

## BA (Prog.) with Economics as Major

### INTRODUCTORY MICRO ECONOMICS

#### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical/ Practice		
Introductory Microeconomics ECON001	4	3	1	0	Class 12th	NIL

#### Learning Objectives

The Learning Objectives of this course are as follows:

- To expose students to the basic principles of microeconomic theory
- To emphasis on the fundamental economic trade-offs and allocation problems due to scarcity of resources
- To use graphical methods to illustrate how microeconomic concepts can be applied to analyze real-life situations

#### Learning outcomes

The Learning Outcomes of this course are as follows:

- By studying the course, the students will understand economic trade-offs and opportunities.
- By studying the course, the students will understand the fundamentals of market mechanisms and government interventions.

**UNIT - I:** Introduction to economic trade-offs **(12 Hours)**

Resources and opportunities, Gains from trade, Individual and society

**UNIT -II:** How market works **(16 Hours)**

Supply and demand, Price and resource allocation, Elasticity, Market, trade and welfare

**UNIT -III:** Role of government **(16 Hours)**

Taxation, Public good, Inequality and poverty

**UNIT - IV:** Individual decision and interactions **(16 Hours)**

Decision versus strategic interaction, How to think about strategic interactions, Real life examples

#### Essential/recommended

**readings:**

- Mankiw, N. G. (2018). *Principles of Microeconomics* 8th ed.
- Frank, R.H., & Cartwright, E. (2010). *Microeconomics and behavior*. New York: McGraw-Hill.
- Dixit, A. K., & Skeath, S. (2015). *Games of/rategy*: Fourth international student edition. WW Norton & Company.
- Acemoglu, D., Laibson, D., & List, J. (2017). *Microeconomics*. Pearson.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

# Basic Mathematics for Economic Analysis

## CREDIT DISTRIBUTION, ELIGIBILITY AND PREREQUISITES OF THE COURSE

Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical/ Practice		
Basic Mathematics for Economic Analysis ECON021	4	3	1	0	Class 12th	NIL

### Learning Objectives

The Learning Objectives of this course are as follows:

- The objective of the course is train basic algebras that enables the study of economic theory at the undergraduate level, specifically the courses on microeconomics, macroeconomics, statistics and econometrics set out in this syllabus. In this course, particular economic models are not the ends, but the means for illustrating the method of applying mathematical techniques to economic theory in general. It contains understanding of basic functions, relations, real number systems, set operations, linear algebras and matrix operations used in economics.

### LEARNING OUTCOMES

The Learning Outcomes of this course are as follows:

- The course equips the students with exposition of economic problems with formal pre- situations algebraically and offers solution techniques to find equilibrium analysis. These tools are necessary for anyone seeking employment as an analyst in the corporate and policy framing world.

## **UNIT-I:**

### **Economic Models (20Hours)**

Ingredients of mathematical models - variables, constants, parameters, equations, and identities; Real number system; Sets and functions; relations and their properties; types of functions; functions of more than one variables; Limit, sequences and series: convergence, algebraic properties and applications; continuous functions: characterisation, properties with respect to various operations and applications; differentiable function: characterisation, properties with respect to various operations and applications; second and higher order derivatives: properties and applications.

### **UNIT- II: Equilibrium Analysis in Economics (20 Hours)**

Meaning of equilibrium; partial market equilibrium - linear and non-linear models; General market equilibrium

### **UNIT- III: Linear Models and Matrix Algebras and their Applications in Economics (20 Hours)**

Matrix operations, Determinants and Cramer's Rule and their applications

### **Practical component (if any)-**

**NIL Essential/recommended**

### **readings**

- Chiang, A and Wainwright, K. (2005). Fundamental methods of mathematical economics. Boston, Mass. McGraw-Hill/Irwin.
- Sydsaeter, K., Hammond, P. (2002). Mathematics for economic analysis. Pearson Educational.
- Hoy, M., Livernois, J., McKenna, C., Rees, R., Stengos, T. (2001). Mathematics for Economics, Prentice-Hall India.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

## **B.A. Programmes with Economics as non-Major or Minor discipline**

### **INTRODUCTORY MICRO ECONOMICS**

#### **CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical/ Practice		
<b>Introductory Microeconomics</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>Class 12th</b>	<b>NIL</b>

#### **Learning Objectives**

The Learning Objectives of this course are as follows:

- To expose students to the basic principles of microeconomic theory
- To emphasis on the fundamental economic trade-offs and allocation problems due to scarcity of resources
- To use graphical methods to illustrate how microeconomic concepts can be applied
- to analyze real-life situations

#### **Learning outcomes**

The Learning Outcomes of this course are as follows:

- By studying the course, the students will understand economic trade-offs and opportunities.
- By studying the course, the students will understand the fundamentals of market mechanisms and government interventions.

**UNIT - I: Introduction to economic trade-offs (12 Hours)**

Resources and opportunities, Gains from trade, Individual and society

**UNIT -II: How market works (16 Hours)**

Supply and demand, Price and resource allocation, Elasticity, Market, trade and welfare

**UNIT -III: Role of government (16 Hours)**

Taxation, Public good, Inequality and poverty

**UNIT - IV: Individual decision and interactions (16 Hours)**

Decision versus strategic interaction, How to think about strategic interactions, Real life examples

**Essential/recommended readings:**

- Mankiw, N. G. (2018). *Principles of Microeconomics* 8th ed.
- Frank, R.H., & Cartwright, E. (2010). *Microeconomics and behavior*. New York: McGraw-Hill.
- Dixit, A. K., & Skeath, S. (2015). *Games of strategy*: Fourth international student edition. WW Norton & Company.
- Acemoglu, D., Laibson, D., & List, J. (2017). *Microeconomics*. Pearson.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

Course Code : E CON025

Course Abbreviation : PMIC1

Credits : 4

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Semester	Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
			Lecture	Tutorial	Practical/ Practice		
I	Principles of Microeconomics I ECON025	4	3	1	0	Class XII pass	NIL

### Learning Objectives

The Learning Objectives of this course are as follows:

- This course discusses the basic principles in Microeconomics and their applications. It includes consumer's problem, demand estimation, production function, cost functions and market analysis. It illustrates how the concepts of microeconomics can be applied to analyze real-life economic situations.

### Learning outcomes

The Learning Outcomes of this course are as follows:

- The students learn some basic principles of microeconomics of consumer and producers, and interactions of supply and demand, characteristics of perfect competition, efficiency and welfare outcomes.

### SYLLABUS OF GE-1

#### UNIT – I: Introduction (20 hours)

Problem of scarcity and choice: scarcity, choice and opportunity cost; production possibility frontier; economic systems. Demand and supply: law of demand, determinants

of demand, shifts of demand versus movements along a demand curve, market demand, law of supply, determinants of supply, shifts of supply versus movements along a supply curve, market supply, market equilibrium. Applications of demand and supply: price rationing, price floors, consumer surplus, producer surplus. Elasticity: price elasticity of demand, calculating elasticity, determinants of price elasticity, other elasticities

#### UNIT – II: Consumer Theory (20 hours)

Budget constraint, concept of utility, diminishing marginal utility, Diamond-water paradox, income and substitution effects; consumer choice: indifference curves, derivation of demand curve from indifference curve and budget constraint

#### UNIT – III: Production and Costs (20 hours)

Production: behaviour of profit maximising firms, production process, production functions, law of variable proportions, choice of technology, isoquant and isocost lines, cost minimizing equilibrium condition

Costs: costs in the short run, costs in the long run, revenue and profit maximization, minimizing losses, short run industry supply curve, economies and diseconomies of scale, long run adjustments

#### UNIT – IV: Perfect Competition (20 hours)

Assumptions: theory of a firm under perfect competition, demand and revenue; equilibrium of the firm in the short run and long run; Long run industry supply curve: increasing, decreasing and constant cost industries.

Welfare: allocative efficiency under perfect competition.

Practical component (if any) - NIL

#### Essential/recommended readings

- Mankiw, N. G. (2018). *Principles of Microeconomics* 8th ed.
- Frank, R. H., & Cartwright, E. (2010). *Microeconomics and behavior*. New York: McGraw-Hill.
- Bernheim, B., Whinston, M. (2009). *Microeconomics*. Tata McGraw-Hill.