

**14.20: Industrial Organization
Spring 2001**

Lectures: Monday and Wednesday, 1-2:30 p.m., Room E56-270

Recitation: Friday, 2-3:00 p.m., Room E51-395

<http://web.mit.edu/14.20/www/>

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14.20 is a course in industrial organization, the study of firms in markets. Students must have completed at least an introductory semester of microeconomics at the level of 14.01 before enrolling in 14.20.

The course will rely heavily on the required textbook by Jeffrey Church and Roger Ware, Industrial Organization: A Strategic Approach (Irwin McGraw-Hill, 2000, 1st. edition). This text is available for your purchase at the Coop and is denoted on the reading list as "C&W." You must purchase the Harvard Business School case, GE & Westinghouse, from Graphic Arts in the basement of E52. The other required readings are generally available on-line as noted in the syllabus. Occasional additional readings (typically short news articles) may be handed out in the lecture preceding their discussion. You are responsible for ALL assigned readings. It is particularly important that you do the application readings and prepare any discussion questions BEFORE class. These form the basis of class discussion, in which you are expected to participate and which will be graded.

Required assignments in 14.20 are:

<u>Weight in</u>	<u>Required</u>
<u>Final Grade</u>	<u>Assignment</u>
5%	Participation in class discussion (cumulated over term)
25%	5 problem sets handed out during the term You may discuss problem sets and work out solutions together, however: <ul style="list-style-type: none">• PROBLEM SETS MUST BE WRITTEN UP INDIVIDUALLY• ALL identical write-ups on problem sets will be given "0" credit
35%	Exam 1 (closed book): covers material through March 16 Wed., March 21 in class.
35%	Exam 2 (closed book): covers material from March 16 – May 16 During Final Exam Week, as scheduled by the registrar.

**NOTE: Late assignments will NOT be accepted under ANY circumstances.
Plan accordingly!**

Course Outline and Assigned Readings

Introduction

1. Overview of Course and Review
C&W, ch. 1, 2, 3.1
2. Antitrust overview
C&W, appendix, pp. 889-894

Monopoly

3. Monopoly and Dominant Firms
C&W, ch. 4

Oligopoly Markets

4. Game Theory Introduction
C&W, ch. 7
5. Non-cooperative Oligopoly: Static Models
C&W, ch. 8
6. Non-cooperative Oligopoly: Dynamic Models
C&W, ch. 9
 - S. Borenstein and A. Shephard, Dynamic Pricing in Retail Gasoline Markets," *RAND Journal of Economics*, 27 (Autumn 1996), 429-451. **[Dewey Library]**
7. Cooperative Oligopoly and Tacit Collusion
C&W, ch. 10
 - Harvard Business School Case, "General Electric v. Westinghouse in Large Turbine Generators," 9-380-128. **[Purchase at Graphic Arts, E52]**
8. Cartels
 - A. Salpukas, "An Oil Outsider Revives a Cartel," *New York Times*, Sunday, Oct. 24, 1999, Sec. 3, p. 1
<http://web.lexis-nexis.com/universe> [Lexis-Nexis]
9. Industry Structure and Performance
C&W, ch. 12
10. Horizontal Antitrust Policy- Mergers
C&W, ch. 19, 23
 - U.S. Department of Justice/Federal Trade Commission 1997 Merger Guidelines. <http://www.ftc.gov/bc/docs/horizmer.htm>
 - "The Trustbusters' New Tools," *The Economist*, May 2, 1998, pp. 62-64.
<http://web.lexis-nexis.com/universe> [Lexis-Nexis]

Strategic Behavior in Oligopoly Markets

Overview: C&W, ch. 13

11. Entry, Entry Deterrence
C&W, ch. 14, 15
 - Pankaj Ghemawat, . Capacity Expansion in the Titanium Dioxide Industry, *Journal of Industrial Economics*, 33:2 (December 1984), 145-63.
<http://www.jstor.org/cgi-bin/jstor/listjournal> [JSTOR]
12. Predation
C&W, ch. 21
 - U.S. v. American Airlines, May 13, 1999. [www.usdoj.gov/atr]
<http://www.usdoj.gov/atr/cases/f2400/2438.htm>
13. Raising Rivals' Cost
C&W, ch. 20
14. Product Choice and Differentiation
C&W, ch. 4.3, 6, 11
 - Aviv Nevo, "Measuring Market Power in the Ready-to-Eat Cereal Industry," forthcoming, *Econometrica*.
<http://elsa.berkeley.edu/~nevo/measur7.pdf>
 - "Hyundai Plans Turbo-Charged Warranty to Beat the Rap of Problems with Quality," *Wall Street Journal*, Sept. 23, 1998.
<http://libraries.mit.edu/lists/dewey-db-short.html> [Dow-Jones or Lexis-Nexis]
 - S. Besen & J. Farrell, "Choosing How to Compete: Strategies and Tactics in Standardization," *Journal of Economic Perspectives* 8 (Spring 1994) 117-131.
<http://www.jstor.org/cgi-bin/jstor/listjournal> [JSTOR]
15. Advertising
C&W, ch. 17
 - "Cigarette Makers in Discount War to Lock in Share," *Wall Street Journal*, September 23, 1998, B1. [Dow-Jones News Retrieval or Lexis-Nexis]
<http://libraries.mit.edu/lists/dewey-db-short.html>
16. R&D
C&W, ch. 18
17. Price Discrimination
C&W, ch. 5
 - E. Brynjolfsson & M. Smith, "Frictionless Commerce? A Comparison of Internet and Conventional Retailers, *Management Science*, 46(4) April 2000, 563-585.
<http://ecommerce.mit.edu/papers/friction/friction.pdf>

Internal Organization, Vertical Structure and Vertical Relations

18. Internal Organization and Theory of the Firm
C&W, ch. 3.2-3.4
19. Vertical Integration and Other Vertical Structures
C&W, ch. 22

Applied Industrial Organization: U.S. v. Microsoft

U.S. DOJ website: http://www.usdoj.gov/atr/cases/ms_index.htm

Complaint: <http://www.usdoj.gov/atr/cases/f1700/1763.htm>

NERA website: <http://www.neramicrosoft.com/>

Economic testimony and findings (both sides):

http://www.neramicrosoft.com/level_1/nera_tt.htm

Other websites:

Robert Hall: http://www.NetEcon.com/robert_e_hall_main_page.htm

Nicholas Economides: <http://www.stern.nyu.edu/networks/ms>

14.20 Policies

1. Problem sets are designed to help you learn how to apply the material presented in lectures and recitations. You are permitted to discuss course material, including homework, with other students in the class. However, you must turn in your own individual solutions to each homework set. Discussion with others is intended to clarify ideas, concepts, and technical questions, not to derive group homework set solutions. Identical homework set answers (especially when the steps used to derive answers are not shown or when questions of interpretation are involved) violate this policy and may receive no credit. Also, you are expected to complete the problem sets without consulting old problem set solutions.
2. Handwritten solutions are fine, as long as they are legible and neat. Please remember: if we can't read it, we can't grade it.
3. In fairness to students who complete assignments on time, late homework sets will not be accepted. You may turn in assignments during the lecture on the day they are due. After the lecture, assignments may be placed in a designated box that will be set out inside E52-262 until 4:30 pm. Do not leave assignments in the professor or T.A.'s office or mailbox.
4. Taking both exams is a requirement of the course. Missing an exam without a valid excuse will result in a failing grade for the entire course.
5. To be considered valid, an excuse must be proffered prior to the exam that is to be missed, if at all possible, the excuse must be in writing, and it must be verifiable. These criteria are necessary, not sufficient, however. We reserve the right to deem an excuse meeting the above criteria invalid.
6. An **oral** make-up exam will be given in the event of a valid excuse.

7. All requests for regrades must be submitted in writing within one week of the exam being handed back.
8. Cheating or academic dishonesty in any form will not be tolerated and will result in swift punitive action. This includes but is not restricted to copying information from other students' exams, communicating with other students during exams, failing to follow the rules of the exams regarding notes, calculators, etc., altering an exam for the purpose of a regrade, and producing fraudulent written excuses. Any student found to have cheated or behaved unethically or dishonestly will be given a grade of F on the exam involved and referred to the appropriate disciplinary committees within MIT for further action.