EC853-01, Spring 2010
Industrial Organization I (MW 1:30-2:45)
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(Office Hours) anytime

COURSE DESCRIPTION

This is a course in industrial organization at the Ph.D. level. The course
includes standard theoretical models of industrial organization, and the approach
will be mostly game-theoretic. A solid background in graduate microeconomics is
required. The aim of this course is two-fold: to present basic tools of industrial
organization, and to encourage students to start their own researches. The basic
game theory tools (such as quantity competition, discrete choice models, mixed
strategy equilibria with infinite strategy sets, search theory, signalling games, and
repeated games) will be presented by showing how the Bertrand paradox can be
resolved by modifying the basic setup of perfect information homogeneous good
market with price competition. This course is designed to provide theoretical tools
and ideas that are useful in conducting research in applied microeconomic theory.

RECOMMENDED BOOKS

The best textbook in Industrial Organization is still: The Theory of Industrial
Organization, by J. Tirole, MIT Press, 1988 (it is getting a bit old, but still the best
book available which covers various materials). Handbook of Game Theory Vol
3, “Game Theory and Industrial Organization” by K. Bagwell and A. Wolinsky
(2002, Elsevier) is also a nice introduction, although the covered materials are
very limited. Another useful reference is: Modern Industrial Organization, by D.
textbook, but nice). A nice and technical textbook that focuses on oligopoly
theory is: Oligopoly Pricing, by X. Vives, MIT Press, 1999. The Chapter 2 of this
book provides a nice introduction of supermodular games.

GRADE AND COURSE REQUIREMENTS
Tentatively, I would say that your grade will be based on your performance on a final exam, and writing a short paper (summary of an existing paper with *some idea about its extension*: 10 pages in double space). The exam will count for 60% of your course grade. The remaining 40% will be based on your paper. Your paper can be a referee report on a paper, but it should involve some additional thoughts on the topic (additional exercises, changing assumptions etc.) If you want to write a more ambitious proposal which will grow to a chapter of your dissertation, the paper does not have to be as polished. However, the idea must be interesting and needs to be seemingly implementable. In completing your writing assignment (in particular), please refer University’s academic integrity policy: 
http://www.bc.edu/offices/stserv/academic/resources/policy/#integrity

Tentative Schedule

(Tirole and Bagwell&Wolinsky are denoted by T and BW, respectively.)

1. 1/20, 25

  1. introduction: Bertand paradox
  2. strategic substitutes and strategic complements (BW)
  3. simple Cournot and Bertrand competition
  4. merger (Salant, Switzer and Reynolds, 1983 QJE)
  5. cartel (d’Aspremont et al., 1983, Canadian JE)

2. 1/27, 2/1, 3

  1. Cournot model
  2. Debreu’s existence theorem
  3. McManus’s existence theorem
  4. strategic substitutes
  5. (local) comparative statics and (non)uniqueness

3. 2/8, 10

  1. heterogeneous goods Bertand model
  2. Shubik’s quadratic utility model
3. strategic complements
4. existence of equilibrium and global comparative statics

4. 2/15, 17
   1. generalization: supermodular games
   2. Hotelling’s horizontally differentiation model (T, d’Aspremont et al. 1979 Em)

5. 2/22, 24
   1. durable goods: Coase theorem (T)
   2. consumer search: Diamond paradox (Diamond, 1970 JET)

6. 3/8, 10
   1. Wolinsky’s search model (Wolinsky, 1986 QJE)
   2. sequential search
   3. demand curve and equilibrium
   4. other related models

7. 3/15, 17 (no classes)

8. 3/22, 24
   1. commitment
   2. concentration of retail stores (Konishi, 2005 JUE)
   3. discrete choice model
   4. Prekopa’s theorem
   5. demand curve and equilibrium
   6. Stiglitz (1977, AER)

9. 3/29, 31
   1. advertisement
2. Butters (1977, RES:, T)
4. Konishi and Sandfort (1999, IJIO)
5. Anderson and Renault (2006, AER)

10. 4/7, 12

1. entry-deterrence
2. commitment: Dixit model (T)
3. technology transfer (Creane and Konishi, 2008)
4. signalling: Milgrom and Roberts (BW)
5. application: Milgrom and Roberts (1986, JPE)

11. 4/14, 21

1. repeated games
3. Rotemberg and Saloner (1986, AER: BW)
5. Abreu, Pierce and Stacchetti (1986, JET)
6. students’ presentations

12. 4/26, 28

1. technology transfer (licensing) in oligopoly: Creane and Konishi 2009
2. equilibrium in licensing game: Creane, Ko and Konishi 2010 (draft)

13. 5/3, 5

1. students’ presentations