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| <b>Title: Production and Operation Management</b> | <b>Code: MGMT 355</b>        |                 |
| <b>Credit Hours: 3</b>                            | <b>Year /Semester: III/V</b> | <b>48 Hours</b> |

**Course Objectives:**

This course aims to acquaint students with current operations management practices and research results and with the core concepts, tools, models and managerial considerations used in making operations management decisions.

**Unit 1 Introduction to Production and Operation Management 7 Hours**

Concept of production and operation Management, Function of Production and Operation Management, Goods and services; Meaning and Factors Affecting Productivity, Productivity Measurement, Productivity in Service Sector

**Unit 2 Analysis of Location and Layout 7 Hours**

Concept of location Decisions Advantages of Good Location, Factors Affecting Location Decision, Meaning of Layout, Types of Layout, Layout for Different Setup: Fixed position, Process oriented, Office Layout, Retail layout, Restaurant, Factors Affecting Layout, Behavioral Factors in Layout

Layout Strategy in Service and Manufacturing, Qualitative and Quantitative Methods of Determination of Location

**Unit 3 Capacity Planning 6 Hours**

Concept of capacity, Determinants of Capacity, Types of capacity

**Unit 4 Production Planning and Control 9 Hours**

Concept of Production Planning and Control, Objectives of Production Planning and Control, Tools and Techniques of Production Planning and Control: Aggregate Planning, Master Scheduling, Material Requirement Planning, Concept of Loading and Scheduling

**Unit 5 Inventory Management 6 Hours**

Inventory costs, independent vs. dependent demand, inventory systems, basic model types, EOQ models

**Unit 6 Maintenance and Reliability Management 7 Hours**

Concept of maintenance and reliability management, Types of Machinery and Equipment, Breakdown of Machinery and Parts, Repair and Maintenance Policies

**Unit 6 Quality Management 6 Hours**

Quality: Management and Control, TQM in Manufacturing and Services, International Quality Standards, Fundamental Tools of TQM, Statistical Quality Control: Meaning and Basic Application

**Reference Books:**

1. Chase, Richard B. and Nicholas J. Aquilano: *Production and Operations Management: A life cycle approach*, Irwin.
2. Adam, Everett E. Jr and Ronald J. Ebert: *Production and Operations Management*, Prentice Hall of India.