LESSON PLAN

ON

ENGINEERING PHYSICS

(PRACTICAL)

1ST SEMESTER

SESSION: 2022-23

PREPARED BY

PRAJNA PRIYADRASHINEE ROUT

LECTURER IN PHYSICS

GOVERNMENT POLYTECHNIC, PURI

GOVERNMENT POLYTECHNIC, PURIDEPARTMENTOFMECHANICALENGINEERING

Discipline: ELECTRICAL ENGG.	Semester: 1ST	Name of the Teaching Faculty: Prajna P. Rout, Lect. In Physics
Subject: **Engg. Physics Lab (Pr.2a.)**	No. of days per week class allotted:**04**	Semester From date: 25.10.2022 To Date: 31.01.2023 No.of Weeks:**14**
PRE-REQUISITE	Basic knowledge on Experiments on Optics, Magnetism and measuring instruments.	
COURSE OUTCOMES	**CO1: Get the knowledge on calculation of LC of various measuring instruments.** **CO2: Know the idea of measuring small thickness, diameter, and radius of curvature of a curved surface.** **CO3: Get the idea on refraction of light.** **CO4: Get the knowledge on magnetic field and magnetic lines of force.**	

Week	Class Day	Theory/Practical Topics	DELIVERY METHOD
1ST	1ST 2ND	Expt. 1: To find the cross sectional area of a wire using a screw gauge. ➢ **Demonstration**	Whiteboard
	3RD 4TH	➢ **Experimentation by students** ➢ **Observation: Data collection by students**	Whiteboard
2ND	1ST 2ND	➢ **Experimentation by students** ➢ **Observation: Data collection by students**	Whiteboard
	3RD 4TH	➢ **Calculation** ➢ **Record writing**	
3RD	1ST 2ND	Expt. 2: To find the thickness and volume of a glass piece using a screw gauge ➢ **Demonstration** ➢ **Experimentation by students** **Observation: Data collection by students**	Whiteboard
	3RD 4TH	➢ **Calculation** ➢ **Record writing and record checking**	Whiteboard
4TH	1ST 2ND	Expt. 3: To find the volume of solid cylinder using a Vernier Calipers ➢ **Demonstration**	Whiteboard
	3RD 4TH	➢ **Experimentation by students** **Observation: Data collection by students**	Whiteboard
5TH	1ST 2ND	➢ **Calculation** **Record writing and record checking**	Whiteboard
	3RD 4TH	Expt. 4: To find the volume of solid cylinder using a Vernier Calipers ➢ **Demonstration**	Whiteboard
6TH	1ST 2ND	➢ **Experimentation by students** **Observation: Data collection by students**	Whiteboard
	3RD 4TH	➢ **Calculation** ➢ **Record writing and record checking**	Whiteboard
7TH	1ST 2ND	Expt. 5: To determine the radius of curvature of convex surface using spherometer ➢ **Demonstration**	Whiteboard

	3RD 4TH	➢ **Experimentation by students** ➢ **Observation: Data collection by students**	Whiteboard
8TH	1ST 2ND	➢ **Calculation** ➢ **Record writing and record checking**	Whiteboard
	3RD 4TH	Expt. 6: To determine the radius of curvature of convex surface using spherometer ➢ **Demonstration**	Whiteboard
9TH	1ST 2ND	➢ **Experimentation by students**	Whiteboard
	3RD 4TH	➢ **Record writing and record checking**	Whiteboard
10TH	1ST 2ND	Expt. 7: To Determine the angle of Prism ➢ **Demonstration**	Whiteboard
	3RD 4TH	➢ **Experimentation by students**	Whiteboard
11TH	1ST 2ND	➢ **Record writing and record checking**	Whiteboard
	3RD 4TH	Expt. 8 : To determine the angle of minimum deviation by I-D curve method. ➢ **Demonstration** ➢ **Concept of Refraction through Prism**	Whiteboard
12TH	1st & 2nd	➢ **Experimentation by student**	Whiteboard
	3RD 4TH	➢ **Observation: Data collection by students** ➢ **Record writing and record checking**	Whiteboard
13TH	1ST 2ND	Expt. 9 : To trace the magnetic lines of force due to a bar magnet with north pole pointing towards geographic north and to locate its neutral points. ➢ **Demonstration**	Whiteboard
	3RD 4TH	➢ **Experimentation by students** ➢ **Calculation** ➢ **Record writing and record checking**	Whiteboard
14TH	1ST 2ND	Expt. 10 : To trace the magnetic lines of force due to a bar magnet with north pole pointing towards geographic south and to locate its neutral points. ➢ **Demonstration**	Whiteboard
	3RD 4TH	➢ **Experimentation by students** ➢ **Calculation** ➢ **Record writing and record checking**	

LEARNINGRESOUCES:

1. E-learning material on engineering physics practical of 1st /2nd semester of all engineering branches. Contents Written by Ms. Babita Padhi, Lecturer in Physics, JES, Jharsuguda, Dr. A. N. Arpita Aparajita, Lecturer in Physics, GP, Bhadrak, Ms. Renu Ekka, Lecturer in Physics, GP, Deogarh

26/10/22 (P.P. Rout)

Signature of Concerned Faculty

26/10/22 (P.P. Rout)

Signature of HOD

Principal
G.P Puri