

**Indian Institute of Technology Kanpur  
Proposal for a New Course**

**1. Course No:** ECO5xx

**2. Course Title:** Economics of Uncertainty and Information

**3. Per Week Lectures:** 2 (L), Tutorial: 0 (T), Laboratory: 0 (P), Additional Hours: 0

Credits: (3\*L+T +P+A): 9 credits

**Duration of Course:** Full Semester Course

**4. Proposing Department:** Economic Sciences

**Other Departments which may be interested:** None

**5. Proposing instructor:** Vasudha Jain

**Level of the course:** UG

**6. Course Description:**

**A) Objectives:** This course introduces students to theories of decision-making under risk and uncertainty, the value of information, strategic transmission and aggregation of information, and related topics in behavioural economics.

**B) Contents**

S. No.	Broad title	Topics	No. of Lectures
1.	Expected Utility Theory for Decision Making Under Risk and Uncertainty	von Neumann-Morgenstern Expected Utility Theory, Attitudes Towards Risk, Measures of Risk Aversion, Stochastic Dominance, Insurance, Subjective Expected Utility Theory	4
2.	Critiques of Expected Utility Theory, and Alternative Theories	Allais Paradox, Loss Aversion, Prospect Theory, Ellsberg Paradox, Ambiguity Aversion, Maxmin Utility	5

3.	Use of Information	Belief Updating, Value of Information, Representation of Information Structures, Blackwell's Theorem, Collective Use of Information	5
4.	Information Transmission and Aggregation	Review of Game Theory, Bayesian Persuasion, Cheap Talk, Verifiable Disclosure, Costly Information Acquisition, Herding and Information Cascades, Condorcet Jury Theorem	7
5.	Topics in Behavioural Economics	Gul Pesendorfer Model of Temptation, Time-Inconsistency of Preferences, Other-Regarding Preferences, Rabin Model of Fairness, etc.	5

The duration of each lecture is 1 hour and 15 minutes.

**C) Prerequisites:** None

**D) Short summary for including in the Courses of Study Booklet:** This course introduces students to theories of decision-making under risk and uncertainty, the value of information, strategic transmission and aggregation of information, and related topics in behavioural economics. Topics include expected utility theory, risk aversion, loss aversion, prospect theory, ambiguity aversion, belief updating and value of information, strategic disclosure of information, herding and information cascades, and topics in behavioural economics such as time inconsistency of preferences, temptation and self-control, fairness.

**7) Recommended textbooks:**

Hirshleifer, Jack, Hirshleifer Jack, and John G. Riley. *The analytics of uncertainty and information*. Cambridge University Press, 1992

Laffont, Jean-Jacques. *The Economics of Uncertainty and Information*. MIT Press Books (1989).

Ariel Rubinstein, *Lecture Notes in Microeconomic Theory*, available online

D.V. Lindley, *Making Decisions*, 2<sup>nd</sup> Edition, John Wiley & Sons, 1985.

Peterson, Martin. *An introduction to decision theory*. Cambridge University Press, 2017.

Mas-Colell, Andreu, Michael D. Whinston, and Jerry R. Green. *Microeconomic Theory*. Oxford University Press, 1995.

Camerer, Colin F., George Loewenstein, and Matthew Rabin, eds. *Advances in behavioral economics*. Princeton university press, 2004.