Course title: Microeconomics-II

Course code: MPE 137	**No. of credits:** 4	**L-T-P:** 60-0-0	**Learning hours:** 60

Pre-requisite course code and title : MPE 131 Microeconomics; MPE 113 Mathematical Methods for Economics

Department: Department of Policy and Management Studies

Course coordinator: Dr. Sanyyam Khurana	**Course instructor:** Dr. Sanyyam Khurana

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Course type: Core	**Course offered in:** Semester 2

Course description:

Standard Microeconomic theory claims that price-taking behavior results in efficient market outcomes under assumptions like rational preferences, certainty of outcomes and complete information. This course recognizes the fact that in the last fifty years, advances in game theory and the theory of contracts, problems of asymmetric and incomplete information have significantly taken the theory beyond price taking behavior and optimal equilibria.

Course objective:

To understand the role of Strategic behavior and asymmetric information in the characterization of markets.

Main references are : Mas-Colell, Whinston and Green (MWG), Hal Varian (H), and Robert Gibbons (G)

Course contents

Module	Topic	L	T	P
1	**Module 1: An uncertain world** 1.Expected Utility Theorem, Measures of Risk Aversion Application: Insurance Readings : MWG Ch. 6B; H Ch. 11.3	5		
2	**Module 2: Game Theory – Basics** (a) : Extensive and Normal Form Games Readings : H- ch.15 ; MWG Ch. 7, 8A, 8B (b) : Domination in Strategies, Nash equilibrium Readings : G- Ch. 1,1A,B,C, Appendix 1.1C: H-Ch.15; MWG-Ch.8 (b1) : Mixed Strategies, Bayesian Nash (Incomplete Information games) Readings : G – Ch. 1.3 Ch.3.1, 3.2A; H –Ch.15; MWG- Ch.8 (c) ; Backward Induction, Subgame Perfection Readings : G- Ch. 2.1, MWG – Ch.9A, 9B	17		
	Game Theory – Advanced Topics (d) Asymmetric Information Adverse Selection Reading : MWG Ch. 13A,B ; H Ch. 25 (e) Signaling Reading : MWG Ch, 13C ; H Ch. 25 (f) Screening Reading : MWG Ch. 13D ; H Ch.25 (g) Principal-Agent problems Reading : MWG Ch.14; H Ch.25	15		
3	**Module 3: Law and Economics** 1. Coase and Transaction Cost approach; 2. Brief overview of law and economics Reading : R. Coase – The Firm, The Market and The Law ; Ch. 1,5 & 6	5		
4	**Module 4: Mechanism design with money** Reading : MWG Ch, 23	10		
5	**Module 5: Cooperative Games** Reading : MWG Ch18 & appendix A	8		
	Total	**60**		

Evaluation criteria:

Minor 1 Exam- Written Examination - 25%

Minor 2 Exam- Written Examination - 25%

Major Exam- Written Examination (whole course) - 50%

Learning outcomes:
On completion of this course, the students would:

1. Understand the nature of different forms of market failure and theoretical responses to such market failure
2. Be able to conceptualize and resolve simple problems of market/institutional failure

Pedagogical approach:
Standard classroom teaching followed by problem solving sessions; classroom experiments.

Materials:
Lecture Notes will be provided.

Suggested readings
Required:

1. Mas-Colell, Andreu, Michael Dennis Whinston, and Jerry R. Green. Microeconomic theory. Vol. 1. New York: Oxford university press, 1995.
2. Gibbons- Game Theory for Applied Economists
3. Hal Varian : Microeconomic Analysis (ed. 3)

Additional:

1. LeRoy, Stephen F., and Jan Werner. Principles of financial economics. Cambridge University Press, 2001.
2. Krepps, David : Microeconomic theory
3. Salanié, Bernard. The economics of contracts: a primer. MIT press, 2005
4. Laffont, Jean-Jacques, and David Martimort. The theory of incentives: the principal-agent model. Princeton University Press, 2009.4. Bolton, Patrick, and Mathias Dewatripont. Contract theory. MIT press, 2005.
5. Coase, Ronald Harry. The firm, the market, and the law. University of Chicago press, 2012.

Student responsibilities: Attendance, feedback, discipline: as per university rules.

Course reviewers:
This course was reviewed by:

1. Prof Debasis Mishra, Indian Statistical Institute, New Delhi
2. Prof Priyodarshi Banerjee, Indian Statistical Institute, Kolkata

Course prepared by: Badal Mukherji