

Market Design and Platforms (MA)

Fall 2026

Content

Description Market Design is a field at the intersection of game theory and mechanism design, seeking to study the design of rules for real-world markets. This course deals with the theory and canonical applications of market design, including (i) matching algorithms for assignment problems such as school choice, public housing allocation, kidney exchange and refugee resettlement; (ii) auction design for allocation of natural resources, public radio spectrum and emission permits; (iii) platform and exchange design for online markets.

Learning Outcomes This course develops students' capacity for game-theoretic and strategic reasoning, grounding abstract concepts in concrete market applications. Upon successful completion, students will be able to:

1. Identify and explain foundational examples of market design across a range of economic environments
2. Build and analyze tractable models of real-world markets and evaluate potential policy interventions to enhance welfare
3. Critically examine the ethical dimensions and distributional consequences of alternative market designs and policy choices

Content and Structure The course surveys key topics at the intersection of game theory and market design, emphasizing practical relevance and real-world applications. The following themes are covered:

- Introduction
- Auctions and Procurement
 - Single-item and Multi-item Auction Formats
 - Applications: Sponsored Search, Procurement, Spectrum Auctions
- Matching Markets
 - Matching Algorithms and Resource Allocation
 - Applications: Residency Matching, Kidney Exchange, School Choice, Refugee Resettlement
- Platform Economics and Governance
 - Two-sided Markets and the Economics of Platforms
 - Digital Platforms and Regulatory Frameworks

Reference Books The main textbooks for this course are:

- Haeringer, G. (2017). *Market Design: Auctions and Matching*. MIT Press.
- Belleflamme, P., & Peitz, M. (2021). *The Economics of Platforms: Concepts and Strategy*. Cambridge University Press.
- Börgers, T. (2015). *An Introduction to the Theory of Mechanism Design*. Oxford University Press.
- Gibbons, R. (1992). *Game Theory for Applied Economists*. Princeton University Press.

An additional, general-audience reference is the book by Alvin E. Roth, who was awarded the Nobel Memorial Prize in Economic Sciences in 2012:

- Roth, A. E. (2015). *Who Gets What and Why: the New Economics of Matchmaking and Market Design*. Houghton Mifflin Harcourt.