	GOVERNMENT POLYTECHNIC, PURIDEPARTMENTOFMECHANICALENGINEERING	
Discipline: CIVIL & ELECTRICAL ENGG.	Semester: **1ST**	Name of the Teaching Faculty: **Dr. Prajna Priyadarshinee Rout**, Lect. in Physics
Subject: **Engg. Physics Lab (Pr.2a.)**	No. of days/per week class allotted:**04**	Semester From date: 25.10.21 To Date: 31.01.22 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	To find the volume of solid cylinder using vernier calipers ➢ **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	To find the volume of hollow cylinder using vernier calipers ➢ **Demonstration** ➢ **Experimentation by students** **Observation: Data collection by students**	Whiteboard
	3RD 4TH	➢ **Calculation** ➢ **Record writing and record checking**	Whiteboard
4TH	1ST 2ND	To find the cross sectional area of a wire using screw gauge ➢ **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	To determine the radius of curvature of convex surface using spherometer. ➢ **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	To determine the radius of curvature of concave 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	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
9TH	1ST 2ND	➢ **Experimentation by students**	Whiteboard
	3RD 4TH	➢ **Record writing and record checking**	Whiteboard
10TH	1ST 2ND	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**	Whiteboard
11TH	1ST 2ND	➢ **Record writing and record checking**	Whiteboard
	3RD 4TH	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	To find the time period of a simple pendulum and determine the acceleration due to gravity. ➢ **Demonstration**	Whiteboard
	3RD 4TH	➢ **Experimentation by students**	Whiteboard
14TH	1ST 2ND	➢ **Calculation** ➢ **Record writing and record checking**	Whiteboard
	3RD 4TH	**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

25/1/21

Signature of Faculty concerned

25/1/21

Signature of HOD i/c

Principal
G.P Puri