Intermediate Microeconomics II

Course title: Intermediate Microeconomics-II			
Course code: UEO 202	No. of credits: 4	L-T-P: 45-15-0	Learning hours: 60
Pre-requisite: Course code and title: UEO 103: Introductory Mathematical Methods for Economics, UEO 102: Basic Mathematics for Economics, UDS 103: Mathematics for Data Science, UEO 203: Intermediate Microeconomics-I			
Department: Policy and Management Studies			
Course coordinator: Dr. Malvika Tyagi	Course instructor: Dr. Aditi Singhal		
Contact details: aditi.singhal@terisas.ac.in			
Course type: Core	Course offered in: Semester 4		
Course description: This is a second course on intermediate microeconomics that focuses on basic game theory under complete information, oligopoly, externalities, public goods, and information.			
Course objective: 1.To learn fundamentals of microeconomics using calculus. 2.To apply the core concepts in economic applications.			

Course contents

S.No	Topics	L	T	P
1	**Market Structures** ***Perfect Competition*** Perfect competition, demand function of a firm, short-run supply function of a firm, shutdown decision, profit maximization, input demand, producer surplus. Market: market demand, short-run market supply, short-run supply elasticity, short-run equilibrium, long-run supply, long-run supply elasticity and long-run equilibrium ***Monopoly*** Monopolist's problem, linear demands and profits, marginal revenue and elasticity, rectangular hyperbola demands and profits, non-existence of supply functions, deadweight loss. Price discrimination: first-degree price discrimination, second-degree price discrimination, and third-degree price discrimination ***Oligopoly*** Duopoly, Cournot model, Bertrand model, and Stackelberg model	18	6	
2	**Introduction to Game theory** ***Simultaneous move games***: Introduction to game theory, simultaneous move games under complete information, payoff matrix, strategy, Nash equilibrium, best responses, dominated strategies, iterated elimination of dominated strategies. ***Introduction to Mixed strategies*** Applications: Prisoner's dilemma, stag-hunt game, matching pennies, rock- paper-scissor.	6	2	
3.	**General Equilibrium Analysis** Exchange, endowments, Edgeworth box, Pareto efficiency, relative prices, competitive equilibrium, first welfare theorem, second welfare theorem, arrow impossibility theorem, social welfare functions, general equilibrium in production, production possibility frontier, applications.	9	3	

4	**Externalities and public goods** ***Externalities***: consumption externality, production externality, Coase theorem, tragedy of the commons. ***Public goods***: non-rival, non-excludability, Pareto inefficiency, Pareto improvement, free riding problem.	7	2	

5	**Asymmetric information** Asymmetric information, market for lemons, adverse selection, moral hazard, signaling, incentives.	5	2	
	Total	45	15	

Pedagogical approach:

Classroom teaching and problem-solving sessions.

Evaluation criteria:

Minor1:WrittenExamination- 30% [Syllabus: 1-2, Learning outcomes: 1-6]
Minor 2: Written Examination - 30% [Syllabus: 3-4, Learning outcomes: 1-6]
Major: Written Examination -40% [Syllabus: Complete course, Learning outcomes: 1-6]

Learning outcomes:

At the end of the course, the students will be able to:

1. Understand the core concepts of microeconomics. [Modules 1-5]
2. Analyze an economic problem graphically. [Modules 1-5]
3. Solve an economic problem mathematically using calculus. [Modules 1-5]
4. Build intuitions of the core results. [Modules 1-5]
5. Figure out the cases where cookbook methods are not applicable. [Modules 1-5]
6. Apply the concepts and results in economic applications. [Modules 1-5]

Core reading:

Varian, H. (2010) *Intermediate Microeconomics*, (HV)
Nicholson, W., & Snyder, C.M. (2012) *Microeconomic Theory: Basic Principles and Extensions*, Cenage Learning (NS)
Pindyck, R.S., & Rubinfeld, D.L. (2013) *Microeconomics*

8th edition (PR)

Additional readings:

Bergstorm, T. & Varian, H. (2014) *Workouts in Intermediate Microeconomics*

Module-wise chapters:

1. Module 1: NS Chapter 12, 14 & 15
2. Module 2: PR Chapter 12 & 13
3. Module 3: HV Chapter 31, 33 & NS Chapter 13
4. Module 4: HV Chapter 34 & 36
5. Module 5: HV Chapter 37

Course Prepared By: Dr. Aditi Singhal

Course Reviewers:

1. Naveen joseph Thomas, Professor, Jindal School of Governance and Public Policy, O.P. Jindal Global University, Sonepat, India
2. Sanyyam Khurana, Assistant Professor, Ashoka University, Sonepat, India

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