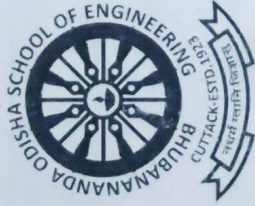


BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF MECHANICAL ENGINEERING



LESSON PLAN

SUBJECT: ENGINEERING MECHANICS(TH-4)

FACULTY: PRIYADARSINI MALLICK

Priyadarsini Mallik

ACADEMIC SESSION: 2022-23

SEMESTER: 2ND

SECTION-D

[Signature]
Sd/-

H O D (Mechanical Engg.)

BHUBANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF MECHANICAL ENGINEERING
LESSON PLAN

B

Discipline- Mechanical Engg	Semester :- 2 nd		Name of the teaching faculty :- Priyadarsini Mallick
Subject- ENGG MECHANICS	No of periods Allotted per Week- 04 (Monday Wednesday Thursday Friday)		Semester from Date - 20/03/2023 To Date - 22/06/2023 No. of Weeks: 15
Week	Class	No Of Periods available	Theory Topics
1st	20/03/2023	1	1.1 Fundamentals, Definitions of Mechanics, Statics, Dynamics, Rigid Bodies,
	22/03/2023	1	1.2 .1 Force- Force System. Definition, Classification of force system according to plane & line of action. Characteristics of Force & effect of Force.
	23/03/2023	1	1.2.2 Principles of Transmissibility & Principles of Superposition
	24/03/2023	1	1.2.3 Action & Reaction Forces & concept of Free Body Diagram.
2nd	27/03/2023	1	1.3 Resolution of a Force. Definition, Method of Resolution, Types of Component forces, Perpendicular components & non-perpendicular components.
	29/03/2023	1	1.4.1 Composition of Forces. Definition, Resultant Force, Method of composition of forces,
	31/03/2023	1	1.4.2 Analytical Method such as Law of Parallelogram of forces & method of resolution,, Polygon law of forces.
3rd	03/04/2023	1	1.4.3 Resultant of concurrent, non-concurrent & parallel force system by Analytical & Graphical Method.
	05/04/2023	1	1.5.1 Moment of Force. Definition, Geometrical meaning of moment of a force, Measurement of moment of a force & its S.I units.
	06/04/2023	1	1.5.2 Classification of moments according to direction of rotation, sign convention, Law of moments

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4th	10/04/2023	1	1.5.3 Varignon's Theorem,
	12/04/2023	1	1.5.4 Couple – Definition, S.I. units, measurement of couple, properties of couple
	13/04/2023	1	Question Discussion On ch-1.5
5th	17/04/2023	1	2.1 .1Definition, condition of equilibrium, Analytical conditions of equilibrium for concurrent, non-concurrent
	19/04/2023	1	2.1.2Graphical conditions of equilibrium for concurrent
	20/04/2023	1	2.1.2Graphical conditions of equilibrium for non-concurrent
	21/04/2021	1	Free Body Diagram
6th	24/04/2023	1	Problems on Equilibrium
	26/04/2023	1	2.2 Lamia's Theorem – Statement,
	27/04/2023	1	Application of Lami's Theorem for solving various engineering problems
	28/04/2023	1	Problems on ch-2.2
7th	01/05/2023	1	3.1.1 Definition of friction, Frictional forces, Limiting frictional force, Coefficient of Friction.
	03/05/2023	1	3.1.2Angle of Friction & Repose, Laws of Friction, Advantages & Disadvantages of Friction
	04/05/2023	1	Problems on ch-3.1.1 & 3.1.2
8th	09/05/2023	1	3.2 .1Equilibrium of bodies on level plane – Force applied on horizontal plane
	11/05/2023	1	Problems on ch-3.2.1
	12/05/2023	1	3.2.2 Equilibrium of bodies on level plane – Force applied on inclined plane (up)

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	13/05/2023	1	3.2.3 Equilibrium of bodies on level plane – Force applied on inclined plane (down)
9 TH	15/05/2023	1	Problems on chapter 3.2.2 & 3.2.3
	17/05/2023	1	3.3 Ladder, Wedge Friction
	18/05/2023	1	4.1 .1Centroid – Definition, Moment of an area about an axis, centroid of geometrical figures such as squares, rectangles, triangles, circles, semicircles & quarter circles
10 th	22/05/2023	1	4.1.2 Centroid of composite figures.
	24/05/2023	1	4.2 .1Moment of Inertia – Definition, Parallel axis Theorem
	25/05/2023	1	Problems on 4.2.1
	26/05/2023	1	4.2.2Perpendicular axis theorem
	29/05/2023	1	4.2.3 Moment of Inertia of plane lamina Problems on Chapter- 4.2.2 and 4.2.3
11 th			4.2.4 Moment of Inertia of different engineering section
			Problems on 4.2.4
	31/05/2023	1	5.1.1 Definition of simple machine, velocity ratio of simple and compound gear train, explain simple & compound lifting machine,
	01/06/2023	1	5.1.2Define M.A, V.R. & Efficiency & State the relation between them,
	02/06/2023	1	5.1.2.1 State Law of Machine, Reversibility of Machine, Self Locking Machine.
12 TH	05/06/2023	1	5.2.1 Study of simple machines - simple axle & wheel, single purchase crab winch & double purchase crab winch,
	07/06/2023	1	.5.2.2Study of machines -Worm & Worm Wheel, Screw Jack

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			5.3 Types of hoisting machine like derricks etc, Their use and working principle.
	08/06/2023	1	6.1.1 Kinematics & Kinetics, Principles of Dynamics, Newton's Laws of Motion,
	09/06/2023	1	6.1.2 Motion of Particle acted upon by a constant force,
13 TH	12/06/2023	1	6.1 .3 De Alembert's Principle
	16/06/2023	1	6.2 Work, Power, Energy & its Engineering Applications, Kinetic & Potential energy & its application.
14 TH	19/06/2023	1	6.3.1 Momentum & impulse, conservation of energy & linear momentum
	21/06/2023	1	6.3.2 collision of elastic bodies, and Coefficient of Restitution.
	22/06/2023	1	CLASS TEST
	23/06/2023	1	REVISION
15 TH	26/06/2023	1	REVISION