

4/4 B.Tech - EIGHTH SEMESTER

EC8T3C

Management Science

Credits: 3

Lecture: 3 periods/week

Internal assessment: 30 marks

Tutorial: 1 period /week

Semester end examination: 70 marks

Course Objectives:

- To develop knowledge of fundamental management concepts, skills and tools, to aid in problem solving and decision making.
- To develop and understanding about the organizational structure and relationship between authority and responsibility in various structures.
- 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.
- To develop comprehensive skills in planning, selecting, motivating, and developing the human resources for organisational effectiveness.
- To understand the broad scope of marketing, societal, ethical and other diverse aspects of marketing.
- To compare conceptual models of strategic management and to understand its applicability in understanding the constraints and opportunities in the sectors.
- To enable the students to understand the contemporary issues in the field of management science and their applicability in the real world at every level.

Learning Outcomes:

Students will be able to

- Design of organizational structure both industries and academia.
- Analyse various functions of management that include operations management, material management, marketing management, HR management helpful in success of organisations.
- Understand the importance of planning for the long-term through strategic management.
- Understand quality control standards & contemporary management practices being followed both in industries and academia.

UNIT – I

Introduction to Management: Concepts of Management and organization- nature, importance and Functions of Management, Taylor's Scientific Management Theory and thinkers. Fayol's. Basic motivational theories. Leadership and Communication –its importance in management.
Designing Organisational Structures: Basic concepts related to Organisation - Departmentation and Decentralisation. Types of organisation structures - their merits, demerits and suitability. Role of ethics and Social responsibilities of Management.

UNIT – II

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- Statistical Quality Control: chart, R chart, *c* chart, *p* chart, (simple Problems), Acceptance Sampling, Deming's contribution to quality, Six sigma.

UNIT – III

Materials Management: Objectives, Need, procedure and Types of Inventory control, EOQ, Materials Requirement Planning (MRP), Just-In-Time (JIT), Total Quality Management (TQM), six sigma and Capability Maturity Model (CMM) Levels.

UNIT – IV

Marketing: Functions of Marketing, Marketing Mix, and Marketing Strategies based on Product Life Cycle, Channels of distribution. **Human Resources Management (HRM):** Concepts of HRM & HRD. Basic functions of Human Resource Management. Grievance Handling and Welfare Administration, Performance Appraisal, Job Evaluation and Merit Rating. Performance Management.

UNIT – V

Strategic Management : Mission, Goals, Objectives, Policy, Strategy, Programmes, Elements of Corporate Planning Process, Environmental Scanning, SWOT Analysis, Steps in Strategy Formulation and Implementation, Generic Strategy alternatives. Value Chain Analysis, Supply Chain Management, Enterprise Resource Planning (ERP), Business Process outsourcing (BPO), Business Process Re-engineering Bench Marking, and Balanced Score Card.

Learning Resources

Text Books:

1. Management Science, Aryasri, TMH, 2004.
2. Management Science, Rajesh C. Jampala, P. Adi Lakshmi, Duvuri Publications, Machilipatnam, 2010.

References:

1. Kotler Philip & Kevin Lane Keller, Marketing Mangement . 12th Edition, PHI, 2005.
2. Koontz & Weihrich, Essentials of Management, 6th Edition, TMH, 2005.
3. Stoner, Freeman, Gilbert, Management, 6th Ed, Pearson Education, New Delhi, 2004.
4. Production and Operations Management, Kanishka Bedi, Oxford University Press, 2004.
5. Personnel Management, Memoria & S.V. Gauker Himalaya, 25th Edition, 2005.
6. Lawrence R Jauch, R.Gupta &William F.Glueck:Business Policy and Strategic Management, Frank Bros.2005.