Economics 40701 – Topics in Matching and Market Design

Scott Duke Kominers

Logistics

Time. Fridays, 14:00–16:30±ε (beginning January 13, 2012)

Location. Rosenwald 329

Office Hours.

• Discussion Preparation – (Typically) Tuesdays, 15:30–16:30
• General Questions and Idea Vetting – (Typically) Tuesdays, 16:30–18:00
• Other, or Alternate – by appointment

Course Webpage.


Overview

Description. This course is a reading seminar on current research in the theory of market design. Recent papers will be discussed alongside their classical antecedents. The course will focus almost entirely on papers presenting novel market design problems and techniques. In addition to technical content, class discussion will pay special attention to issues of problem identification and formulation, so as to understand what comprises “interesting” work in market design.

Most papers under consideration will be theoretical, although some empirical/engineering work will be discussed. (See below for a preliminary list of topics.)

This course complements Economics 40603 (Market Design).

Prerequisites. Economics 40603 (Market Design), as well as many courses under the “Mathematical Economics” field designation, will provide useful context and technical background. Some understanding of algorithms, complexity, and combinatorics will be invaluable. However, I do not believe in formal prerequisites—these observations are made only for the purpose of guidance.

If you are interested in taking the course, and are concerned about the difficulty of the material, please get in touch with me early in (or before) winter quarter. I am inclined to reward individuals for taking risks and stretching themselves.

Requirements. Evaluation will be primarily based upon class participation and discussion. Each student will be responsible for leading at least one discussion session. (Discussion leadership roles will be assigned via a version of the deferred acceptance algorithm, with some priority given in reverse order of academic seniority.) In addition, students will periodically be required to supply comments in advance of discussion, as a commitment device to enforce reading.

A written “idea proposal” exercise will be required as well; details will be established by social choice mechanism (i.e. vote) at the first course meeting.
Topics

Introduction/Overview.


Matching with Regional Caps.


Cadet–Branch Matching.


Substitutability and the Kelso–Crawford Legacy.


Random Allocation Mechanisms.


Signaling in Matching Markets.


Markets for Private Data.


Large-Scale Kidney Exchange.


Financial Intermediation in Networks.


“Hidden” Market Design.


Large Markets.


Market Design through History.


Land Assembly.


