

## MA203: ENGINEERING ECONOMICS AND MANAGEMENT

**CREDITS = 3 (L=3, T=0, P=0)**

### Course Objective:

Provide the basics of economics and management applicable to various branches of engineering to enable them to connect the concept to the practical situation and take appropriate decision. It will enable them to select projects and price the products as well as to fix capacity utilization to maximum benefits. It will also enable the students to understand the implications of monetary and fiscal policy variables on business organizations.

### Teaching and Assessment Scheme:

Teaching Scheme			Credits	Marks Distribution				Total Marks
L	T	P	C	Theory Marks		Practical Marks		
				ESE	CE	ESE	CE	
3	00	0	3	70	30	0	0	100

### Course Contents:

Unit No.	Topics	Teaching Hours
1	<b><u>Basic Concepts of Economics</u></b>  Introduction to Economics: Definitions, Nature, Scope, Difference between Microeconomics & Macroeconomics  Theory of Demand and Supply: meaning, determinants, law of demand, law of supply, equilibrium between demand & supply  Elasticity: elasticity of demand, price elasticity, income elasticity, cross elasticity  Theory of production :Introduction to factor markets-land, labor, capital and organization Law of variable proportions, law of returns to scale  Cost: Meaning, short run & long run cost, fixed cost, variable cost, total cost, average cost, marginal cost, opportunity cost  Break even analysis: Meaning, explanation, numerical  Markets: Meaning, types of markets & their characteristics (Perfect competition, monopoly, monopolistic competition), pricing under different market conditions, anti-competitive laws and concept	20

	<p>of dumping.</p> <p>Inflation: meaning, types, measures to control inflation: monetary and fiscal policies.</p> <p>National Income: Meaning, stock and flow concept, NI at current price, NI at market price, GNP, GDP, NNP, NDP, Personal income, disposable income.</p>	
2	<p><b><u>Introduction to management:</u></b> Definition , nature and scope of management</p> <p>Functions of management:Planning,Organizing, Staffing, Directing, Controlling</p> <p>Functions of organization:Purchasing, Operations, Marketing and sales, Finance, Product development, Quality, Personnel</p>	03
3	<p><b><u>Introduction to Marketing Management:</u></b> Marketing mix, marketing vs. selling, market segmentation, holistic marketing</p>	04
4	<p><b><u>Introduction to Financial Management:</u></b> The need for monetary control, the ideal financial system, costing, marginal costing, investment appraisal, depreciation</p>	07
5	<p><b><u>Product Development and Operations Management:</u></b> Customers and product development, product life cycle and GAP analysis, Ideal product development process, Management techniques in product development</p> <p>Methods of production :Jobproduction, batch production, flow production, group technology, production planning and control</p> <p>Quality: quality control, quality assurance, total quality management and its tools</p> <p>Human resource management: recruitment, training and development.</p>	11
	<b>Total Hours</b>	<b>45</b>

**List of References:**

1. Dewett, K.K. “*Modern Economic Theory*”, S. Chand & Company Ltd.
2. Ahuja, H.L. “*Advanced Economic Theory*”, S. Chand & Company Ltd.
3. Gail Freeman-Bell and James Balkwill, “*Management in Engineering*”, Prentice Hall of India.
4. James A .F. Stoner, R. Edward Freeman, Daniel R. Gilbert. Jr, “*Management*”, Pearson, Latest Edition.

**Course Outcome (COs):**

On successful completion of the course, students will be able to:

1. Understand and apply the basics of economics and management to engineering areas.
2. Understand and apply the basics of demand, demand forecasting, elasticity and et al. to engineering projects.
3. Apply the basics of project planning project evaluation break even depreciation and costing and et al to engineering.
4. Understand product development product life cycle and its advantages to the organization.
5. Understand quality concepts.
6. Understand human resource development recruitment and training and its advantages to the organization.