

LESSON PLAN FOR ACADEMIC SESSION 2026-27 (Winter)

Discipline: Mechanical Engg.	Semester: 5th	Name of the Teaching Faculty: DINESH KUMAR SAHU Designation: Lecturer S-1
Subject: Production and Operation Management Th:3(B)	No. of days/week class allotted: 03	Semester From: 01.07.2026 to 05.11.2026 No. of weeks: 15
Week	Class Day	Theory/Practical Topics
1 ST	1 st	Syllabus discussion
	2 nd	Process Planning and Process Engineering: Process Planning: Introduction, Function, Pre-requisites and steps in process planning
	3 rd	Factors affecting process planning, Make or buy decision, plant capacity and machine capacity.
2 ND	1 st	Process Engineering: Preliminary Part Print Analysis:
	2 nd	Introduction, Establishing the General Characteristics of work piece, determining the principal Process
	3 rd	Functional surfaces of the work piece, Nature of the work to be Performed, Finishing and identifying operations.
3 RD	1 st	Dimensional Analysis: Introduction, types of dimensions, measuring the Geometry of form
	2 nd	Baselines, Direction of specific dimensions
	3 rd	Tolerance Analysis: Causes of work piece variation,
4 TH	1 st	Terms used in work piece dimensions, Tolerance stacks
	2 nd	Work piece Control: Introduction, Equilibrium Theories,
	3 rd	Concept of location, Geometric Control,
5 TH	1 st	Dimensional control, Mechanical control.
	2 nd	CLASS TEST
	3 rd	Production Forecasting: Introduction of production forecasting
6 TH	1 st	The strategic role of forecasting in supply chain,
	2 nd	Time frame, Demand behavior
	3 rd	Forecasting methods- Qualitative and Quantitative, Forecast accuracy
7 TH	1 st	Scheduling: Introduction, Objectives in scheduling
	2 nd	Loading, Sequencing, Monitoring,
	3 rd	Advanced Planning and Scheduling Systems
8 TH	1 st	Theory of Constraints, Employee scheduling.
	2 nd	Break-Even Analysis: Introduction, Break-even analysis charts
	3 rd	Break-even analysis for process, plant and equipment selection
9 th	1 st	Aggregate Operations Planning:
	2 nd	Aggregate production planning, Adjusting capacity to meet the

	3 rd	Demand management
10 TH	1 st	Hierarchical and collaborative planning
	2 nd	Aggregate planning for services.
	3 rd	CLASS TEST
11 TH	1 st	Assembly Line Balancing: Assembly lines, Assembly line balancing
	2 nd	Splitting tasks
	3 rd	Flexible and U-shaped line layouts,
12 th	1 st	Mixed model line balancing,
	2 nd	Current thoughts on assembly lines
	3 rd	Computerized assembly line balancing.
13 TH	1 ST	Material Management:;
	2 ND	Introduction,
	3 rd	Importance and objectives,;
14 th	1 st	Purchasing and Stores
	2 nd	policies and procedures
	3 rd	Vendor development
15 th	1 st	Selection
	2 nd	Analysis and rating.
	3 rd	REVISION
TOTAL NO. OF CLASSES=45		

Prepared By:

Checked by

Approved by


 20/06/26
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