



BIRLA INSTITUTE OF TECHNOLOGY AND
SCIENCE, Pilani

Hyderabad Campus
**SECOND SEMESTER, 2020-
2021**

16/01/2021

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 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 Text |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| 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 | 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. | Ch. 10(TB) |
| 17-20 | Decision making under uncertainty | Expected utility function-existence and uniqueness, Risk aversion, Risk and Insurance. | 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, The 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 Function, 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 prices and cost functions, Duality between cost function and production function. | Ch. 4, 5, & 6 (TB) |
| 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 | 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 |
| 37-42 | To study some oligopolistic market forms, pricing and output determination in oligopolistic competition. | Monopolistic competition, Bertrand model, Cournot model, Stackelberg Model. | Ch. 16, 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.

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.



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6. Evaluation Scheme:

| EC No. | Evaluation | Duration | Weights | Date & Time | Nature of Component |
|--------|---------------------------|-------------|---------|---------------------|---------------------|
| 1 | Mid-sem | 90 minutes | 30 | 03/03 1.30 - 3.00PM | OB |
| 2 | Quizzes- (03) | - | 30 | To be announced | OB |
| 3 | Comprehensive Examination | 120 minutes | 40 | 08/05 AN | OB |

7. Chamber Consultation hours: Thursday, 03:00-04:00 PM.

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