



BIRLA INSTITUTE OF TECHNOLOGY AND
SCIENCE, Pilani

Hyderabad Campus
**SECOND SEMESTER, 2021-
2022**

15/01/2022

In addition to part-I (General Handout for all courses appended to the timetable) this portion gives further specific details regarding the course

Course No. : **ECON F242**
Course Title : **MICROECONOMICS**
Instructor-in-Charge : **Dushyant Kumar.**
Instructors: : **Dushyant Kumar, Prakash Kumar Shukla.**

1. Scope and objective of the course:

Course Rationale:

This course covers the tools of microeconomics theory and discusses their applications to consumption behaviour, production and pricing behaviour under various possible market structures like perfect competition, monopoly, oligopoly, etc. We are also going to cover consumers' as well as producers' decision making under uncertainty.

Specific Objectives:

- To provide an analytical and quantitative apparatus for economic analysis.
- To explain students with the economic concepts and theories surrounding the micro topics identified above.
- To provide students with some of the recent development of microeconomics and research methods used by economists.
- To acquaint students with individuals and firms economic behavior in a context of scarcity and how it relates to the operation of markets reflecting group behavior.

The course uses basic mathematical techniques to develop a theory of consumer behaviour, firm's behaviour and their interaction (market functioning).

2. Text Book (TB):

Varian, Hal R.: *Microeconomic Analysis*, Viva-Norton Student Edition (Third Edition).

3. Reference Books:

- R1.** Jehle, Geoffrey A. and Philip J. Reny: *Advanced Microeconomic Theory*.
R2. Mas-Colell, Andrew, Michael D. Whinston & Jerry R Green: *Microeconomic Theory*, Oxford University Press, India (2012).
R3. Varian, Hal R.: *Intermediate Microeconomics: A Modern Approach*, SPRINGER (INDIA) PVT. LTD. India (2010)
R4. *The Economy*, <https://www.core-econ.org/the-economy/book/text/0-3-contents.html>



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4. Course Plan:

Lecture No.	Learning Objectives	Topics to be covered	Chapter in the
1	Introduction to Microeconomics; Overview of the course.	Introduction: Scope and Coverage	notes
Theory of Consumer Behaviour			
2-4	Modeling of individual behaviour; Construction of utility functions from preferences	Preference relation, Axioms of rational choice, Utility functions, Special preferences	Ch. 7 (TB)
5-7	Determination of optimal behaviour of consumers; Utility maximization	Indirect utility function, Expenditure functions, Relationships between the two.	Ch. 7 (TB)
8-12	Properties of demand function, Study of consumer's behaviour changes in responses to changes in prices and income, Understanding demand inter-dependence among goods	Comparative statics, Slutsky equation, Properties of demand functions, Duality, Endowments in the budget constraint, Inverse demand functions, Elasticity, Substitution and income Effects, Substitutes and complements	Ch. 8 & 9 (TB), notes
13-14	Analyse the consumer's behaviour without explicitly assuming preferences, data/observation-based approach	Revealed preference theory	Ch. 8 (TB), notes
15-16	Analysing consumers' welfare	Consumer's surplus, Compensating and equivalent variations, Applications	Ch. 10(TB)
17-20	Decision making under uncertainty	Expected utility function-existence and uniqueness, Risk aversion, Risk and insurance, First order stochastic dominance, Second order stochastic	Ch. 11 (TB)
Theory of Production			
21-22	To study the nature and basic properties of production function, To examine the different technologies for production used widely in economic theory.	Specification of technology, Production functions, Technical rate of substitution, Returns to scale, Homogeneous and homothetic production function	Ch. 1 (TB), notes
23-25	To study the profit maximizing behavior of the firms; derivation of supply function and factor demand functions	Profit maximization, Profit function and its properties, Supply function, The envelope theorem, Comparative statics.	Ch. 2, 3



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26-28	To study cost minimization procedure of firms and derive the cost functions, To understand the properties of cost functions.	Cost minimization, Conditional factor demand functions, Algebraic approach to cost minimization, Average and marginal cost function, Factor demand functions prices and cost functions, Duality between cost function and production function, Firm's behavior under uncertainty.	Ch. 4, 5, & 6 (TB), notes
Theory of Firm and Market Structures			
29-30	To study the characteristics of a perfectly competitive market; derivation of market equilibrium in the short run and long run; welfare and efficiency analysis of competitive equilibrium.	The partial equilibrium, Welfare analysis, Pareto efficiency, Taxes and subsidies.	Ch. 13 (TB), notes
31-33	To study the competitive price system, General equilibrium and factor prices, introduction to welfare economics, output and efficiency determination commodity-market equilibrium.	The General equilibrium, The First and the Second Theorem of Welfare Economics	Ch. 17 & 18, notes
34-36	To study the monopoly market form, price Discrimination, welfare effects of monopoly.	Monopoly profit maximization, Price discrimination- first degree, second degree and, third degree, welfare effects.	Ch. 14, notes
37-40	To study some oligopolistic market forms, pricing and output determination in oligopolistic competition.	Monopolistic competition, Bertrand model, Cournot model, Stackelberg Model.	Ch. 16, notes
Sources of Market Failures: Information Asymmetry			
41-42	To study the asymmetric information issues- adverse selection and moral hazard	Adverse selection, Moral hazard, Individual rationality and incentive compatibility constraints	Ch. 25, notes

5. Learning Outcomes:

Topic 1: Introduction

The students will be introduced to the field of microeconomics. They will get to know its applications, scope and relevance.

Topic 2: Theory of Consumer Behaviour

How does (or rather should) a consumer decide about his consumption basket; what are the factors that impact consumers' decisions; how can we represent the consumption preferences of different consumers; how are the demand for two or more goods linked to each-other; how does this all analysis changes when a consumer is faced with risk and uncertainty; the students will be able to analyze all these issues after going through this module.



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Topic 3: Theory of Production

How can we represent a production process through the production function, how does different inputs impact the output; given the production function and input prices, how should we choose the output level, what are the conditions that govern the profit maximization and the cost minimization; the students will be able to analyze all these issues after going through this module.

Topic 4: Theory of Firm and Market Structures

How does a firm operate under different market conditions; what role does competition plays in determine market outcome; why is monopoly considered to be 'bad'; what are the 'good' properties of a competitive market, what conditions do we need to achieve it; what are some of the oligopolistic market forms, what are their properties, how do firms strategically interact with each-other; the students will be able to analyze all these issues after going through this module.

Topic 5: Market Failures

Here we will be focusing on one particular source of market failure- asymmetric information. What happens when firms don't know employee productivity (type) and/or can't monitor employee's work (effort), how does it impact firm-employee relationship, in general when two parties can't observe and monitor each-other perfectly, how should they work together; the students will be able to analyze all these issues after going through this module.

6. Evaluation Scheme:

EC No.	Evaluation Component	Duration	Weights	Date & Time	Nature of Component
1	Mid-sem	90 minutes	35	15/03 11.00am to 12.30pm	OB
2	Quizzes- (05)	-	25	To be announced	CB
3	Comprehensive Examination	120 minutes	40	17/05 AN	CB

7. Chamber Consultation hours: To be announced in the class.

8. Notices: Notices would be displayed on **CMS**.

9. Make-up policy

Make-up will be given only on Doctor's/Warden's recommendation and with prior (at least 01 day before the test/exam) permission of the Instructor-in-Charge/Instructor. Request for make-up made by phone/sms or during/after the test/exam would NOT be entertained at all. You need to communicate your requests through the official email only. If a student is representing the Institute in a seminar/conference/sports event etc., they need to produce a valid proof of the same to apply for make-up.

10. Academic Honesty and Integrity Policy: Academic honesty and integrity are to be maintained by all the students throughout the semester and no type of academic dishonesty is acceptable.

**Instructor-in-Charge
ECON F242**