

## 4/4 B.Tech - EIGHTH SEMESTER

<b>EC8T3D</b>	<b>Engineering Economics &amp; Management</b>	<b>Credits: 4</b>
<b>Lecture: 4 periods/week</b>		<b>Internal assessment: 30 marks</b>
<b>Tutorial: 1 period /week</b>		<b>Semester end examination: 70 marks</b>

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### **Course Objectives:**

- i. To develop knowledge of fundamentals of management and economics concepts, skills and tools, to aid in problem solving and decision making.
- ii. To discuss the evolution of principles that make it possible to design facilities, processes, and control systems with a degree of predictability as to their performance.
- iii. To familiarize the students with macro-environmental forces affecting business operations in the Indian context; and the dynamics of the operation of these forces.
- iv. To develop the skill in the students regarding the project development and implementation.
- v. To familiarize the student with widely used networking models related to decision-making, problem analysis and their interpretations in project management.

### **Learning Outcomes:**

- i. Students will be aware of the concept of Management and types of organization.
- ii. Students will understand the impact of various micro and macro economic variables that influence the organizational functions.
- iii. Student will analyze the cost volume relationship in the short run and long run.
- iv. Students will analyze various functions of management that include operations management, material management, helpful in success of organizations.
- v. Student will develop skills regarding the project management inclusive of network project scheduling techniques.

**UNIT- I: Introduction to Management** Concepts of Management- nature, importance and Functions of Management, Taylor's Scientific Management Theory, Fayol's Principles of Management. Internal and External Business Environment. , Features and evaluation of Sole Proprietorship, Partnership, Joint Stock Company, State/Public Enterprises and their types.

### **Unit-II: Elements of Engineering and Economics:**

Micro and Macro Economics, Factors determining Demand, Law of Demand and its Exceptions Elasticity of Demand, Law of Diminishing Margin of returns, Law of returns to scale Iso-Cost and Iso-Quant Analysis,

### **Unit III: Cost theory and Estimation:**

Cost concepts, determinants of cost, cost-output relationship in the short run and long run Average total cost curve. Cost volume profit analysis.

**UNIT- IV: Operations Management:** Principles and Types of Plant Layout-Methods of production (Job, batch and Mass Production), Work Study -Basic procedure involved in

Method Study and Work Measurement, Business Process Reengineering. **Materials Management:** Objectives, Need for Inventory control, EOQ, ABC Analysis, Purchase Procedure, Stores Management and Stores Records.

**UNIT- V: Project Management (PERT/CPM):** Network Analysis, Program Evaluation and Review Technique (PERT), Critical Path Method (CPM), Identifying critical path, Probability of Completing the project within given time, Project Cost Analysis, Project Crashing. (Simple problems)

## **Learning Resources**

### **Text Books:**

1. Management, Koontz, H and Wihrich.H McGraw, New York, 10th Edition, 1995.
2. Principles of Management, Ramasamy.T Himalaya Publishing House, New Delhi, 2000.
3. Managerial Economics and Financial Analysis, N. Appa Rao. & P. Vijaya Kumar Cengage Publications, New Delhi, 2011

### **References:**

1. Managerial Economics, Suma Damodaran Oxford, 2011
2. Managerial Economics and Financial Analysis, S.A. Siddiqui & A.S. Siddiqui, New Age International Publishers, 2011
3. Managerial Economics and Financial Analysis, N. Appa Rao. & P. Vijaya Kumar, Cengage Publications, New Delhi, 2011
4. Entrepreneurship Narayana Reddy, Cengage learning, New Delhi, 2010
5. Entrepreneurship, Rajeev Roy, Oxford University Press, New Delhi, 2010
6. Projects, Prasanna Chandra, Tata McGraw-Hill Education, 2009.