

Syllabus

ECO557 Market Design (2018-2019)

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In many problems of resource allocation, using the price system may encounter practical, legal, or ethical objections. In this course, we consider economic allocation problems in which traditional markets with the price system would not function properly, or even not exist, and study how to design allocation systems in which desirable properties, such as efficiency, stability, and/or strategy-proofness are satisfied.

We first study the main concepts of Market Design illustrated in Roth (2015) *“Who Gets What – and Why: The New Economics of matchmaking and Market Design,”* along with the lectures in two main subfields: Matching Theory and Auction Theory. Students are expected to be quickly familiar with the theoretical concepts which are useful to analyze problems in market design, and with the applications to a various kind of economic allocation problems, such as auction, school choice, kidney exchange, high-frequency trading, residential matching, college admission, Airbnb, Über, eBay, etc.

The climax of the course will be a ‘pitch’ given by each student. A proposal based on an original idea of market design should be presented, using the analytical tools learned during the course. By the end, students are expected to be confident in applying the concepts acquired in the course to practical examples of market design.

Intensive participation is required, since discussions based on the cases and applications are in the center of our course. Missing one of the following would simply end up with a fail: (i) presentation of a chapter of Roth’s book, (ii) giving a pitch, (iii) handing out a report on your pitch, and (iv) attending all presentations of your classmates.

References:

- A. Roth (2015) *“Who Gets What – and Why: The New Economics of Matchmaking and Market Design”* HMH
- A. Roth and M. Sotomayer (1989) *“Two-Sided Matching Markets”* Cambridge U. Press
- P. Milgrom (2004) *“Putting Auction Theory to Work”* Cambridge U. Press