This is an advanced undergraduate course examining markets for goods and services where there is relatively little regulation of firm behavior. The course uses basic microeconomics and game theory to study firm pricing behavior under both monopoly and imperfect competition, the determinants of market structure and product variety and strategies that firms can use to affect market structure. Theoretical models will be illustrated with real-world examples.

**Reading.** The basic and required textbook for the course is


I will also provide lecture notes for the material covered. The lecture notes and problem sets are the best guide for the material which will be tested in the exams.

Some readings on antitrust cases are from


These readings are on electronic reserve in the library.

**Course Website.** I will put handouts, problem sets, solutions and announcements on Blackboard.

**Prerequisites.** Most of the course is self-contained but I will assume familiarity with basic microeconomic theory (e.g., as presented in PRN Chp. 2), linear algebra and basic calculus.

**Lectures.** There will be lectures on Tuesdays and Thursdays 11-12:20 in UNIVERSITY HALL 102. The TA, Mateo Caronia (*m-caronia@northwestern.edu*), will hold a discussion section to discuss the material and go through problem sets. Time and location will be announced in class and on Blackboard. If you miss lectures or discussion sessions then it is your responsibility to make sure that you know the material covered. The TA will also hold office hours.

**Exams and Grading.** The midterm examination will be in-class on Thursday February 1, which is one week before the drop date. The final exam will be on Tuesday March 13 (12-2 pm) during exam week. There will also be weekly problem sets. **You must take the final exam at the scheduled time or file for an incomplete** (see WCAS rules on final exams [http://www.wcas.northwestern.edu/advising/rules5.html](http://www.wcas.northwestern.edu/advising/rules5.html)). Late problem sets will not be accepted. There will be a review session before the midterm and the final.

The problem sets will count for 15% of the final grade. The remaining grade will be determined by the maximum of (i) 0.4*midterm + 0.45*final and (ii) 0.85*final – 5 where “midterm” and “final” are your scores on those exams as a percentage. What this means is that missing/doing
very badly on the midterm is not fatal to your final grade, but that you will suffer a five point penalty.

**Office hours.** My office hours are given above. There will be no office hours on the first Friday of the quarter.

**Outline Schedule (subject to change)**

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<th>Topic</th>
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<td>Tu Jan 9</td>
<td>Multiproduct monopoly and monopoly bundling and tying</td>
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<td>Th Jan 11</td>
<td>First and third degree price discrimination</td>
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<td>Tu Jan 16</td>
<td>Second degree price discrimination</td>
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<td>Th Jan 18</td>
<td>Durable goods monopoly</td>
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<td>Tu Jan 23</td>
<td>Introduction to game theory</td>
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<td>Th Jan 25</td>
<td>Cournot and Bertrand competition (homogenous products)</td>
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<td>Tu Jan 30</td>
<td>Differentiated product competition, variety and “excess entry”</td>
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<td>Tu Feb 13</td>
<td>Mergers</td>
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<td>Mergers continued</td>
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<td>Strategic entry deterrence</td>
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<td>Tu Feb 27</td>
<td>Vertical relationships</td>
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<td>Th Mar 1</td>
<td>Auctions</td>
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Readings
(some additional readings may be assigned in problem sets)

1. Monopoly, perfect competition and costs
   PRN Chp. 2 and 4 (4 contains more detail than required)

2. Multiproduct pricing
   PRN Chp. 8

3. First and third degree price discrimination
   PRN Chp. 5

4. Second degree price discrimination (non-linear pricing)
   PRN Chp. 6

5. Durable goods
   Class notes

6. Introduction to game theory
   PRN Chp. 9
   Gibbons, Game Theory for Applied Economists, Princeton, 1992, Chps. 1 and 2 are recommended (on reserve)

7. Cournot and Bertrand
   PRN Chps. 9 and 10

8. Differentiated product competition, product variety and excess entry
   PRN Chp. 10, 7

9. Repeated games, collusion and facilitating practices
   PRN Chp. 11, 14, 15
   KW, Ethyl and Airline Tariff Publishing cases

10. Mergers
    PRN Chp. 16
    Department of Justice, Horizontal Merger Guidelines,

11. Strategic entry deterrence
    PRN Chp 12, 8.4
Class notes

12. Vertical relationships
PRN Chp. 17-19

13. Auctions
PRN Chp. 25

14. Asymmetric Information

Class notes