Course Description
This course provides an introduction to and an overview of the literature on market design when agents on both sides of the market are privately informed about their valuations and costs. It introduces basic concepts from the literature on Bayesian mechanism design and on dominant strategy mechanisms and applies these to a variety of setups, including bilateral and multi-lateral trade problems, assignments models, public goods problems, and models of partnership dissolution.

Prerequisites
This course is aimed at second-year PhD students in economics who are familiar with basic notions of game theory such as Bayes Nash equilibrium and dominant strategies. The Bayesian mechanism design will be largely based on chapter 5 in Krishna (2002) and on Myerson (1981). The most important prerequisite – in the words of Gale and Shapley (1962) – is “the degree of concentration required to follow a moderately involved sequence of inferences”.

Tentative Course Outline

Lecture 1: Introduction
Lecture 2: Dominant Strategy Mechanisms
Lecture 3: Bayesian Mechanism Design
Lecture 4: Bilateral Trade
Lecture 5: Multilateral Trade
Lecture 6: Assignment Models
Lecture 7: Partnership Dissolution
Lecture 8: Public Goods
Lecture 9: Property Rights
Lecture 10: “Almost” Efficient Incentive Compatible Mechanisms
Lecture 11: Interdependent Values
Lecture 12: Prior-Free Bayesian Optimal Mechanisms (and/or Platform Design/IO applications)

Lectures in *italics* are tentative (and new). Lectures notes will be available on the LMS.
Assessment (tentative, to be discussed with class): Two assignments (20%), one 1.5h midterm (on 4 May, 30%), one final exam (2h, 50%).

Office hour: Monday 11am to 12pm (room 433)

Lectures: Monday 12pm to 3pm, The Spot – 5016

References

