

JNTUA COLLEGE OF ENGINEERING (AUTONOMOUS) PULIVENDULA  
19AHS15a-MANAGEMENT SCIENCE

(Humanities Elective-II)(Common to ...)

CE&ME

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**Course Objectives:**

- Understand the role of entrepreneurship in economic development.
- Identify the general characteristics of entrepreneurs.

**UNIT - I**

**INTRODUCTION TO MANAGEMENT**

Concepts of Management - Nature, importance and Functions of Management - Taylor's Scientific Management Theory, Fayol's Principles of Management, Maslow's Theory of Human Needs, Douglas McGregor's Theory X and Theory Y, Leadership Styles, Social responsibilities of Management.

**DESIGNING ORGANIZATIONAL STRUCTURES**

Basic concepts related to Organization - Departmentation and Decentralization, Types of mechanistic and organic structures of organization (Line organization, Line and staff organization, functional organization, Committee organization, matrix organization, team structure) their merits, demerits and suitability.

**Learning Outcomes:**

At the end of this unit, the student will be able to

- Understand the concept of management and organization. L1
- Apply the concepts & principles of management in real life industry. L2

**UNIT - II**

**OPERATIONS MANAGEMENT:**

Principles and Types of Plant Layout-Methods of production (Job, batch and Mass Production), Work Study. Statistical Quality Control: *c* chart, *p* chart, (simple Problems) Deming's contribution to quality.

**MATERIALS MANAGEMENT:** EOQ, Purchase Procedure and Stores Management. Inventory — functions. Types, inventory classification techniques.

**Marketing:** Functions of Marketing, Marketing Mix, and Marketing Strategies based on Product Life Cycle, Channels of distribution.

**Learning Outcomes:**

At the end of this unit, the student will be able to

- Understand the core concepts of Management Science and Operations Management. L1
- Evaluate Materials departments & Determine EOQ. L2

**UNIT - III**

**HUMAN RESOURCES MANAGEMENT (HRM):**

Concepts of HRM, Personnel Management and Industrial Relations (PMIR), Basic functions of HR Manager: Manpower planning, Recruitment, Selection, Training and Development, Placement, Wage and Salary Administration, Promotion, Transfer, Separation, Performance Appraisal, Grievance Handling and Welfare Administration, Job Evaluation, Merit Rating and methods.

**Learning Outcomes:**

At the end of this unit, the student will be able to

- Understand the concepts of HRM in Recruitment, Selection, Training & Development. L1
- Apply Managerial and operative Functions. L2

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**UNIT – IV**

**STRATEGIC MANAGEMENT:**

Vision, Mission, Goals, Objectives, Policy, Strategy, Programmes, Elements of Corporate Planning Process, Environmental Scanning, Value Chain Analysis, SWOT Analysis, Steps in Strategy Formulation and Implementation, Generic Strategy alternatives.

**PROJECT MANAGEMENT (PERT/CPM):**

Network Analysis, Programme 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 Outcomes:**

At the end of this unit, the student will be able to

- Understand Mission, Objectives, Goals & strategies for an enterprise. L1
- Evaluate PERT and CPM Techniques. L2

**UNIT – V**

**CONTEMPORARY MANAGEMENT PRACTICES:**

Basic concepts of MIS, Materials Requirement Planning (MRP), Just-In-Time (JIT) System, Total Quality Management (TQM), Six sigma concept, Supply Chain Management, Enterprise Resource Planning (ERP), Performance Management, Business Process outsourcing (BPO), Business Process Re-engineering and Bench Marking, Balanced Score Card.

**Learning Outcomes:**

At the end of this unit, the student will be able to

- Analyze CRM, MRP, TQM. L1
- Understand modern management techniques. L2

**Text Books:**

1. **Management Science**, Aryasri: TMH, 2004.
2. **Management**, Stoner, Freeman, Gilbert, 6th Ed, Pearson Education, New Delhi, 2004.

**Reference Books:**

1. **Marketing Management**, Kotler Philip & Keller Kevin Lane: 12/e, PHI, 2005.
2. **Essentials of Management**, Koontz & Weihrich:, 6/e, TMH, 2005.
3. **Management—Principles and Guidelines**, Thomas N. Duening & John M. Biztantra, 2003.
4. **Production and Operations Management**, Kanishka Bedi, , Oxford University Press, 2004.

**Course Outcomes:**

At the end of this Course the student will be able to

- Equipping engineers for a lifelong career addressing the critical technical and managerial needs of private and public organizations. L1
- Exploring and developing analytic abilities, making better decisions, developing and executing strategies while also leading people who innovate. L2
- Cultivating the technical skills as well as the behavioral challenges of running organizations and complex systems. L3
- Emphasizing quantitative analytic skills and an entrepreneurial spirit L4
- Have an introductory understanding of global entrepreneurship concepts. L5