**19SH4101-MANAGEMENT SCIENCE**

(Common to ECE & EEE)

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| **Course Category:** | Humanities | **Credits:** | 3 |
| **Course Type:** | Theory | **Lecture-Tutorial-Practical:** | 3-0-0 |
| **Pre-requisite:** | NIL | **Sessional Evaluation:**  **External Exam Evaluation:**  **Total Marks:** | 40  60  100 |

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| **Course Objectives** | Students undergoing this course are expected to   * Learn the disciplines of management science and manager’s role in business and other decision-making. * Gain an overview of the process of developing and using quantitative techniques in decision making and planning. * Aware of the ethical dilemmas faced by managers and the social responsibilities of business. * Know the significance of strategic management in competitive and dynamic global economy | |
| **Course Outcomes** | Upon successful completion of the course the students will be | |
| CO1 | Able to apply the concepts & principles of management in real life industry. |
| CO2 | Able to design & develop organization chart & structure for an enterprise |
| CO3 | Able to identify Marketing Mix Strategies for an enterprise |
| CO4 | Able to apply PPC techniques and Work-study principles in real life industry. |
| CO5 | Able to maintain Materials departments, & determine EOQ |
| CO6 | Able to develop PERT/CPM Charts for projects of an enterprise and estimate time & cost of project. |
| **Course Content** | **UNIT – I**  **Introduction to Management**: Concept of Management –– Functions of Management- Evolution of Management Thought: Taylor's Scientific Management Theory-Fayal's Principles of Management- Maslow's theory of Hierarchy of Human Needs- Douglas McGregor's Theory X and Theory Y - Hertzberg Two Factor Theory of Motivation.  **UNIT – II**  **Design of Organization:** principles of Organization –Organisation process- Types of organisation: line, line and staff organization, function, committee, matrix, virtual, cellular, team organization. Boundary less organization, inverted pyramid structure, lean and flat organization. Managerial objectives and social responsibilities.  **UNIT-III**  **Strategic Management**: Corporate planning – Mission, Objectives, programmers, SWOT analysis – Strategy formulation and implementation.  **Marketing Management**: Functions of Marketing- Marketing Mix -Marketing Strategies based on Product Life Cycle-Channels of distribution.  **UNIT-IV**  **Production and Operations management**: Plant Location and Plant Layout concepts- methods of production (Job, Batch & Mass)-Production Planning and control. Work study- Basic procedure involved in Method Study -Work Measurement.  **UNIT-V**  **Materials Management:** Objectives -Need for Inventory Control- EOQ, ABC Analysis- VED Analysis- Purchase procedure and stores Management  **UNIT-VI**  **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). | |
| **Text Books & Reference Books** | **TEXT BOOKS:**  1.Applied management Science and Operations Research by Dr. T.P. Singh, Er. Arvind Kumar  2.Management Science by A.R.Aryasri  3.Industrial Engineering and Management by O.P.Kanna  **REFERENCE BOOKS:**  1.Business organizations and management by C.B.Gupta  2.Industrial Engineering and Management (Including Production Management) by T.R.Banga, S.C.Sharma | |