# ECON 4697-001: Industrial Organization Spring 2009

Professor Yongmin Chen

Office: Econ 112 Tel. (303) 492-8736

Class Time: 12:30-1:45 PM on Tu/Th

Classroom: ECON 119

Office Hours: 2:00-3:00 PM on Tu/Th; additional office hours with appointment.

Website: <a href="http://spot.colorado.edu/~cheny/">http://spot.colorado.edu/~cheny/</a>

Industrial organization studies the functioning of markets. It is concerned with business behavior and strategy, as well as their implications for economic efficiency. It also studies the role of public policies in promoting efficiency. The topics that we intend to cover are listed below in the course schedule. The textbook is *Industrial Organization: Contemporary Theory and Practice* by Pepall, Richards, and Norman, 4<sup>th</sup> edition. I will indicate the required readings below and in my lectures.

<u>Prerequisites & Grading</u>: Students must have successfully completed ECON 3070, Intermediate Microeconomics, before taking this course. Students are also expected to know basic calculus. Grades are based on homework and class participation (10%), two midterm exams (50%), and a final exam (40%). You are encouraged to form study groups to discuss homework and lecture materials.

The course materials are arranged by topics (the topics are listed below), and each topic is usually covered over several classes. When homework is assigned for a topic, it is usually due at the beginning of the first class for the next topic. You can start working on problems in an assignment before I have finished the topic.

A tentative course schedule is attached (the chapter and page numbers refer to those in the textbook). There can be changes to this schedule during the semester, which will be announced in classes. It is your responsibility to update your information about the course according to announcements made in classes.

## Course Schedule:

- 1. Introduction
  - Readings: Ch. 1
- 2. Basic Microeconomic Tools
  - Readings: Ch. 2
  - HW 1. p. 42-43: #2, 4
- 3. Market Structure and Market Power
  - Readings: Ch. 3
  - HW 2. p. 57: #1
- 4. Monopoly Pricing
- --Price for a single product
- -- Prices for multiple products
- --Group-pricing
- --Nonlinear pricing
- -- Dynamic pricing
- --Bundling and Tie-in sales
  - Readings: Ch. 5, Ch. 6, Ch. 7, Ch. 8
  - HW 3. p. 109: #1, 2, 3, 4;
  - HW 4. p. 131-132: #2, 3, 4;
  - HW 5. p. 158: #1, 2, 5; 189: #1, 2, 3.

### Midterm Exam 1

- 5. Game Theory and Oligopoly Markets: Basic Concepts and Solutions
- --What is a game?
- --Strategy
- -- Dominant Strategy
- -- Nash equilibrium
- --Cournot Model
  - Readings: Ch. 9
  - HW 6. p. 220-222: #1, 3, 4, 5, 6.
- 6. Price Competition
- -- The Bertrand Duopoly Model
- --Asymmetric Duopoly or multiple firms
- -- Product Differentiation in a duopoly: the Hotelling model
- -- Product Differentiation with Many firms: the Circle model and the Spokes model
  - Readings: Ch. 10
  - HW 7. p. 244-245: #1, 2, 3, 4.
- 7. Dynamic Games and Competition
- --Entry games and Subgame perfect Nash equilibrium
- -- The Stackelberg Model
- --Sequential price competition
- --Oligopoly price discrimination by purchase history
  - Readings: Ch. 11
  - HW 8. p. 263-264: #1, 2, 3, 4
- 8. Price-Fixing, Repeated Games, and Collusion
- --Price Fixing
- -- Repeated Bertrand Duopoly
- -- The number of firms and collusion
- --Other factors facilitating or hindering collusion
  - Readings: Ch. 14, Ch. 15
  - HW 9. p. 349-350: #1, 2, 3; p. 382: #1, 3, 7

#### Midterm Exam 2

- 9. Horizontal Mergers
- -- Merger analysis in the Cournot model
- --Merger and Cost savings
- -- The merged firms as Stackelberg leaders
- --Horizontal merger and price competition
- --Public policy toward horizontal mergers
  - Readings: Ch. 16
  - HW 10. p. 423-424: # 1, 2, 3, 4
- 10. Vertical Mergers
- -- The foreclosure theory
- -- Efficiency arguments

- --Post-Chicago Approach
- --Public policy toward vertical mergers
  - Readings: Ch. 17HW 9. p. 458: # 1, 2
- 11. Vertical Price Restraints
- --Bilateral Monopoly
- -- Competitive downstream
- --Resale price maintenance: theory and public policy
- -- Upstream competition
  - Readings: Ch. 18
  - HW 10. p. 485-486: #1, 2, 4
- 12. Nonprice Vertical Restraints
- --Upstream competition and exclusive dealing
- -- Exclusive territories
  - Readings: Ch. 19
  - HW 11. p. 509: #1, 2, 3

## Final Exam

\*Students with disabilities who may need academic accommodations should discuss options with me during the first two weeks of class.

\*The University of Colorado Policy on Sexual Harassment applies to all students, staff and faculty. Sexual harassment is unwelcome sexual attention. It can involve intimidation, threats, coercion, or promises or create an environment that is hostile or offensive. Any student, staff or faculty member who believes s/he has been sexually harassed should contact the Office of Sexual Harassment (OSH) at 303-492-2127 or the Office of Judicial Affairs at 303-492-5550.