

**349: INDUSTRIAL ECONOMICS**  
**Winter 2007**

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Andersen Hall, 331  
Office Hours: Friday 9-10, Tuesday 5-6

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

Pepall, Richards and Norman, *Industrial Organization: Contemporary Theory and Applications*, 2005, Third Edition, Thomson-Southwestern, Third Edition (PRN)

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

John Kwoka and Lawrence White, *The Antitrust Revolution*, 1999 edition (KW)  
William Breit and Kenneth Elzinga, *The Antitrust Casebook* (BE)

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](mailto: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>). 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)  $0.4 \cdot \text{midterm} + 0.45 \cdot \text{final}$  and (ii)  $0.85 \cdot \text{final} - 5$  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)**

Th Jan 4	Introduction and motivation. Antitrust. Costs, demand and welfare in the context of single product monopoly and comparison with perfect competition.
Tu Jan 9	Multiproduct monopoly and monopoly bundling and tying
Th Jan 11	First and third degree price discrimination
Tu Jan 16	Second degree price discrimination
Th Jan 18	Durable goods monopoly
Tu Jan 23	Introduction to game theory
Th Jan 25	Cournot and Bertrand competition (homogenous products)
Tu Jan 30	Differentiated product competition, variety and “excess entry”
Th Feb 1	<i>Midterm Exam</i> (drop date: Feb 9)
Tu Feb 6	Collusion
Th Feb 8	Collusion and facilitating practices
Tu Feb 13	Mergers
Th Feb 15	Mergers continued
Tu Feb 20	Strategic entry deterrence
Th Feb 22	Strategic entry deterrence
Tu Feb 27	Vertical relationships
Th Mar 1	Auctions
Tu Mar 6	Asymmetric Information

## **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,  
[http://www.usdoj.gov/atr/public/guidelines/horiz\\_book/hmg1.html](http://www.usdoj.gov/atr/public/guidelines/horiz_book/hmg1.html)

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