Industrial organization is the branch of Microeconomics that studies the functioning of markets with few competitors. The presence of a small number of market participants generates situations of strategic interdependence. The course uses Microeconomics and basic Game Theory to study firm behavior and social welfare. We will cover tools to analyze the market as well as how US antitrust laws place limits on firms’ behavior and market outcomes.

Readings: Class notes covering everything I expect you to know are posted. If you are interested in a different take, you can read: Pepall, Richards and Norman, *Industrial Organization: Contemporary Theory and Applications*, 2005, 3rd edition, Thomson-Southwestern (there is a new edition, either is fine) or Waldman and Jensen, *Industrial Organization: Theory and Practice* (4th Edition), Pearson. These texts offer additional applications and examples, but are not required.

For additional readings on Game Theory see: R. Gibbons, *Game Theory for Applied Economists*. For further readings on legal cases: J. Kwoka and L. White, *The Antitrust Revolution*. We will mention several current cases, extensively covered on line. These are optional readings.

Grading will be based on class participation, a midterm exam (during lecture-time 5/4), a final exam during the last day of classes (5/30) and problem sets in the following proportions: midterm 40%, final 50%, and homework 10%. Class participation will bump your grade up if you are above median. For example, if your composite grade for homework, midterm and final is above the median among students in the A-range, an above median participation will bring your grade to an A. Homework and tests will involve mostly problem solving. A couple of problem sets will involve data or reasoning through a case. Tests will involve almost exclusively problem solving. The best way to prepare for the tests is to take the problem sets seriously.

1. Introduction
Industrial Organization: PRN Chapter 1.
What is a firm? and Cost Structure. PRN Chapter 4.1.
Monopoly and Competition: Efficiency implications.
   Competition and Monopoly: PRN Chapter 2 (excluding 2.3.2).
Industry Structure: Concentration Measures and Evidence. PRN Chapters 3, 4.1 and 4.3
Benefits of Competition and Indicators of Market Power:
   Council of Economic Advisors 2016

2. Durable Goods Monopoly
   Market Definition: PRN Chapter 3.1 and Case: Alcoa in Breit and Elzinga, page 177-86.
   Coase Conjecture: Notes.

3. Price Discrimination: PRN Chapters 6.1 (first degree), 6.2 (second degree), 5-5.3 and 5.5 (third degree) and 8.1 (Tie-in sales and bundling).
4. Economic Theories of Oligopoly Pricing
   i. Static Games. PRN 9.1-3 and Gibbons Ch 1 (pp 1-12).
   ii. Static Price Competition
      a. Homogeneous Goods: PRN 9.4-5, 10.1 or Gibbons 1.2.A.
      b. Differentiated Goods: PRN 10.2-3 and Ch 7 or Gibbons 1.2.B
   iii. Sequential and Repeated Games. PRN 11, Gibbons 2.1, 2.2 and 2.3 (skip the complex applications).
   iv. Dynamic Price Competition:
      a. First Mover Advantage
      b. Repeated Interaction
   Christopher Rowland, “Investigation of generic ‘cartel’ expands to 300 drugs,” Washington Post (Dec. 9, 2018)
   Nathan Miller, “Strategic Leniency and Cartel Enforcement” pp750-762 AER
   ii. Introduction to Antitrust Policy. PRN Ch 1 (Appendix), Ch 16. Breit and Elzinga: Part I and Part II (skim pages 9-60).
   Cartel: Practice and Policy. PRN 14 and 15.
   Case: Practices that Facilitate Cooperation: The Ethyl Case (in Kwoka and White).
   5. Strategic Behavior:
      Product Differentiation PRN 7
      Entry Deterrence: PRN 12.2-4.
      Entry Deterrence: Brand Proliferation. Case: Breakfast Cereals.
      Case: United Shoe Machinery, Breit and Elzinga.
      Case: Frame-Wilson v Amazon
   7. Horizontal mergers.
      Merger Guidelines DOJ: https://www.justice.gov/atr/horizontal-merger-guidelines-0
      AT&T Complaint 2011
      T-mobile Complaint 2019
      US v ABInBev/GrupoModelo complaint 2013
      US v American/USAirways Complaint 2013
   8. Vertical Price Restraints and Vertical Mergers: PRN 8, Vertical Non-Price Restraints PRN 9
      Ticketmaster-Live Nation,
KW: Microsoft, 6th ed Case 20, 7th ed case 22
EC Decision “COMP/C-3/37.792 — Microsoft,” 24 May 2004:
Platform steering: https://siepr.stanford.edu/publications/working-paper/platform-annexation


11. Auction Markets: PRN 25

**Tentative schedule**

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<tr>
<th>Date</th>
<th>Lecture</th>
<th>Subject</th>
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<tbody>
<tr>
<td>3/30</td>
<td>Lecture 1</td>
<td>Introduction, Review: Monopoly, Competition and Efficiency.</td>
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<tr>
<td>4/4</td>
<td>Lecture 2</td>
<td>Durable goods and Market Definition.</td>
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<td>Lecture 3</td>
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<td>4/11</td>
<td>Lecture 4</td>
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<tr>
<td>4/13</td>
<td>Lecture 5</td>
<td>Price Discrimination.</td>
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<td>4/18</td>
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<td>4/27</td>
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<td>5/2</td>
<td>Lecture 10</td>
<td>Repeated Games.</td>
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<tr>
<td>5/4</td>
<td>Midterm</td>
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