GOVERNMENT POLYTECHNIC, MALKANGIRI
DEPARTMENT OF MECHANICAL ENGINEERING

LESSON PLAN

Discipline: EE 2, EEE	Semester: 2nd	Name of the Teaching Faculty: Shantanu Kumar Maity	
Subject: Engineering Mechanics Lab	No. of days/week class allotted 2	Semester From date: 04.02.2025 No. of Week: 15	To date:17.05.2025
Course Outcomes		CO1: Analyzing different simple machines to find out different influencing parameters viz. Mechanical Advantage, Velocity Ratio and Efficiency. CO2: Understanding the phenomena of friction in different condition and make analysis through experiment to find out coefficient of friction CO3: Determining resultant of various force systems and analyse the equilibrium of a rigid body by Lamis theorem CO4: Analysing support reactions of different types of beam CO5: Determining Centroid of geometrical plane figures	

Week	Class/Day	Theory/Practical Topics
1st	1st	To study various equipments related to Engineering Mechanics
	2nd	To study various equipments related to Engineering Mechanics
2nd	1st	To find the M.A., V.R., Efficiency and law of machine for Differential Axle and Wheel.
	2nd	To find the M.A., V.R., Efficiency and law of machine for Differential Axle and Wheel.
3rd	1st	To find the M.A., V.R., Efficiency and law of machine for Simple Screw Jack
	2nd	To find the M.A., V.R., Efficiency and law of machine for Simple Screw Jack
4th	1st	Derive Law of machine using Worm and worm wheel.
	2nd	Derive Law of machine using Worm and worm wheel.
5th	1st	Derive Law of machine using Single purchase crab.
	2nd	Derive Law of machine using Single purchase crab.
6th	1st	Derive Law of machine using double purchase crab
	2nd	Derive Law of machine using double purchase crab
7th	1st	Derive Law of machine using Weston's differential or wormed geared pulley block.
	2nd	Derive Law of machine using Weston's differential or wormed geared pulley block.
8th	1st	Determine resultant of concurrent force system applying Law of Polygon of forces using force table

	2nd	Determine resultant of concurrent force system applying Law of Polygon of forces using force table
9th	1st	Determine resultant of concurrent force system graphically
	2nd	Determine resultant of concurrent force system graphically
10th	1st	Determine resultant of parallel force system graphically.
	2nd	Determine resultant of parallel force system graphically.
11th	1st	Verify Lami's theorem.
	2nd	Verify Lami's theorem.
12th	1st	Study forces in various members of Jib crane
	2nd	Study forces in various members of Jib crane
13th	1st	Determine support reactions for simply supported beam
	2nd	Determine support reactions for simply supported beam
14th	1st	Obtain support reactions of beam using graphical method
	2nd	Obtain support reactions of beam using graphical method
15th	1st	Determine coefficient of friction for motion on horizontal and inclined plane.
	2nd	Determine centroid of geometrical plane figures.

Learning Resources:

Prof. Bhankhar Bharat Gokaldas,	Engineering Mechanics
D.S. Bedi,	Engineering Mechanics (Khanna Publications)
Khurmi, R.S.,	Applied Mechanics(S. Chand & Co)
Bansal R K,	A text book of Engineering Mechanics,(Laxmi Pub)

Shantanu Kumar Maity

Signature of Faculty

03/02/5

Signature of HOD/

06/02/2025

Signature of Academic Coordinator

18/02/25

Signature of Principal