

OPERATIONS MANAGEMENT

CREDITS :	3
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OBJECTIVE:

- To provide a broad introduction to the field of operations management and explain the concepts, strategies, tools and techniques for managing the transformation process that can lead to competitive advantage.

UNIT I INTRODUCTION TO OPERATIONS MANAGEMENT 9

Operations Management – Nature, Importance, historical development, transformation processes, differences between services and goods, a system perspective, functions, challenges, current priorities, recent trends. Operations Strategy – Strategic fit, framework. Productivity; World-class manufacturing practices

UNIT II OPERATIONS AND THE VALUE CHAIN 9

Capacity Planning – Long range, Types, Developing capacity alternatives, tools for capacity planning. Facility Location – Theories, Steps in Selection, Location Models. Sourcing and procurement - Strategic sourcing, make or buy decision, procurement process, managing vendors.

UNIT III DESIGNING OPERATIONS 9

Product Design - Criteria, Approaches. Product development process - stage-gate approach - tools for efficient development. Process - design, strategy, types, analysis. Facility Layout – Principles, Types, Planning tools and techniques.

UNIT IV PLANNING AND CONTROL OF OPERATIONS 9

Demand Forecasting – Need, Types, OBJECTIVE and Steps - Overview of Qualitative and Quantitative methods. Operations planning - Resource planning - Inventory Planning and Control. Operations Scheduling - Theory of constraints - bottlenecks, capacity constrained resources, synchronous manufacturing

UNIT V QUALITY MANAGEMENT 9

Definitions of quality, The Quality revolution, quality gurus; TQM philosophies; Quality management tools, certification and awards. Lean Management - philosophy, elements of JIT manufacturing, continuous improvement. Six sigma.

TOTAL: 45 PERIODS

OUTCOMES:

- Understanding of the evolution of operations management practices and world class manufacturing processes
- Knowledge about capacity planning, strategic sourcing and procurement in organizations
- Enhances the understanding of product development and design process
- Ability to forecast demand and overcome bottlenecks
- Provides insight to Quality management tools and practices.

REFERENCES:

1. Richard B. Chase, Ravi Shankar, F. Robert Jacobs, Operations and Supply Chain Management, McGraw Hill Education (India) Pvt. Ltd, 14th Edition, 2014.
2. Mahadevan B, Operations management: Theory and practice. Pearson Education India; 2015.
3. William J Stevenson, Operations Management, Tata McGraw Hill, 9th Edition, 2009.
4. Russel and Taylor, Operations Management, Wiley, 5th Edition, 2006.
5. Norman Gaither and Gregory Frazier, Operations Management, South Western Cengage Learning, 2002.
6. Cecil C. Bozarth, Robert B. Handfield, Introduction to Operations and Supply Chain Management, Pearson, 4th Edition, 2016.
7. Panneerselvam. R, Production and Operations Management, 3rd Edition, PHI Learning, 2012.