Description and Requirements

1. Description

This is a topic class on information economics and contract theory. The purpose of the course is to give an introduction to some of the main topics in this field: adverse selection (signaling, screening), moral hazard, mechanism design, and communication in organizations. First, the course focuses on the role of private information in people’s incentives to work (or to shirk), to distinguish themselves and to communicate (or to lie). Second, it studies the question of how to design optimal mechanisms, compensation schemes and organizations given people’s private information.

The course will use game theoretical concepts developed in 200B extensively, but we will also develop some new tools such as equilibrium refinement and mechanism design as we go along. This is a quarterly class and consists of approximately 17 lectures. It requires some readings, two problem sets and one three hour final. Since this is an advanced course, I would try to make the course more research oriented and focus more than the core sequence on modeling issues.

2. Reference books

- Milgrom and Roberts (1992), *Economics, Organization and Management*.
Course Outline

1. Information economics (5 sessions)
   
   (a) Adverse Selection
   (b) Signaling and Screening
   (c) Reputation and Cheap Talk Games
   (d) Non-linear Pricing

Reading:

- MWG, Chapter 13.

2. Contract theory (7 sessions)

   (a) Moral Hazard and Optimal Incentive Contract (2)
   (b) Dynamic Moral Hazard (2)
   (c) Implicit Incentive and Career Concerns (1)
   (d) Property Right and Incomplete Contract Theory (2)

Readings:

- MWG, Chapter 14.
3. Mechanism Design and Auctions (4)

(a) Basic Mechanism Design (1-2)

(b) Efficient Mechanism (1)

(c) Auction: (1-2)

Readings:

- MWG, Chapter 23.

4. Communication and Organizational Design (2)

(a) Computer science approach (1)

(b) Incentive approach (1)

Readings:


• Van Zandt, Radner