



Prof. Chrystie Burr  
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MW, 12:40-1:30  
(303)492-0863  
Course Canvas site

**Economics 4697-001**  
Industrial Organization & Regulation  
Fridays, Prerecorded videos  
Synchronous Online Learning  
Zoom Office Hours: MW 1:30 - 2:00

### Course Description:

Industrial organization is the study of competition and monopoly power and how they affect efficiency and innovation that occur in markets. Using the basic tools of microeconomic theory and game theory, this course explores the relationships among firms in an industry or across industries by examining the nature of strategic interaction among firms. The central issues concern firms' choice of price, quantity, and quality in markets where the assumptions behind perfect competition do not hold. Topics to be covered include: monopoly pricing, collusion and cartels, oligopoly behavior, product differentiation, price discrimination, firm entry and barriers to entry and mergers. We will also consider public policies that affect the structure of markets and the behavior of firms, particularly the antitrust laws that try to create a balance between the benefits of coordination and consolidation and the detriments of market power. We will approach this subject from both theoretical and applied perspectives

### Prerequisite(s):

Intermediate microeconomics (ECON 3070) is a prerequisite. You must also be comfortable enough with calculus so that you can differentiate fairly simple functions, such as polynomials and exponentials.

### Grading:

- In-class Participation (15%)  
This requires your attendance at lectures and completing recorded lectures and readings in advance! It include your in-class presentation assignments as well.
- Group Project: Competitive Strategy Game (15%)  
Strategy Submissions every 1.5 week Final write-up due April 29
- Clicker Questions (15%)  
We will have at least one clicker question per class. You will be graded by whether you answer the clicker questions correctly.
- 3 problem sets & quizzes (20%)  
You may discuss problem sets and work out solutions together, however: **PROBLEM SETS MUST BE WRITTEN UP INDIVIDUALLY**. ALL identical write-ups on problem sets will be given "0" credit.

The occasional quizzes will be given during the class time to assess your understanding of the materials. It could be pre-announced or as a pop quiz. You can't work together on the quiz but you can use your notes.

- 2 exams (35%)
  - midterm (17.5%) March 3 during class time
  - Final exam (17.5%) May 3 Mon 1:30pm-4:00pm
- The precise exam format will depend on the development of the covid-19 spread. It's possible that we could have in-person closed-book and closed-notes exams. I will announce the format two weeks before the exam date. Exams will test your cumulative knowledge with emphasis on the latest material.
- Problem sets, each composed of 3-4 problems will be posted on the class web page and it's due at the beginning of the class a week after being posted. Collaboration on assignments is allowed and encouraged, but final solutions must be written independently. Each student should participate fully in solving each problem and understand the answer. This is the preparation for the exams and at the same time it is meant for you to identify which concepts from the lecture is not clear to you.
- In-class activities include presentations of Harvard Business Review case studies. A group of six students will give a half-hour presentation which requires to use some means of visual aids (i.e. PowerPoint slides).
- Cheating, plagiarism or hire someone to do your work will not be tolerated. They are immediate grounds for failing the class and will be reported to the dean. All incidents of academic misconduct will be reported to the Honor Code Council.

### **Textbook, Case Studies, and Supplemental Materials:**

1. Optional textbook: *Industrial Organization: A Strategic Approach* by Jeffrey Church and Roger Ware. This textbook is available for free download! I also include a copy on Canvas.
2. HBR case studies will be posted on the course Canvas site.
3. Supplemental readings: other relevant articles and references will be posted on the course Canvas site as well.

### **Course Policies:**

- **General**
  - Attendance is critical to succeed in this class. In order to incentivize you to do so, regular attendance and clicker responses will be taken. Together with in-class participation and activities, this will contribute to 15% of the final grade. You are also required to leave your webcam on.
  - Students are responsible for all missed work, regardless of the reason for absence. It is also the absentee's responsibility to get all missing notes or materials.

- Homework needs to be turned in on the due date. I will be more flexible considering the current pandemic situation when reasonable excuses are provided. However, the 1.5 weekly submission of the group game strategy submission has to be submitted by the deadline.
- Missed Exams
  - Make-up exams for the midterms will not be given. Midterm exam absences will only be excused for compelling circumstances (family emergencies or documented illness), in which case the other course material will be re-weighted. Students anticipating conflict with an exam due to religious observance or over-scheduling (3 or more exams on the same day) should bring these to my attention within the first 3 weeks of class.
- Special Accommodation:
  - If you require special accommodation because of disability, please submit a letter from Disability Services in a timely manner (at least two weeks before the exams or other due dates). Disability Services determines accommodations based on documented disabilities. You may contact Disability Services at 303-492-8671 or by email at dsinfo@colorado.edu. If you have a temporary medical condition or injury, see Temporary Injuries for guidelines and discuss your needs with your professor.

**Topics to be covers:**

- Unit 1: Theory of the firm
  - What is a firm?
  - Economies of scales and scopes
  - Incomplete contracts and information asymmetry
  - Long-run relationship and hold-up
- Unit 2: Game theory foundations
  - Elements of the game
  - The Nash equilibrium concept
  - Dynamic games
- Unit 3: Static competition
  - Competition in quantities
  - Competition in prices
- Unit 4: Dynamic competition
  - Repeated interaction and renegotiation
  - Collusion and price wars
  - Case Study I: Diamond Cartels
- Unit 5: US Antitrust
  - Antitrust

- Case Study II: Microsoft Antitrust Case
  - Case Study III: Google Antitrust Case
- Unit 6: Entry and Market Structure
- Unit 7: Deterrence and predation
  - Preemption
  - Reputation
  - Contestability
- Unit 8: Price discrimination
  - Degrees of PD
  - Advanced Pricing
  - Bundling and legality of PD
  - Case Study IV: Pricing the EpiPen: This is Going to Sting
- Unit 8: Product differentiation
  - Horizontal differentiation
  - Proliferation and deterrence
  - Vertical differentiation
  - Case Study V: Crescent Pure
- Unit 9: Networks and platforms
  - Networks
  - Critical mass and lock-in
  - Platforms
- Unit 10: Intellectual property
  - The nature of IP
  - Copyright
  - Patents, trademarks and international IP



*“Education is the most powerful weapon which you can use to change the world.”*

— Nelson Mandela