

Decision Theory

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Course Aim and Prerequisites

Decision Theory is the area of Theoretical Economics that models individual economic choices, which are the basic unit of analysis in modern Economics. The course will cover both classical topics and recent advances. Its purpose is to introduce advanced undergraduate and doctoral students to models and methods that lie at the foundation of many economic applications. Though advanced calculus (as learned during BES) is enough for the course, the material is best understood after taking “Advanced Mathematics for Economics and Social Sciences” (course 20136).

Course Outline

Classical Theory

- Methodology of Decision Theory
- Preferences and utility
- Expected utility theory
- Subjective expected utility theory
- Risk attitudes
- Paradoxes of Allais and Ellsberg

Neoclassical Theory

- Model uncertainty and ambiguity
- Two preferences foundations

A curious intersection between Decision Theory and Networks

- Some recent research

Grades

Problem sets and written final exam.

Texts

Instructor's handouts

Peter Fishburn "Utility theory for decision making," Wiley, 1970.

Itzhak Gilboa "Theory of decision under uncertainty," Cambridge University Press, 2009.

David Kreps "Notes on the theory of choice," Westview Press, 1988.

Leonard J. Savage "The foundations of statistics," Wiley, New York (2nd edition in 1972, Dover).