Quaid-i-Azam University, Islamabad
School of Economics
Course outlines

Course:	**EC-601-Advance Microeconomics**
Level	**M.Phil/PhD**

Semester: Fall– 2024

Description: This subject is an introduction to neoclassical microeconomic theory and mostly focus on the behavior of consumers and firms under different contexts such as with certain and uncertain information. Specific topics to be covered include consumer and producer theory, choice under uncertainty, partial equilibrium, general equilibrium, game theory, information economics, auctions and mechanism design. The subject is intended to teach students the foundations of conventional economic microeconomic theory in these areas. The students are expected to understand Intermediate level microeconomics. The topics have some blend of math; hence it is presumed that students have basic knowledge of linear algebra, optimization, multivariate calculus and real analysis.

Instructors:

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Teaching Format: Two lectures per week
Timings: As per Timetable
Venue: Class Room: 9, first floor next to dean social science office building
Number of Classes : 32 (approximately)
Number of Lectures: 30 (approximately)

Consulting Hours: $12.30 - 1.00$ (Wednesday/Thursday)
Students can also discuss problems at any time other than consulting hours.

Course Contents:

Introduction Framework of Microeconomics
Consumer Theory
Demand Analysis

Classical Demand Theory:
Utility maximization subject to budget constraint: Marshallian demand function, Indirect utility function. Budget minimization subject to utility constraint: Hicksian demand function, the expenditure function. Duality between Marshallian and Hicksian demand functions, Slutsky Equation, Duality between utility function and indirect utility function.

Special Topics in Consumer Theory
Consumption with endowments, Composite commodities, separability and homotheticity, Aggregation, Consumption technology, Consumption over time, Consumption and allocation of time, Household production functions, Revealed preferences, Empirical estimation and functional Forms. Choice under

uncertainty. Rationality & Behavioural analysis of consumer

Decision under Uncertainty Ch2.4
Theory of the Firm   Technology, Cost Minimization, Profit Maximization Ch3
Production Analysis
Constraints: Technological constraints: production set, production functions, Leontief technology production function, Linear production function, Cob-Douglas production function, Constant elasticity of substitution production function, Transcendental logarithmic production function. Financial Constraints: budget constraint. Market constraints: price constraints, quantity constraints.
Optimization: Profit maximization: profit equation, input demand function, output supply function, profit function. Cost minimization: the cost minimization problem, conditional input demand function, cost function. Revenue maximization. Duality between cost and production

Firm Analysis
Cournot Model, Bertrand Model, The Cournot-Bertrand Model, Hoteling Location Model, Stackelberg Model, Advertising and Market Structure, Advertising and Efficiency, Natural Monopoly pricing, Ramsey pricing rule, Limit Pricing and Entry Deterrence, Elements of Game Theory and models of Asymmetric information.

Partial Equilibrium Perfect Competition, Monopoly, Imperfect Competition, Equilibrium and Welfare Ch4
Game Theory Strategic Form Games, Extensive Form Games with Perfect and Imperfect Information Ch7
Information Economics   Adverse Selection, Moral Hazard and Principal Agent Ch8
Auctions and Mechanism Design Standard Auctions with independent private values, Revenue Equivalence Theorem Ch9

General Equilibrium**: General equilibrium in exchange economy, Equilibrium in competitive market, equilibrium in production.
Welfare Economics: Social welfare functions, The Pareto conditions, The Classical theorems of welfare economics, Alternative approaches of measuring welfare changes

Assessment:

Your assessment for this subject comprises assignments, quizzes, a midterm exam and a final exam.

Assignments and Quizzes   15
Midterm Exam   35
Final Exam   50
University rule of minimum 80% attendance shall be followed

Recommended Textbooks

The main textbook for this subject is Geoffrey A. Jehle and Philip J. Reny 'Advanced Microeconomic Theory', Addison Wesley, 2nd Edition,
Other Books:
Martin J. Osborne 'An Introduction to Game Theory', Oxford University Press, 2003.
Robert Gibbons, 'Game Theory for Applied Economists', Princeton University Press, 1992,

Gravelle and Rees "Microeconomics", Third Edition, Pearson Education Ltd, 2004 (Indian reprint 2008) Chapters: 1-4, 19, 22

Bierman and Fernandez "Game Theory with Economic Applications", Second Edition, Pearson Education Ltd, 1998 (Indian reprint 2005) Chapters: 1,2, 19

Wolfstetter "Topics in Microeconomics: Industrial Organization, Auctions and Incentive", Cambridge University Press, 2003, Chapter: 6

Victor J. Tremblay and Carol Horton Trembly "New Perspectives on Industrial Organization", Springer, New York, 2012, Chapters: 10-12, 15-16