Course Title: Intermediate Microeconomics I			
Course code: UEO 203	**No. of credits:** 4	**L-T-P:** 46-14-0	**Learning hours:** 60
Pre-requisite course code and title (if any): UEO 103: Introductory Mathematical Methods for Economics, UEO 102: Basic Mathematics for Economics, UDS 103: Mathematics for DataScience			
Department: Department of Policy and Management Studies			
Course coordinator: Dr. Malvika Tyagi		**Course instructor:** Guest Faculty	
Contact details: malvika.tyagi@terisas.ac.in			
Course type: Core		**Course offered in:** 3rd Semester	

Course Description This is a second course on microeconomics which uses calculus that was taught in mathematical economics courses. Broadly, the course is divided into four parts. The first part teaches preferences of a consumer, utility representations, and demands. The second part focuses on production, profit maximisation, and cost minimisation. The third part focuses on different forms of markets – perfect competition and monopoly. The fourth part focuses on general equilibrium and welfare economics.

Course objectives

1. To learn fundamentals of microeconomics using calculus.
2. To apply the core concepts in economic applications.

Course content

S.No	Topic	L	T	P
1				
	Consumer choice I Preference relations, budget sets, utility representations, cardinal and ordinal utilities, indifference curves, marginal utility, and marginal rate of substitution. Examples of utility functions: Cobb-Douglas, perfect substitutes, perfect complements, CES, and quasi-linear.	8	3	
2	**Consumer choice II** Optimality, Marshallian demands, normal and inferior goods, income offer curves andEngel curve, price offer curve and demand curve, law of demand, substitutes and complements. Substitution and income effects, Slutsky equation, Hicksian demand, revealedpreferences, weak axiom of revealed preference, intertemporal choice. Uncertainty, expected utility, risk averse, risk neutral, risk loving preferences.	8	3	
3	**Production and Costs** Technology, marginal product, technical rate of substitution, short and long run,returns to scale, and elasticity of substitution. Examples of technology functions: Cobb-Douglas, perfect substitutes, perfectcomplements, CES, and quasi-linear. Cost minimization, cost functions, expansion path, fixed and sunk costs, average costs, variable costs, cost-output elasticity, marginal costs and duality with technology.	6	2	
4	**Markets I: Perfect competition**	6	2	

	Firm: Perfect competition, demand function of a firm, short-run supply function of afirm, shutdown decision, profit maximization, input demand, producer surplus. Market: market demand, short-run market supply, short-run supply elasticity, short-runequilibrium, long-run supply, long-run supply elasticity and long-run equilibrium.			
5	**Markets II: 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	6	2	
6	**General equilibrium** Exchange, endowments, Edgeworth box, Pareto efficiency, relative prices, competitiveequilibrium, first theorem of welfare economics, second theorem of welfare economics, applications.	8	2	
7	**Welfare economics** Social welfare function, individual preferences, axioms of Pareto, independence ofirrelevant alternative and dictatorship, Arrow's impossibility theorem.	4		
	Total	46	14	

Pedagogical approach:

Classroom teaching and problem-solving sessions.

Evaluation criteria:

Minor1:WrittenExamination- 30% [Syllabus: 1-4, Learning outcomes: 1-6]
Minor 2: Written Examination - 30% [Syllabus: 5-6, 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 1-6]
2. Analyze an economic problem graphically. [Modules 1-6]
3. Solve an economic problem mathematically using calculus. [Modules 1-6]
4. Build intuitions of the core results. [Modules 1-6]
5. Figure out the cases where cookbook methods are not applicable. [Modules 1-6]
6. Apply the concepts and results in economic applications. [Modules 1-6]

Core reading:

1. H. Varian, "Intermediate Microeconomics: A Modern Approach", 8th edition (2010) (HV)
2. W. Nicholson, C. Snyder. "Microeconomic Theory: Basic Principles and Extensions", 10th edition (NS)

Additional readings:
3. T. Bergstorm, H. Varian. "Workouts in Intermediate Microeconomics" (2014)

Module-wise chapters from the core reading: H. Varian, "Intermediate Microeconomics", 8th edition (2010)(HV)

1. Module 1: HV, Chapters 2, 3 and 4
2. Module 2: HV, Chapters 5, 6, 7, 8, 10, and 12
3. Module 3: NS, Chapters 9 and 10

4. Module 4: NS, Chapters 11 and 12 5. Module 5: NS, Chapter 14 6. Module 6: HV, Chapter 31 7. Module 7: HV, Chapter 33 Course prepared by: Sanyyam Khurana			
Student responsibilities: Attendance, feedback, discipline: as per university rules.			

Course reviewers:

1. Souvik Dutta. Assistant Professor, Indraprastha Institute of Information Technology Delhi
2. Ankush Garg. Assistant Professor, Jindal School of Government and Public Policy O.P.Jindal Global University