

**NORTHWESTERN UNIVERSITY**  
**DEPARTMENT OF ECONOMICS**

Economics 349: Industrial Organization

Spring 2021

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Office Hours: Wed 10-11 or by appointment, on Zoom.

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TA session Fr 10-10:50 via Zoom.

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.

Recommended textbook: Pepall, Richards and Norman, *Industrial Organization: Contemporary Theory and Applications*, 2005, Third Edition, Thomson-Southwestern. There is a new Edition, either is fine. If you prefer you can instead use Waldman and Jensen, *Industrial Organization: Theory and Practice* (4th Edition), Pearson. I will post class notes covering everything I expect you to know. The text is recommended, as it provides another look into the problems, additional applications and examples, not required.

In case you want to read more on Game Theory see: R. Gibbons, *Game Theory for Applied Economists*. For further readings on legal cases you can check: J. Kwoka and L. White, *The Antitrust Revolution*. These are optional readings.

**Grading** will be based on a midterm exam (during lecture-time April 27th), a final exam (during the last class) and problem sets in the following proportions 40, 50, and 10%. Homework and tests will involve problem solving (no essay questions). 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

2. Durable Good 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

Game Theory: Static Games. PRN 9.1-3 and Gibbons Ch 1 (pp 1-12).

Static Price Competition

Homogeneous Goods: PRN 9.4-5, 10.1 or Gibbons 1.2.A.

Differentiated Goods: PRN 10.2-3 and Ch 7 or Gibbons 1.2.B

Game Theory: Sequential and Repeated Games. PRN 11, Gibbons 2.1, 2.2 and 2.3 (skip the complex applications).

Dynamic Price Competition:

First Mover Advantage

Repeated Interaction. PRN 14. Case: Rapid Price Communication and Coordination: The Airline Tariff Publishing Case (1994) (in Kwoka and White).

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. Practices that Facilitate Cooperation: The Ethyl Case (in Kwoka and White).

5. Strategic Behavior: Carlton and Perloff, Chapter 11.

Product Differentiation (Variety) PRN 7 (single firm).

Entry Deterrence: PRN 12.2-4.

Entry Deterrence: PRN 13 (pages 310-25). Strategic Capacity Preemption: Du Pont (in Kwoka and White).

Entry Deterrence: Brand Proliferation. Case: Breakfast Cereals.

Predatory Pricing. Carlton and Perloff, Chapter 11, pp. 352-59, Breit and Elzinga pages 305-317. Case: Matsushita (in Breit and Elzinga or Kwoka and White).

Contracts: Most-Favored-Customer Clauses. PRN 13.3. Case: United Shoe Machinery, Breit and Elzinga.

6. Horizontal mergers.

7. Vertical Price Restraints and Vertical Mergers: PRN 8, Vertical Non-Price Restraints PRN 9

8. Information: The Market for Lemons.

9. Auction Markets: PRN 25

10. Network Markets: PRN 24

### Tentative schedule

<u>Date</u>	<u>Lecture</u>	<u>Subject</u>
4/1	Lecture 1	Introduction, Review: Monopoly, Competition and Efficiency.
4/6	Lecture 2	Durable goods and Market Definition.
4/8	Lecture 3	Durables (cont.)
4/6	Lecture 4	Price Discrimination.
4/13	Lecture 5	Price Discrimination.
4/15	Lecture 6	Introduction to Game Theory.
4/20	Lecture 7	Static Competition: Homogeneous Goods.
4/22	Lecture 8	Static Competition: Differentiated Goods.
4/27	Lecture 9	Dynamic Games.
4/29		Midterm

Final: 6/10 12-2pm (please verify I got it right).