ECONOMICS 490S—THE ECONOMICS OF MARKET FAILURE
Fall 2007

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Office hrs.: M,W 1:00-2:00 and by appointment

Description
Markets are said to ‘fail’ under imperfect competition, and more importantly in the presence of public goods, externalities, indivisibilities and non-convexities. What does market failure mean? When the market mechanism fails, what alternative mechanisms are there for resource allocation? This course deals with these questions and covers the theory and practice of designing novel institutions for resource allocation. Many of these involve market-like mechanisms, e.g. SO2 emissions markets or the electric power exchanges. Others involve auctions, such as spectrum auctions carried out in the US, Australia, Canada, the UK and Switzerland. Yet others involve matching such as the National Resident Matching Program (NRMP) which places some 20,000 physicians each year in a residency program, or the design of an exchange for live donor kidney transplants. We will begin with the general theory of economic design, what we know about manipulability of mechanisms, and then look at specific auctions and matching mechanisms.

Readings
There is, alas, no text for this seminar. I will however post several chapters of notes to go with the lectures and distribute photocopies of relevant material in class as necessary.

Aplia
All students have to register online — there is no charge for accessing Aplia! Here’s how you do it.

2. Click the System Configuration Test link below the Sign In and Register sections to make sure you can access all of the features on Aplia’s website. This takes just a few seconds and tells you how to update your browser settings if necessary.
   • If you have never used Aplia before, click the New Student button to register and follow the registration instructions.
   • If you have used Aplia before, sign in with your usual e-mail address and password. If you are not prompted for a new Course Key, click the Enter Course Key button to enroll in a new Aplia course.
For technical problems or problems signing in, please contact Aplia by sending an e-mail to support@aplia.com and cc-ing me.

**Attendance**
You will be allowed *two* unaccounted for absences during the semester without incurring any penalty. You may clear an upcoming class absence with me before it happens, or in case of emergencies, immediately following your absence. Any other unaccounted for absences will reduce your total score by 5% for each absence.

**Grading**
There will be 3 tests (no final exam), a group (or solo) paper to be presented in-class and turned in, as well as homework on Aplia. Each of these will count for 20% towards your final grade. In addition, I will bring quizzes to class or post them on Aplia in order for you to monitor your understanding of new material. These will not be collected or graded but answers will be discussed in class and posted. The homework sets will strengthen you understanding of the theory. The objective of assigning a paper is to apply your understanding to an existing market or environment with a potential design problem, describe the relevant design questions, evaluate how the current system works and propose improvements on the current mechanism.

**Tentative Topics**
1. Introduction
2. Economies with private and public goods
3. Game theory and mechanisms
4. Manipulability of mechanisms
5. Mechanisms with public goods
6. Mechanisms with externalities
7. Mechanisms with indivisibilities