

**GOVERNMENT POLYTECHNIC,
KENDRAPARA
DEPARTMENT OF HUMANITIES & SCIENCE**

**LESSON PLAN
APPLIED PHYSICS – II (PRACTICAL-2)
FOR
2ND SEMESTER
BRANCH: CIVIL, ELECTRICAL, ETC, MECHANICAL & CSE
(SESSION: 2025– 26)**

Prepared by
MANASWINEE PATNAIK
Lecturer (Stage-II) in PHYSICS
&
SUSHREE SANGITA BEHERA
GUEST FACULTY, PHYSICS



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Discipline:	Semester: 2ND COMMON	Name of the Teaching Faculty: MANASWINEE PATNAIK (Lecturer) SUSHREE SANGITA BEHERA (GF)	
Subject: APPLIED PHYSICS-II LAB (Pr-2)	No. of days/per week class allotted: 02	Semester From date: 09.01.2026 to Date: 08.05.2026 No. of Weeks: 15	
PRE-REQUISITES	Basic knowledge of Science and Mathematics.		
COURSE OUTCOMES	CO1	Determine the time period of a cantilever, studying the oscillatory motion & elasticity.	
	CO2	Verify the laws of reflection and refraction using mirrors, glass slabs.	
	CO3	Determine focal length and magnifying power of convex lenses for practical applications.	
	CO4	Verify Ohm's law & kirchhoff's law.	
	CO5	Convert a galvanometer into ammeter & voltmeter for electrical applications	
Week	Class Day	Practical Topics	DELIVERY METHOD
1ST	1ST	Introduction to syllabus	PPT
	2ND	To verify laws of reflection from a plane mirror / interface.	DEMOSTRATION
2ND	1ST	To verify laws of reflection from a plane mirror / interface.	DEMOSTRATION
	2ND	To verify laws of reflection from a plane mirror / interface	Record & Viva
3RD	1ST	To verify the laws of refraction(snell's law)using glass slab.	DEMOSTRATION
	2ND	To verify the laws of refraction(snell's law)using glass slab.	DEMOSTRATION
4TH	1ST	To verify the laws of refraction(snell's law)using glass slab	Record & Viva
	2ND	To determine focal length and magnifying power of a convex lens..	DEMOSTRATION
5TH	1ST	To determine focal length and magnifying power of a convex lens..	DEMOSTRATION
	2ND	To determine focal length and magnifying power of a convex lens..	Record & Viva
6TH	1ST	To verify Ohm's law by plotting graph between current and potential difference.	DEMOSTRATION
	2ND	To verify Ohm's law by plotting graph between current and potential difference.	DEMOSTRATION
7TH	1ST	To verify Ohm's law by plotting graph between current and potential difference..	Record & Viva
	2ND	To verify laws of resistances in series and parallel combination.	DEMOSTRATION
8TH	1ST	To verify laws of resistances in series and parallel combination.	DEMOSTRATION
	2ND	To verify laws of resistances in series and parallel combination.	Record & Viva

9TH	1ST	To draw V-I characteristics of a semiconductor diode (Ge, Si) and determine its knee voltage.	DEMOSTRATION
	2ND	To draw V-I characteristics of a semiconductor diode (Ge, Si) and determine its knee voltage..	DEMOSTRATION
10TH	1ST	To draw V-I characteristics of a semiconductor diode (Ge, Si) and determine its knee voltage..	Record & Viva
	2ND	To convert a galvanometer into an ammeter..	DEMOSTRATION
11TH	1ST	To convert a galvanometer into an ammeter.	DEMOSTRATION
	2ND	To convert a galvanometer into an ammeter.	Record & Viva
12TH	1ST	To convert a galvanometer into a voltmeter.	DEMOSTRATION
	2ND	To convert a galvanometer into a voltmeter.	DEMOSTRATION
13TH	1ST	To convert a galvanometer into a voltmeter.	Record & Viva
	2ND	To verify Kirchhoff's law using electric circuits.	DEMOSTRATION
14TH	1ST	To verify Kirchhoff's law using electric circuits.	DEMOSTRATION
	2ND	To verify Kirchhoff's law using electric circuits.	Record & Viva
15TH	1ST	Repeat Experiment/ Record Checking/ Viva/ Sessional Evaluation	Record & Viva
	2ND	Repeat Experiment/ Record Checking/ Viva/ Sessional Evaluation	Record & Viva

LEARNING RESOURCES:

1. Applied Physics-I by Prof. Vinod Kumar Yadav (Download from <https://ekumbh.aicteindia.org/dbook.php>),
2. Text Book of Physics for Class XI& XII(Part-I, Part-II); N.C.E.R.T., Delhi.
3. Comprehensive Practical Physics, Vol, I & II, JN Jaiswal, Laxmi Publications (P) Ltd., New Delhi
4. Practical Physics by C. L. Arora, S. Chand & Company Ltd
5. e-books/e-tools/ learning physics software/you Tube videos/ websites etc.

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