ADVANCED BEHAVIORAL DECISION THEORY
(24 Hours*)*

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SYNOPSIS

Empirical investigations dating from the early 1950s have revealed a variety of violations of the standard models of rationality under uncertainty and over time (i.e., expected utility and discounted utility). The accumulated findings resulted in the elaboration of behavioral decision theories that could capture a rich spectrum of behaviors.
The course analyses the consequences of deviations from rationality on the measurement of preferences under risk (known probabilities), ambiguity (unknown probabilities), and over time. It also proposes advanced and recent elicitation methods (for attitude towards risk, subjective probabilities, and attitude towards ambiguity) using behavioral generalizations of the standard models with an eye to their preference foundations.

COURSE OVERVIEW

The course consists of six modules.

1. **Rational decision maker** (Birth of ordinal homo-economicus; ordinal utility; cardinal utility from ordinal choice; Utilitarianism)

2. **Empirical problems for rational decision maker** (Problems for risk and their implications for attitude towards risk elicitation; Problems for ambiguity and their implications for subjective probability elicitation, e.g., overconfidence)

3. **Behavioral decision theories for risk** (Kahneman & Tversky's original prospect theory; Chew's weighted utility; Gul's disappointment aversion; Quiggin's rank-dependent utility; Tversky & Kahneman's cumulative prospect theory; How to elicit risk attitudes without assuming expected utility)

4. **Behavioral decision theories for ambiguity** (Multiple priors vs. non-additive subjective probability approaches; Rank-dependent utility and prospect theory for ambiguity; How to elicit subjective probabilities from choice without expected utility;

How to elicit ambiguity attitude and perception; How to capture different attitudes in the presence of difference sources of uncertainty)

5. **Behavioral theories for intertemporal choice** (Decreasing impatience; Hyperbolic discounting; Quasi-hyperbolic discounting; Unit invariance)

6. **Behavioral applications** (risky choice, intertemporal choice, preference reversals, and framings)

KEY TOPICS AND LEARNING OUTCOMES

- MODELING BEHAVIOR UNDER RISK AND AMBIGUITY WITHOUT COMMITTING TO EU
- MEASURE ATTITUDES TOWARDS RISK AND AMBIGUITY
- DEBIASING BELIEF ELICITATION
- HOW TO ACCOUNT FOR DIFFERENCES BETWEEN SOURCES OF UNCERTAINTY

ASSESSMENT

Class participation, short assignments, and a final exam.

AUDITING

☒ Accepted
Attendance is usually mandatory. Returning written assignments is desirable, but not mandatory.