

University of Minnesota—Twin Cities
Department of Economics
ECON 4631(002) (Fall 2021)
INDUSTRIAL ORGANIZATION AND ANTITRUST POLICY

Instructor: Jorge D. Ramos-Mercado

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Office Hours: Wednesdays 12-2 pm via Zoom [e-mail me first]

Course Credits: 3 credits

Lecture days and period: Tuesdays and Thursdays 11:15 a.m. -12:30 p.m.

Lecture Location: Blegen Hall 255

Class Website: <https://canvas.umn.edu/courses/286540>

IN PERSON COURSE DELIVERY:

This course meets in person and most office hour meetings will be done via Zoom.

COURSE DESCRIPTION AND OBJECTIVES

Most economic courses focus on markets with “many” buyers and sellers where each market participant is cognizant that their behavior seldom influences price. But this is far from realistic. Most markets have some participants—either in the buying or selling side—can influence market prices and are aware of this capacity. This course, hence, studies how *realistic* markets operate. I focus on the behavior of monopolies (e.g. how do they set prices, price discrimination, the value of customer data, government’s role) and oligopolies (e.g. how do they compete, how do they collude [form cartels]?, when do sellers enter or leave?). My goal is to use the tools from Econ 3-101, calculus, and some statistics to explore these theoretical problems as well as analyze real-world markets.

COURSE PREREQUISITES: Must have passed Econ 3-101, Calculus 1, and some statistics.

TEXTBOOK AND READINGS: The course primarily follows the instructors notes, but the supplemental textbook is *Modern Industrial Organization* by Dennis W. Carlton and Jeffrey M. Perloff, 4th edition, 2015. Further readings will be discussed along the way. (WILL NOT USE.)

COURSE OUTLINE

This course outline should give you a general idea of the topics covered. I will add details along the semester. I will keep a detailed and updated course schedule on Canvas.

- Perfect competition
- Firm basics (objective, costs, ownership, and economies of scale)
- Game theory:
 - Basics
 - Cournot model
 - Stackelberg model
 - Bertrand model
- Cartels and Repeated Games (Green and Porter (1984), Fudenberg, Maskin, Levine (1994), Sannikov and Skripacz (2010))
- Correlated Equilibria and communication.
- Monopolistic competition (Classic Theory, Auctions (Myerson (1981)), Monopolies as Auctions (Bulow and Roberts (1989))).
- Independent vs Interdependent Valuations.
- Price Discrimination (Bergmann and Morris (2015))
- Information Economics: Adverse Selection, Asymmetric Information, Social Learning
- Time permitting: Theory of the Price, Regulation and De-regulation, Antitrust and Patent Policy, vertical integration, location models,

COMMUNICATION BETWEEN STUDENTS AND INSTRUCTOR: Most communication will be made in person and via Canvas. Please be on top of the course material. Also, I will answer your e-mails within 24 hours, but only between 9am-7pm.

APPROPRIATE USE OF COURSE MATERIALS: Sharing course materials with anyone outside of the class is a violation of intellectual property per Item 6 of the [U of M policy on student responsibilities](#). Please do not share any course material with anyone else.

TECHNICAL SUPPORT FOR CANVAS:

For tips and information about Canvas visit the Canvas Guide Using Help - Student: <https://community.canvaslms.com/docs/DOC-10554-4212710328>.

INSTRUCTIONAL TIME AND STUDENT EFFORT: For undergraduate courses, one credit is defined as equivalent to three hours of additional work per week for the course, in order for students to achieve an average grade. This implies that you should put in at least 9 additional hours per week on this course, along with attending class for 150 minutes per week.

COURSE REQUIREMENTS AND GRADING

Course Requirements

The final grade will be based on four problem sets (40%), Industry in Brief (20%), a midterm (20%), and a final exam (20%). You are responsible for the material covered in lecture as well as the assigned reading. Although coming to class is not mandatory, it is immensely encouraged.

Problem Sets (40%)

You will receive 4 problem sets made in cooperation with 3-5 colleagues. The groups submit a single document on or before the due date and all late work receives a 0. Nonetheless, keep in mind the following points. First, problem set grades are primarily driven by work completion, so it is utmost important to take a serious stab at each question. Secondly, exam questions will be simplified versions of the problem set exercises.

Industry in Brief (20%)

Each group must choose an industry and write a formal report discussing the following questions:

1. What is its current market structure? (i.e. how many firms compete in the market, who are their customers, how is the industry segmented, et cetera.)
2. How concentrated is the industry? (e.g. what is the distribution of market shares, regional differences in market share,...)
3. How profitable is this industry currently and historically?
4. What has been the industry's market structure and concentration over time?
5. What role does the government play in this industry and how has it evolved?
6. What are the current, salient issues affecting this industry?

The report should be 5-7 pages long; properly cited and formatted; and presented to the class in less than 10 minutes.

Exams: There will be a midterm and a final exam. Both will be done in class without notes or a book. The midterm exam is scheduled for **Thursday, October 21, in class.** Meanwhile, The final exam is scheduled **Tuesday, December 14, in class.** Both exams will be cumulative and based on your homework material. According to University policy, you may request a make-up only if you have:

- Documentation of a family or medical emergency,
- Another test scheduled at the same time, or
- Three exams within a 16-hour period.

If you have any of the last two complications, make sure you talk to me at least two weeks before the exam date. We will arrange a different date for your exam. Written justification for emergencies described in the first point must be provided to me to take the make-up exam. No

other reasons are valid in order to have the right to take an exam on a date different from the ones above. Specifically, work is not a valid excuse, so please plan accordingly.

GRADE DISPUTES: If you disagree with an exam or homework grade, please discuss the matter with me and I will redress the issue accordingly. I do not promise that I will agree with your assessment, but I will hear your criticisms and your grade can only improve upon a regrade.

COURSE GRADING POLICY - The final grade is determined as follows:

Homework: 40%

Industry in Brief: 20%

Midterm: 20%

Final: 20%

DEPARTMENT GRADING SCALE: (I adhere to it...in your favor)

92%-100% A

90%-91% A-

88%-89% B+

82%-87% B

80%-81% B-

78%-79% C+

72%-77% C

70%-71% C-

68%-69% D+

60%-67% D

0 -59% F

The cutoff lines given are final and are not subject to bargaining. If a curve is required, I will do so at the exam/homework/Industry in Brief level only.

COURSE SCHEDULE

Main Dates:

Requirement/Month	September	October	November	December
First day of classes	01/09			
Problem set 1 due	Feb07			
Problem set 2 due		Feb21		
Midterm		Feb23		
Problem set 3 due			Mar14	
Problem set 4 due			Apr04	
Industry in Brief due				Apr25-27
Final exam				May2

Tentative Calendar:

Week	Main Topic:
01	Optimization, Probability theory, What is a firm? Perfect Competition.
02	Standard and Third-Degree Monopolies, information and Price Discrimination (Bergmann and Morris (2015))
03	Optimal Auctions (Myerson (1981)), Interdependent Values and learning
04	Monopolies as Auctions (Bulow and Roberts (1989)), Monopolistic Competition
05	Cournot Competition (Duopoly, Oligopoly, and competitive limit)
06	Review and Midterm (in class exam)
07	Bertrand Competition and Games Theory
08	Stackelberg Competition and the importance of timing
09	Dynamic Competition and Investments.
10	Cartel Formation (Green and Porter (1984), Abreu, Pearce, and Stachetti (1990), Fundenberg, Maskin, and Levine (1994))
11	When are cartels impossible? (Sannikov and Skrzypacz (2007)),
12	Cartel formation, revisited (Rahman (2014)) and Correlated Equilibrium
13	Presentations and Review
14	Final (in class).

ACADEMIC SERVICES AND RESOURCES AT UMN

Below are several student services available to students:

- [Academic Advising Center](#)
- [Disability Student Services](#)
- [Career Services](#)
- [Counseling Center](#)
- [Financial Aid Office](#)
- [Student Writing Support](#)
- <https://libguides.umn.edu/economics> for the U libraries' section for Economics

The University of Minnesota [Academic Support and Tutoring website](#) and [Student Academic Support Services](#) offer a range of excellent support services. Please contact the [Center for Writing](#), or the [Libraries](#) for assistance with research and writing skills.

FERPA and STUDENT PRIVACY

In this class, our use of technology will make student names and emails visible within the course website, but only to other students in the same class. The University uses a secure, password-protected course website; however, if you have concerns, you can adjust settings in your online course profile to hide your email. If you are required to use any tool external to Canvas for

learning activities or assignment completion, a link or description of privacy policies will be included in the directions provided in the course site.

DEPARTMENT OF ECONOMICS -- PROCEDURES AND POLICIES 2020

CLASS ASSIGNMENTS: Written answers to homework assignments must be typed; Graphs and numerical work need not be typed but should be legible. I prefer that this work is done in Latex.

COURSE PREREQUISITES: Students are expected to have successfully completed all prerequisites prior to taking an Economics course.

STUDENTS WITH DISABILITIES: Reasonable accommodations will be provided for all students with documented disabilities (by the DRC). Contact the instructor at the beginning of the semester to work out details. This information will be kept confidential.

STUDENT MENTAL HEALTH AND STUDENT COUNSELING SERVICES: As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. University of Minnesota services are available to assist you with addressing these and other concerns. Information about confidential mental health services is available at: <https://boynton.umn.edu/clinics/mental-health>. Student Counseling Services website: <https://counseling.umn.edu/>

SEXUAL MISCONDUCT: Sexual misconduct (sexual harassment, sexual assault, stalking, and relationship violence) includes unwelcome sexual advances, requests for sexual favors, and/or other verbal or physical conduct of a sexual nature. Such behavior is prohibited in the University setting. Per the [U of M policy on sexual harassment](#), *I am required to share information that I learn about possible sexual misconduct* with the campus Title IX office. Within the requirements of my job, I will be as responsive as possible to your requests for confidentiality and support. You can also, or alternately, choose to talk with a confidential resource that will not share information that they learn about sexual misconduct. Confidential resources include [The Aurora Center](#), [Boynton Mental Health](#), and [Student Counseling Services](#).

DROPPING A CLASS: Termination of attendance alone is not sufficient to drop a class. You must notify the Registrar's office. Please contact your academic (college) adviser for details on this process and pay attention to University deadlines for add/drop.

INCOMPLETE GRADE: Low class standing is not a valid reason for an Incomplete grade. An I is given only in exceptional circumstances like family emergencies or hospitalization; arrangements must be worked out between the student and instructor before the final exam. We require written proof of emergencies. Details about I grades and how to make it up are to be decided by the Instructor and student; you need to fill out the form.

MAKE-UP EXAMS: Make up exams are possible for the final exam only if the student has another exam scheduled at the same time, or has three exams within a 16 hour period. This should be pre-arranged

with the instructor at least three weeks before the final exam. Make up final exams may also be possible for documented medical emergencies.

SCHOLASTIC DISHONESTY:

"The College of Liberal Arts defines scholastic dishonesty broadly as any act by a student that misrepresents the student's own academic work or that compromises the academic work of another. Examples include cheating on assignments or exams, plagiarizing (misrepresenting as one's own anything done by another), unauthorized collaboration on assignments or exams, or sabotaging another student's work".

The University Student Conduct Code defines scholastic dishonesty as "Submission of false records of academic achievement; cheating on assignments or examinations; plagiarizing; altering, forging, or misusing a University academic record; taking, acquiring, or using text materials without faculty permission; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement."

Penalties for scholastic dishonesty of any kind in any course will entail an "F" for the particular assignment/exam or the course.

Website for information on Student Academic Misconduct --

<https://communitystandards.umn.edu/avoid-violations/avoiding-scholastic-dishonesty>

Recent Update on Scholastic Dishonesty:

The University of Minnesota has updated their policy on Scholastic Dishonesty.

Please read this carefully and comply with it.

You are expected to do your own academic work and cite sources as necessary. Failing to do so is scholastic dishonesty. Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using course materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering, forging, misrepresenting or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis. ([Student Conduct Code](#).) If it is determined that a student has cheated, the student may be given an "F" or an "N" for the course, and may face additional sanctions from the University.

The Office for Community Standards has compiled a useful list of [Frequently Asked Questions](#) pertaining to scholastic dishonesty.

Beware of websites that advertise themselves as being "tutoring websites." It is not permissible to upload any instructor materials to these sites without their permission or copy material for your own homework assignments from these various sites.

If you have additional questions, please clarify with your instructor for the course. Your instructor can respond to your specific questions regarding what would constitute scholastic dishonesty in

the context of a particular class, e.g., whether collaboration on assignments is permitted, requirements and methods for citing sources, if electronic aids are permitted or prohibited during an exam.

STUDENT CONDUCT AND CLASSROOM BEHAVIOR:

Students are expected to contribute to a calm, productive, and learning environment. Check the Student Conduct Code: https://regents.umn.edu/sites/regents.umn.edu/files/2019-09/policy_student_conduct_code.pdf to find out what is expected of you.

STUDY ABROAD IN ECONOMICS:

The Department encourages you to undertake Study Abroad. There are many courses in foreign countries that can satisfy some economics major, minor, or Liberal Education requirements. For more information, please contact our Undergraduate Advisers, Ms. Annie Bigley and Ms. Tiffany Kroeze Murphy, or the University's Learning Abroad Center at <http://www.umabroad.umn.edu/>. There will be no Study Abroad in Fall 2020.

UNDERGRADUATE ADVISERS:

Contact the Undergraduate Advisers if you wish to sign up for an Economics major or minor or to get information about institutions of higher study. Your APAS form will list your progress toward an Economics degree.

Adviser: Ms. Tiffany Kroeze Murphy and Ms. Annie Bigley (econadv@umn.edu); Sign up for appointments at econ.appointments.umn.edu

ECONOMICS UNDERGRADUATE PROGRAM INFORMATION:

Available on the Internet at: <https://cla.umn.edu/economics/undergraduate>. Registration policies are listed in the University Course Schedules and College Bulletins.

COMPLAINTS OR CONCERNS ABOUT COURSES:

All course grades are subject to department review.

Please contact your instructor or TA if you have any complaints/concerns about the course. If your concerns are not resolved after talking with your instructor, you can contact: Professor Simran Sahi, Director of Undergraduate Studies. Her e-mail is: ssahi@umn.edu