

LESSON PLAN

Subject Name – Manufacturing System Models	Branch – Production Engineering
Subject Code – MPEMS101	Semester – 1st

Sl no.	Module	Topic(s)	Period/Hours
1.	I	Fundamentals of Systems: Basic concepts of systems and chaos,	1
2.	I	Definition of systems, basic problems concerning systems, systems design	2
3.	I	decision making Procedures	3
4.	I	Fundamentals of Manufacturing Systems: Structural aspects of Manufacturing systems	4-5
5.	I	transformational aspect of manufacturing systems, Integrated Manufacturing Systems (IMS)	6
6.	II	Types of Production, Mass Production,	7
7.	II	Multi-product, small batch production, production diversification.	8
8.	II	Integrated Manufacturing and Management systems	9
9.	II	Basic functions and structures of management systems.	10
10.	III	Basic framework of integrated Manufacturing Management Systems	11
11.	III	Framework of an Integrated Manufacturing System	12
12.	III	Material & Technological information flows in Manufacturing Systems	13-14
13.	III	Logistic Systems, Material flow, Technological information flow	15
14.	III	Tutorial	16
15.	IV	Product Planning, Product Design. Process Planning & Design: Process Design, Operation Design	17-20
16.	IV	Optimum Routing Analysis, Line balancing, Layout Planning & Design: Scope & Problems of layout planning, Systematic layout Planning (SLP)	21-23
17.	IV	Production Flow Analysis	24-26
18.	IV	Logistic Planning & Design	27
19.	IV	Transportation Problems, Distribution Problems	28-29
20.	IV	Optimization of single stage Manufacturing, Optimization of Multi-stage Manufacturing Systems.	30
21.	V	Managerial information Flow, Decision Problems in Managerial Information Flow.	31-33
22.	V	Aggregate Production Planning	34-35
23.	V	Material Requirements Planning (MRP) & Machine Loading	36
24.	V	Production Forecasting Production Scheduling	37
25.	V	Project Scheduling-PERT & CPM	38-39
26.	V	Tutorial	40