1 \times 15 \%)$	15 %
Mid-term examination	$(1 \times 15 \%)$	15 %
Final examination	$(1 \times 10 \%)$	10 %

Homework will consist of short-answer and problem-solving questions that require you to use diagrammatic, mathematical and written skills to prove your answers (i.e., provide an appropriate method and/or logical steps). Homework presentation will count for 20 percent of each of your assignment grades. Please write your mathematical and graphical answers clearly and smartly. Basic requirements for presentation include name and heading, page numbers, appropriate labels for figures, graphs, tables, etc., clear and transparent economic and mathematical notation, and good grammar and flow. You may use a word processor and/or write neatly with a pen (see Canvas for an example solution). Homework must be saved as a single pdf file and uploaded to Canvas by 5pm on the due date. Submissions after 5pm on the due date will incur a 25 percent penalty. No homework will be accepted after 11.59pm on the due date.

The mid-term quiz will be a multiple-choice questionnaire. The mid-term and final examinations will consist of short-answer and problem-solving questions like homework questions and class applications. You may need a basic non-programmable calculator during the quiz and examinations. I will let you know beforehand.

Make-up homework assignments, quizzes or examinations will only be given when there is a proven emergency, health or safety concern, or other unusual circumstance that are discussed with the instructor prior to submission/completion dates. If any issues hinder your performance in the class, please discuss with the instructor sooner than later. Any

student that misses the quiz or mid-term exam due to a proven emergency or other circumstances may have their other assessments weighted up with instructor approval.

Important dates for assessment

Jan 18	Homework 1
Feb 1	Homework 2
Feb 15	Homework 3
Mar 1	Mid-term examination
Mar 15	Homework 4
Mar 29	Homework 5
April 5	Mid-term quiz
April 12	Homework 6
April 26	Homework 7
April 30	Final examination ¹

The Department of Economics provides a free drop-in tutorial office which offers help on all core courses in the major, and occasionally on other undergraduate courses in the Department. Its website is:

<https://www.colorado.edu/economics/node/513/attachment>.

The Department also maintains a list of tutors who are available for private hire. Its website is:

<https://www.colorado.edu/economics/node/515/attachment>.

Campus and department policies

The Department of Economics enforces prerequisites. Students without the appropriate prerequisite(s) may be administratively dropped.

See the campus and department policies at:

<https://www.colorado.edu/economics/current-courses>.

See the required syllabus statements at:

<https://www.colorado.edu/academicaffairs/policies-customs-guidelines/required-syllabus-statements>.

¹ The final exam date and time is April 30, 1.30 to 4pm. The spring 2022 exam schedule is available at: <https://www.colorado.edu/registrar/students/calendar/finals>.