

Course title: Microeconomics-II				
Course code: MPE 137		No. of credits: 4	L-T-P: 56-0-0	Learning hours: 56
Pre-requisite course code and title : MPE 131 Microeconomics; MPE 113 Mathematical Methods for Economics				
Department: Department of Policy Studies				
Course coordinator: Dr Soumendu Sarkar			Course instructor: Dr Soumendu Sarkar	
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Course type: Elective			Course offered in: either semester	
Course description: Standard Microeconomic theory claims that price-taking behaviour results in efficient market outcomes under assumptions like rational preferences, certainty of outcomes and complete information. This course recognizes possibility of market failure, i.e., inefficient market outcomes, when one or more of these assumptions are relaxed. It explores the special requirements for designing institutions like insurance, contracts, law, voting, auctions and matching to meet the challenge of market failure.				
Course objectives: <ol style="list-style-type: none"> 1. To understand the role of asymmetric information and non-standard preferences in the failure of markets and other institutions 2. To appreciate the role of alternative axioms in characterizing solutions to institutional failure problems 3. To apply axiomatic theory for characterizing different solutions to institutional failure problems 				
Course contents				
Module	Topic	L	T	P
1	Module 1: Flashback and Overview • Recap of standard Microeconomic theory: individual decision-making and general equilibrium • Overview of the course • Axioms and their role in Microeconomics	2		
2	Module 2: An uncertain world • Expected Utility Theorem, Measures of Risk Aversion; Application: Insurance • General Equilibrium under uncertainty; Asset Markets; Application: Emission trading markets	8		
3	Module 3: Lemons and Shirking • Market for lemons; the screening problem; Application: the problem of a discriminating monopolist vs. the optimal auction problem • Moral hazard; optimal incentive schemes; Application: underdeveloped agriculture • Signalling; Application: signalling in job markets • General application: auctions vs. negotiations for coal blocks	10		
4	Module 4: Law and Economics • Coase and Transaction Cost approach; Coase on Federal Communication Commission and auctions for natural resources • Brief overview of law and economics	6		

5	Module 5: Taking people along: social choice <ul style="list-style-type: none"> • Aggregation of individual preferences; Condorcet Paradox; Arrow's Impossibility Result; Single-peaked preferences and other restrictions; Median Voter Rules • Strategic Social Choice: Gibbard-Satterthwaite Theorem; Nash Implementation; strategic social choice when outcomes are lotteries 	10		
6	Module 6: Design your own market <ul style="list-style-type: none"> • Mechanism design with money: Optimal auction, VCG , double auctions; Application: mechanism design for land assembly • Mechanism design without money: marriage market and the Gale-Shapley algorithm; house allocation problem and the Shapley-Scarf algorithm • Applications: school choice, kidney exchange 	10		
7	Module 7: Cooperative Games and Networks <ul style="list-style-type: none"> • Bargaining Solutions: Nash solution, Core and Shapley Value; Applications to resource sharing problems • Economics of social networks: stability vs efficiency, network formation games. 	10		
	Total	56		

Evaluation criteria:

- Test 1: Submission and oral presentation of a Term Paper (at the end of Module 7) 40%
 Test 2: Written Examination (at the end of Module 4) 30 %
 Test 3: Written Examination (at the end of Module 7) 30 %

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 (Test 2)
2. Understand collective decision making processes and their properties in an axiomatic framework (Test 3)
3. Be able to conceptualize and resolve simple problems of market/institutional failure (Test 1)

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. Bergin, James. Microeconomic theory: a concise course. Oxford University Press, 2005.

Additional:

1. LeRoy, Stephen F., and Jan Werner. Principles of financial economics. Cambridge

- University Press, 2001.
2. Salanié, Bernard. The economics of contracts: a primer. MIT press, 2005.
 3. 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.
 4. Coase, Ronald Harry. The firm, the market, and the law. University of Chicago press, 2012.
 5. Gaertner, Wulf. A Primer in Social Choice Theory: Revised Edition: Revised Edition. Oxford University Press, 2009.
 6. <http://alsamixer.files.wordpress.com/2013/03/iislectures2.pdf>
 7. Krishna, Vijay. Auction theory. Academic press, 2009.
 8. Peleg, Bezalel, and Peter Sudhölter. Introduction to the theory of cooperative games. Vol. 34. Springer, 2007.
 9. Goyal, Sanjeev. Connections: an introduction to the economics of networks. Princeton University Press, 2012.
 10. Roth AE. Who Gets What—and Why: The New Economics of Matchmaking and Market Design. Houghton Mifflin Harcourt; 2015
 11. Tietenberg TH. Emissions trading: principles and practice. Routledge; 2010
 12. Sarkar S. *Auctions, Negotiations and Winner's Curse in Coal Mining in India*, International Journal of Management Practice. Inderscience (forthcoming)

Additional information (if any):

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: Dr Soumendu Sarkar