

Lesson Plan

Subject: Engineering Mechanics (Code) TH-4 Name of faculty: Satyabrata Khillar
 Semester: 2nd (Class allotted) 4 P/W (50%) Branch: Civil, Electrical & Metallurgy
 Session: 2022-23

Discipline	Semester	From Date:	To date:	Teaching Aid
Subject:	No. of days/per week	Theory / Practical-topics / Lesson		
Week	Date/Period			
1	20.03.23 20.03.23	Fundamentals - Definition of mechanics		White board & Marker
	to	Statics, Dynamics force system - Definition, clarification, characteristics, Transmissibility Superposition.		
	25.03.23			
2	27.03.23	Concept of FBD Resolution of force		White board & Marker
	to	-: Defn, Method, Types of Component of force. Composition of forces - Defn, Resultant law of Parallelogram & Resolution		
	31.03.23			
3	03.04.23 03.04.23	Graphical method → Introduction, Space diag, vector diag, Polygon law		Whiteboard & Marker
	to	Resultant of Concurrent, Non Concurrent, Parallel force system by Analytical & Graphical method.		
	08.04.23			
4	10.04.23	Moment of force → Defn, Meaning		Whiteboard & Marker
	to	Clarification, law of moments. Varignon's theorem, Properties of Couple.		
	15.04.23	Eq ^m defn, Condition. Analytical & Graphical Representation.		
5	17.04.23	Lami's theorem → Statement		White board & Marker
	to	Application for solving engineering problem.		
	22.04.23	Friction → Definition, Frictional force.		
6	24.04.23	Limiting of frictional force,		White board & Marker
	to	Coefficient of angle of frictions		
	29.04.23	Repose. Law of friction, Advantage & disadvantages of friction. - Eq ^m of bodies on level plane.		
7	01.05.23	• Force applied on horizontal		Whiteboard & Marker
	to	"		
	06.05.23	• Inclined Plane (up & down)		

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8	08-05-23	• Ladder	White board & Marker
	to	• Wedge friction	
	13-05-23	• Centroid → Definition Moment of Inertia about any axis	
9	15-05-23	Centroid of square, rectangle, Triangle, Circle,	White board & Marker
	to	Semi Circle, Quarter circle,	
	20-05-23	Centroid of Composite figures.	
10	22-05-23	Moment of Inertia → Definition	White board & marker
	to	Parallel axes theorem	
	27-05-23	Perpendicular axis theorem.	
11		MOI of Plane lamina	White board & Marker
	29-05-23	Different engineering sections	
	to	Problems of MOI	
12		Simple Mechanics, Velocity	White board & Marker
	05-06-23	Ratio of Simple gear, Compound gear, Define M.A.	
	to	VR & efficiency & relation between them.	
13	12-06-23	State law of machine & Reversibility	White board & Marker
	to	Self locking machine, Simple and	
	17-06-23	Single Purchase Crab winch & double Purchase Crab winch → Worms Worm wheel, screw jack.	
14	19-06-23	Types of hoisting machine, line, derrick, their use & working	White board & Marker
	to	Principle. (No Problem)	
		→ Dynamics, Kinematics & Kinetics. Principle of dynamical, Newton's law.	
15	26-06-23	Eqn of motion, De-Alembert's Principle work, Power, energy & Application.	White board & Marker
	to	→ Kinetics & Potential energy, Momentum & Impulse, Conservation of energy	
	27-06-23	→ Linear momentum, Collision of bodies.	



Signature of HOD

S. Khatun

Signature of Faculty