Instructor: Prof. Huseyin Yildirim
<hy12@duke.edu>, <https://econ.duke.edu/people/huseyin-yildirim>
TA: TBA
When and where to meet: TTH - 1:45 - 3:00 PM on ZOOM (Synchronous lectures// recordings and notes to be available on Sakai)
Office Hours: T: 3:15 - 4:15 PM, TH: 10:00 - 11:00 AM (Yildirim); TBA for TA

Note: I will use the textbook as fun and concise read of the material. However, my arguments will be more formal and based on my notes, which I will distribute after lectures. The course difficulty is similar to Intermediate Microeconomics.

What is this course about? Many markets are structured as an oligopoly in which only a few firms operate. Examples include food, airlines, oil, and pharmaceuticals. This course studies the competitive strategy of oligopolistic firms and its implications for anti-trust policy. Beginning with the basic competition models, Bertrand vs. Cournot, the consequences of firms’ strategic behavior on collusion, price discrimination, product differentiation, advertising, and innovative activities will be examined.

What background knowledge do I need before taking this course? Intermediate Micro or similar. Basic understanding of Calculus is required.

What will I learn in this course? After completing this course, you should be able to critically evaluate a wide variety of business strategies and their anti-trust consequences. I think it is a must course if you are vying for a job in economic consulting or anti-trust. Since the course is model-based, it will also help those who are applying for economics and business Ph.D. programs.

How will my grade be determined? Your grade will comprise two exams, 4-6 problem sets, and a paper summary with the following weights:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem sets</td>
<td>10%</td>
</tr>
<tr>
<td>Paper Summary</td>
<td>20%</td>
</tr>
<tr>
<td>Midterm</td>
<td>30%</td>
</tr>
<tr>
<td>Final</td>
<td>40%</td>
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</tbody>
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After the midterm, I will announce the letter grade scale, e.g., 90-100 A, 85-90 A-, etc. for the rest of the semester. The exams are likely to be out of 100+ points. Makeup exams will be given only in case of a dean’s or doctor’s excuse.

Paper Summary: In consultation with the professor, you are expected to pick a theory paper related to IO topics, and write a 5-7 page summary: (1) the paper’s main idea (1/2 page), (2) the model (players, actions, timing of actions, equilibrium concept, etc.) (1-2 page), (3) one or two formal results (1-2 pages), (4) intuition behind the results (1-2 pages), and (4) a discussion of the paper’s weaknesses (1 page).

How will I turn in my assignments and exams? I will post the problem sets on your Sakai Dropbox, and expect you to submit a PDF version of your solutions by the due date. The
same is also true for the paper summary. The exams are most likely to be administered through Zoom.

**Re-grading Policy:** Once midterm exams are returned, you have one day for a re-grade request. Please write down the question number and your rebuttal, and post it on your Sakai Dropbox. Note that since grading mistakes can happen in both directions, your entire exam, not just the specific questions, may be re-evaluated. Note also that a rebuttal for the final exam is possible only at the beginning of the following semester.

**Special Exam Accommodations:** Per the University rule, students with “approved accommodations” must inform the professor, preferably at the beginning of the semester.

**Tentative Schedule:**

- **Warming up**
  - Ch.1: Class Objective: What is Industrial Organization?
  - Ch.7: Toolbox: Game Theory and Nash Equilibrium

- **Monopoly**
  - Ch.5: Monopoly and Regulatory Policy

- **Oligopoly Models: Bertrand vs. Cournot**
  - Ch.8: Oligopoly Competition
  - Ch.9: Collusion and Price Wars
  - Ch.10: Market Structure and Market Power Index
  - MIDTERM EXAM (Thursday, October 1)

- **Price and Nonprice Strategies**
  - Ch.6: Price Discrimination
  - Ch.13: Vertical Relations
  - Ch.14: Product Differentiation and Advertising

- **Innovation**
  - Ch.15: Incentives, Diffusion, and Public Policy

- **Economics of Contracts** (if time permits.)

FINAL EXAM (Sunday, November 22)