

# GUJARAT TECHNOLOGICAL UNIVERSITY

## B.E. SEMESTER : VIII

### PRODUCTION ENGINEERING

Subject Name: **RECENT ADVANCES IN MANUFACTURING**

Sr. No.	Course Contents	Total Hrs
1.	<b>Enterprise Resource Planning</b> Role of management information system, MIS & Production/ operation system, Decision making information system, Information value & measuring the information value, Assessing information needs Identification & development of information sources, design & development of information flow network. Different ERP modules and their Implementation procedures, Role of ERP in productivity improvement, ERP for different types of manufacturing systems, Software and Hardware need for ERP implementation.	20
2.	<b>Logistic and Supply Chain Management</b> Role of supply chain, Different models of supply chain management, Optimization of transport Network, Zero inventories, E-manufacturing, E-commerce.	10
3.	<b>Japanese Manufacturing Systems</b> Japanese approach for productivity improvement; Concepts like JIT, KANBAN systems, KAIZEN Philosophy, Manufacturing Improvement techniques such as SMED, POKAYOKE, JIDOKA, TPS, 5S.	12
4.	<b>Value Analysis and Value Engineering</b> Introduction, Concept of value analysis, Definition of value analysis, Objectives of value analysis, Difference between value analysis and value engineering, When to apply value analysis, Stages in value analysis, Techniques of value analysis and value engineering, Un-necessary costs, Test for value analysis, Advantages of value analysis	08

#### Reference Books:

1. Enterprise resource Planning: Concepts and Practice By Garg & Venkitakrishnan
2. ERPWARE- ERP Implementation Framework BY Garg & Venkitakrishnan
3. Logistics & Supply Chain Management By Christopher
4. Logistics Engineering & Management By Blanchard
5. Frontiers of E- Commerce By Kalakota
6. Electronic Commerce- A Manager's Guide BY Kalakota
7. Design and Manufacturing By Surender Kumar
8. Kaizen- The Key to Japanese Success By Masaki Imai
9. Japanese Manufacturing Systems By R.J. Schonberger(Ref.)
10. Toyota Production System By Ohno Taiichi