Theory of Industrial Structure
ECO-4371
Spring, 2012.

Instructor: Santanu Roy, Professor, Department of Economics.

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Course Web-page: http://faculty.smu.edu/sroy/index3.html

Lectures: Tuesdays and Thursdays, 12.30 - 1.50 P.M., Umphrey Lee 303.
Office Hours: Tuesdays and Thursdays, 10.00 - 11.30 AM & by appointment.

Teaching Assistant: Ms. Yi Li (E-mail: yil@smu.edu).
TA’s Regular Office Hours: Fridays, 11.30 AM - 1.30 PM (Umphrey Lee 309).


Prerequisite:
ECO 3301 (Price Theory) and one of the following: STAT 2301, 2331 or 4340.

Important Advice:
This course will use differential calculus and basic algebra. Students who have not taken a course in calculus and are not sufficiently confident about their basic mathematical skills (such as solving and manipulating equations) are strongly discouraged from taking this course.

Course Description:
In the last few decades, Industrial Organization has been arguably one of the most active research field in economics. It began as a branch of applied micro-economics specializing in questions related to imperfect competition, effect of market structure on behavior of firms, concentration & monopoly power, cartel formation, anti-competitive practices and anti-trust issues. The revolution in the field is related to the development of non-cooperative game theory which allows economists to study strategic behavior of firms in the market. This course focuses on strategic competition between firms, how this is related to market structure and market power and the implications for public regulation of industries.
**Learning Objectives:**
* Familiarize students with key questions in the field of industrial organization and regulation and their relevance.
* Introduce them to basic economic and strategic models of industrial organization using game theoretic solution concepts such as Nash equilibrium and subgame perfect equilibrium.
* Enable them to solve for the "equilibrium" in various models of markets including oligopolistic markets, markets with dynamic interaction, markets with price discrimination and markets with vertical interaction.
* Create the ability to use strategic thinking to predict market outcomes in simple settings.

**Topics:**
* Monopoly, Regulation of Natural Monopoly.
* Basic game theory: Nash equilibrium & sub game perfect equilibrium.
* Oligopoly: Bertrand price competition & factors that soften price competition (capacity constraints)
  * Cournot competition; asymmetric costs.
  * Product differentiation & price competition; Search cost.
  * Advertising, market structure & competition
  * Collusion & dynamic competition; factors that facilitate collusion.
  * Concentration and Market Power.
  * Price Discrimination and regulation.
  * Vertical Relations and regulation.
  * Entry cost, market structure and welfare.
* Strategic barriers to Entry, Predation & Merger of Firms.
* Research and Development.
  * Networks and Standards.

**Rules:**
Students are expected to attend all lectures.
If a student misses a lecture it is his/her personal responsibility to find out the material covered in class.
No student should enter the class more than five minutes late.
About four to five home assignments will be given out in the semester and will be due in class on a certain date.
Assignments turned in late will not be accepted unless a valid reason for the delay can be provided and substantiated. Solutions may be handed out, e-mailed or discussed in class.
**20% of final grade will be based on performance in home-assignments.**
There will be two written exams - one Midterm exam and one Final exam.
The midterm exam will be held on Tuesday, March 6.
The final exam will be held (as scheduled by the university) on Monday, May 7 (8 - 11 AM).
The midterm exam will count towards 40% of final grade.
The final exam will count towards 40% of final grade.
All exams will be in class and "closed book."
If you foresee a conflict with any of the exam dates, please contact the instructor immediately.
No make-up exam will be given except for documented medical reasons or in case there is a conflict with university extracurricular activity. It is the responsibility of the student to schedule a make-up exam with the instructor and to keep the instructor informed about inability to appear in an exam due to university extracurricular activity.

No incomplete grades will be given except in case of a documented medical emergency that prevents a student, who has performed satisfactorily in the midterm exam and in the home assignments, from appearing in the final exam and, in addition, also prevents him/her from taking a make-up exam prior to the deadline for submission of final grades.

It is the responsibility of the student to check the course web-site frequently for updates, announcements, amendments to problem sets and other handouts etc.

Disability Accommodations: Students needing academic accommodations for a disability must first be registered with Disability Accommodations & Success Strategies (DASS) to verify the disability and to establish eligibility for accommodations. Students may call 214-768-1470 or visit http://www.smu.edu/alec/dass.asp to begin the process. Once registered, students should then schedule an appointment with the professor to make appropriate arrangements. (See University Policy No. 2.4; an attachment describes the DASS procedures and relocated office.)

Religious Observance: Religiously observant students wishing to be absent on holidays that require missing class should notify their professors in writing at the beginning of the semester, and should discuss with them, in advance, acceptable ways of making up any work missed because of the absence. (See University Policy No. 1.9.)

Excused Absences for University Extracurricular Activities: Students participating in an officially sanctioned, scheduled University extracurricular activity will be given the opportunity to make up class assignments or other graded assignments missed as a result of their participation. It is the responsibility of the student to make arrangements with the instructor prior to any missed scheduled examination or other missed assignment for making up the work. Disability Accommodations: Students needing academic accommodations for a disability must first contact Ms. Rebecca Marin, Coordinator, Services for Students with Disabilities (214-768-4557) to verify the disability and establish eligibility for accommodations. They should then schedule an appointment with the professor to make appropriate arrangements. (See University Policy No. 2.4.)