



IIPM SCHOOL OF ENGINEERING AND TECHNOLOGY
LESSON PLAN: SUMMER 2022
INDUSTRIAL ENGINEERING & MANAGEMENT

Branch : Mechanical
Semester : 6th

- Duration** : 60
Faculty name : Saritprava Sahoo
Objective : Main objective of Mechanical Engineering is to produce goods and services for benefit to mankind. Such productions are done utilizing various resources like Men, Materials, machines and Money. Industrial engineering and quality control is the subject which allows optimized use of such resources and hence very important for a mechanical engineer.
- Learning Outcome** : Understanding effectiveness of
- ✓ *New plant set up and systematic arrangement of machinery and shop for smooth production.*
 - ✓ *Improving productivity of the lands, buildings, people, material, machines, money, methods and management effectively.*
 - ✓ *Stock management and maintenance to reduce plant ideal time.*
 - ✓ *Use the charts to record the quality of products.*
 - ✓ *Eliminate unproductive activities under the control of the management, supervisor, worker and the design of products and processes.*

Sl. No	Chapter	Proposed Week for Teaching	Period No.	Subject Name	Important Teaching Points	Content Source			
1	I	1 st	1	PLANT ENGINEERING	➤ Introduction of Industrial Engineering & Management	Industrial Engineering & Management O.P.KHANNA			
2			2		➤ Selection of Site of Industry. ➤ Define plant layout.				
3			3		➤ Describe the objective and ➤ Principles of plant layout.				
4			4		➤ Explain Process Layout, ➤ Product Layout.				
5		2 nd	1		➤ Combination Layout.				
6			2		➤ Techniques to improve layout.				
7			3		➤ Principles of material handling equipment.				
8			4		➤ Plant maintenance. Importance of plant maintenance.				
9		II	3 rd		1		OPERATIONS RESEARCH	➤ Break down maintenance. ➤ Preventive maintenance. ➤ Scheduled maintenance.	Industrial Engineering & Management O.P.KHANNA
10					2			➤ Introduction to Operations Research and its applications. ➤ Define Linear Programming Problem	
11	4 th		3	➤ Solution of L.P.P. by graphical method. ➤ Critical Path					
12			4	➤ Evaluation of Project completion time by Critical Path ➤ Method and PERT					
13			1	➤ (Simple problems) ➤ Explain distinct features of PERT with respect to CPM.					
14			2	➤ ASSIGNMENT					
15	5 th		3	➤ CLASS TEST					
16			4						
17			1						
18			2						
19		3							
20	4								

21	III	6 th	1	INVENTORY CONTROL	➤ Introduction of Inventory	Industrial Engineering & Management O.P.KHANNA	
22			2		➤ Classification of Inventory		
23			3		➤ Objective of inventory control.		
24			4		➤ Describe the functions of Inventories.		
25		7 th	1		Benefits of inventory control.		
26			2		Costs associated with inventory.		
27			3		Terminology in inventory control		
28			4		Explain and Derive economic order quantity for Basic model.		
29		8 th	1		Solve numerical		
30			2		Define and Explain ABC analysis		
31			3		➤ ASSIGNMENT		
32			4		➤ CLASS TEST		
33	IV	9 th	1	INSPECTION AND QUALITY CONTROL	➤ Define Inspection and Quality control.	Industrial Engineering & Management O.P.KHANNA	
34			2		➤ Describe planning of inspection.		
35			3		➤ Describe types of inspection.		
36			4		➤ Advantages and disadvantages of quality control.		
37			10 th		1		➤ Study of factors influencing the quality of manufacture.
38					2		➤ Explain the Concept of statistical quality control, Control charts (X, R, P and C - charts).
39					3		➤ Methods of attributes.
40					4		➤ Concept of ISO 9001-2008.
41			11 th		1		➤ Quality management system, Registration /certification procedure.
42					2		➤ Benefits of ISO to the organization.
43					3		➤ JIT, Six sigma,
44					4		➤ 7S, Lean manufacturing
45		12 th	1	➤ Solve related problems.			
46			2	➤ ASSIGNMENT			
47			3	➤ CLASS TEST			
48			4	➤ Introduction			
49	V	13 th	1	PRODUCTION PLANNING AND CONTROL	➤ Major functions of production planning and control	Industrial Engineering & Management O.P.KHANNA	
50			2		➤ Methods of forecasting		
51			3		➤ Routing		
52			4		➤ Scheduling		
53			14 th		1		➤ Dispatching
54					2		➤ Controlling
55					3		➤ Types of production
56					4		➤ Mass production
			1	➤ Batch production			
			2	➤ Job order production			
			3	➤ Principles of product and process planning.			
			4	➤ ASSIGNMENT			
			4	➤ CLASS TEST			

Text book suggested :

- Industrial Engineering & Management
- Industrial Engg & Production Management

O.P.KHANNA Dhanpat Rai & Sons
MARTAND TELSANG S.Chand

Signature of Faculty Member

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Principal/ Director