

MIDS Lectures on Decision Theory
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All of you, who are excited about and willing to put in the hard work to learn Economics, spoken with the language of Mathematics, are welcome to this series of MIDS lectures. Often there is a complaint that in most parts of India, Economics is never taught the way it should be. It could be a result of social preference for Engineering, Medicine and Science. This lecture series is an attempt to provide an opportunity to all those of you to experiment what modern Economics is. We are open to students, researchers, practitioners and faculty. We are also open to people from other disciplines and walks of life, as long as you are comfortable with at least higher secondary level mathematics, and are excited about Economics. This is part of the MIDS outreach program and hence is free. The courses consist of series of lectures on selected topics in modern economics. Those of you who complete the entire lecture series of a course will get a Certificate.

We are experimenting with a first course on “Decision Theory” with five lectures of 90 minutes each, one lecture a week, on Thursdays 3.30 to 5 pm at MIDS (79, Second Main Road , Gandhi Nagar, Adyar, Chennai - 600 020) starting from 27 February 2020. The course on Decision Theory will cover the following topics.

Measures of riskiness (such as those of Musgrave, Roy, Mean-Variance, Semi variance, and Baumol measures), Lotteries, Preference relations over lotteries, Brief overview of various theories of expected utility (Neumann-Morgenstern expected utility theory with objective probabilities).

N-M Expected utility theory: basic axioms and representation theorem; violations of EU theory. Money lotteries; various risk aversion measures (Arrow-Pratt coefficient of absolute risk aversion, relative risk aversion, and their generalizations) and their properties; DARA, CARA, IARA, DRRA, IRRA, CRRA classes of utility functions and their comparative static properties; Applications and comparative static results.

Decision making under risk and the notion of ordering risky prospects; various ordering principles such as expected utility criterion and stochastic dominance criterion and the possible equivalence between these various ordering principles.

Stochastic dominance: underlying structure and interrelationships between various stochastic dominance relationships (such as First order Stochastic Dominance, Second order Stochastic Dominance, and Third order Stochastic Dominance) and their equivalence to Expected utility criterion. Applications of stochastic dominance criteria. Generalizations of risk aversion measures: Multiple independent risks, notions of risk vulnerability, risk temperance, diffidence theorem.

Please register for the course with your brief academic background on or before February 24, 2020 by sending an email to frontoffice@mids.ac.in with a subject line: ‘Decision Theory Course’; 50 seats are available on a ‘first come first serve’ basis.