OPRM639:OPERATIONS MANAGEMENT AND RESEARCH-I

L:2 T:1 P:0 Credits:2

Course Outcomes: Through this course students should be able to

CO1 :: develop the skills to get familiarity with how to optimally utilize the resources

CO2 :: apply optimization techniques to solve real-life problems of organizations

CO3 :: analyze the various location avenues for selecting the appropriate location for production.

CO4 :: select suitable methodologies for enhancing the productivity of operations

CO5 :: formulate a suitable policy for improving the quality of manufacturing operations in organizations

CO6 :: employ the suitable tools for improving delivery systems for an organization with emerging trends

Unit I

Introduction to operations management : introduction and scope of operation management, concept of production, transformation process, Contemporary IT- enabled manufacturing operations

Demand Forecasting : introduction, features, elements of forecasting, qualitative and quantitative techniques

Unit II

Process selection and facility layout : introduction, facility layout, line balancing, product and service profiling, process types

Product design : concept, phases of product design and development, sustainability in product design, additional aspects of product design

Unit III

Location planning and analysis : factors that affect location decisions, need and nature of location decisions, evaluating location alternatives

Unit IV

Management of quality : the cost of quality, quality tools, total quality management, defining quality-dimensions of quality

Quality control : inspection, control charts for attributes, control charts for variables

Unit V

Inventory management : quantity discounts, inventory counting systems and inventory costs, economic production quantity, EOQ model, nature and importance of inventories, Simple EOQ model, inventory management techniques

Unit VI

JIT and lean operations : goals and building blocks of lean systems

Supply chain management : requirements and steps for creating an effective supply chain, need, logistics and reverse logistics, elements and benefit of effective SCM, supply chain visibility, Basics of e-commerce

Text Books:

1. OPERATIONS MANAGEMENT by WILLIAM J STEVENSON, MCGRAW HILL EDUCATION

References:

1. OPERATIONS MANAGEMENT by NORMAN GAITHER, GREGORY FRAZIER, CENGAGE LEARNING