

# LESSON PLAN

SUB: ENGINEERING PHYSICS (PRACTICAL)

BRANCH:- MECHANICAL ENGG. & TEXTILE ENGG.

SEMESTER:1<sup>ST</sup>

NAME OF FACULTY: ASEEMA BARIK (PTGF-PHYSICS)



**GOVERNMENT POLYTECHNIC,  
BHADRAK**

Hod, Math&Sc

Academic Co-ordinator

Principal  
Govt. Polytechnic, Bhadrak

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**LESSON PLAN FOR WINTER SEMESTER – 2023**  
**Dept. of Math & Science, Govt. Polytechnic, Bhadrak**

Course Code: Pr-2a  
 Theory: Engg. Phy. Lab  
 Total Periods : 60  
 Examination: Winter(2023)  
 Sem: 1<sup>st</sup>

Sessional: 50  
 End Sem. Exam: 50  
 Total Mark :100  
 Class Start : 16.08.2023

<b>Discipline:</b> <i>Mechanical Textile</i>	<b>Semester:</b> 1 <sup>ST</sup> (2023)	<b>Name of the Teaching Faculty :</b> Aseema Barik, PTGF (PHY)
<b>Subject:</b> Engineering Physics Lab	<b>No. of Days/per week class allotted:</b> 04 classes	<b>Semester from date:</b> 16.08.2023 <b>To Date:</b> 11.12.2023  <b>No. of Weeks:</b> 16
<b>Week</b>	<b>Class Day</b>	<b>Practical/ Topics</b>
1 <sup>st</sup>	1 <sup>st</sup>	<ul style="list-style-type: none"> <li>▪ Importance of experimentation and accurate measurement</li> <li>▪ Instruction of maintaining lab record</li> <li>▪ Introduction to vernier caliper, screw gauge, spherometer</li> <li>▪ Demonstration of measurement using vernier caliper</li> </ul>
	2 <sup>nd</sup>	
	3 <sup>rd</sup>	<ul style="list-style-type: none"> <li>▪ Measurement of diameter of solid cylinder using vernier caliper</li> </ul>
	4 <sup>th</sup>	
2 <sup>nd</sup>	1 <sup>st</sup>	<ul style="list-style-type: none"> <li>▪ Measurement of height of solid cylinder using vernier caliper</li> <li>▪ Discussion on working formula, precautions and record writing</li> </ul>
	2 <sup>nd</sup>	
	3 <sup>rd</sup>	<ul style="list-style-type: none"> <li>▪ Dictation/instruction on the record writing</li> <li>▪ Correction of mock record</li> </ul>
	4 <sup>th</sup>	
3 <sup>rd</sup>	1 <sup>st</sup>	<ul style="list-style-type: none"> <li>▪ Measurement of height, inner diameter and outer diameter of hollow cylinder</li> </ul>
	2 <sup>nd</sup>	
	3 <sup>rd</sup>	<ul style="list-style-type: none"> <li>▪ Measurement of height, inner diameter and outer diameter of hollow cylinder</li> <li>▪ Discussion on working formula and precautions</li> </ul>
	4 <sup>th</sup>	
4 <sup>th</sup>	1 <sup>st</sup>	<ul style="list-style-type: none"> <li>▪ Demonstration of measurement using screw gauge and spherometer</li> </ul>



	2 <sup>nd</sup>	
	3 <sup>rd</sup>	<ul style="list-style-type: none"> <li>▪ Demonstration of drawing of magnetic lines of force</li> </ul>
	4 <sup>th</sup>	
5 <sup>th</sup>	1 <sup>st</sup>	<ul style="list-style-type: none"> <li>▪ Lab practice by the students of group               <ul style="list-style-type: none"> <li>✓ Alpha – Cross sectional area of thin wire by screw gauge</li> <li>✓ Beta – Radius of curvature of concave surface using spherometer</li> <li>✓ Gamma – Drawing magnetic lines of force with magnetic north pointing geographic north</li> </ul> </li> </ul>
	2 <sup>nd</sup>	
	3 <sup>rd</sup>	<ul style="list-style-type: none"> <li>▪ Lab practice by the students of group               <ul style="list-style-type: none"> <li>✓ Alpha – Drawing magnetic lines of force with magnetic north pointing geographic north</li> <li>✓ Beta - Cross sectional area of thin wire by screw gauge</li> <li>✓ Gamma – Radius of curvature of concave surface using spherometer</li> </ul> </li> </ul>
	4 <sup>th</sup>	
6 <sup>th</sup>	1 <sup>st</sup>	<ul style="list-style-type: none"> <li>▪ Lab practice by the students of group               <ul style="list-style-type: none"> <li>✓ Alpha – Radius of curvature of concave surface using spherometer</li> <li>✓ Beta - Drawing magnetic lines of force with magnetic north pointing geographic north</li> <li>✓ Gamma – Cross sectional area of thin wire by screw gauge</li> </ul> </li> </ul>
	2 <sup>nd</sup>	
	3 <sup>rd</sup>	<ul style="list-style-type: none"> <li>▪ Re-practice on the basis of necessity</li> <li>▪ Record correction</li> <li>▪ Viva</li> </ul>
	4 <sup>th</sup>	
7 <sup>th</sup>	1 <sup>st</sup>	<ul style="list-style-type: none"> <li>▪ Lab practice by the students of group               <ul style="list-style-type: none"> <li>✓ Alpha – Drawing magnetic lines of force with magnetic north pointing geographic south</li> <li>✓ Beta – Thickness and volume of glass piece using screw gauge</li> <li>✓ Gamma – Radius of curvature of convex surface using spherometer</li> </ul> </li> </ul>
	2 <sup>nd</sup>	
	3 <sup>rd</sup>	
	4 <sup>th</sup>	<ul style="list-style-type: none"> <li>▪ Lab practice by the students of group               <ul style="list-style-type: none"> <li>✓ Alpha – Radius of curvature of convex surface using spherometer</li> <li>✓ Beta - Drawing magnetic lines of force with magnetic north pointing geographic south</li> <li>✓ Gamma – Thickness and volume of glass piece using screw gauge</li> </ul> </li> </ul>

8 <sup>th</sup>	1 <sup>st</sup>	<ul style="list-style-type: none"> <li>▪ Lab practice by the students of group               <ul style="list-style-type: none"> <li>✓ Alpha – Thickness and volume of glass piece using screw gauge</li> <li>✓ Beta - Radius of curvature of convex surface using spherometer</li> <li>✓ Gamma – Drawing magnetic lines of force with magnet north pointing geographic south</li> </ul> </li> </ul>
	2 <sup>nd</sup>	
	3 <sup>rd</sup>	
	4 <sup>th</sup>	
9 <sup>th</sup>	1 <sup>st</sup>	<ul style="list-style-type: none"> <li>▪ Re-practice on the basis of necessity</li> <li>▪ Record correction</li> <li>▪ Viva</li> </ul>
	2 <sup>nd</sup>	
	3 <sup>rd</sup>	<ul style="list-style-type: none"> <li>▪ Demonstration of measurement of angle of prism and related theory</li> </ul>
	4 <sup>th</sup>	
10 <sup>th</sup>	1 <sup>st</sup>	<ul style="list-style-type: none"> <li>▪ Practice of determination of angle of prism by the students</li> </ul>
	2 <sup>nd</sup>	
	3 <sup>rd</sup>	
	4 <sup>th</sup>	
11 <sup>th</sup>	1 <sup>st</sup>	<ul style="list-style-type: none"> <li>▪ Refraction through prism and demonstration of determination of angle of minimum deviation by I~D curve method</li> </ul>
	2 <sup>nd</sup>	
	3 <sup>rd</sup>	<ul style="list-style-type: none"> <li>▪ Practice of determination of angle of minimum deviation by the students</li> </ul>
	4 <sup>th</sup>	
12 <sup>th</sup>	1 <sup>st</sup>	<ul style="list-style-type: none"> <li>▪ Practice of determination of angle of minimum deviation by the students</li> </ul>
	2 <sup>nd</sup>	
	3 <sup>rd</sup>	<ul style="list-style-type: none"> <li>▪ Record writing</li> <li>▪ Viva</li> </ul>
	4 <sup>th</sup>	
13 <sup>th</sup>	1 <sup>st</sup>	<ul style="list-style-type: none"> <li>▪ Demonstration of determination of time period of simple pendulum and value of g</li> </ul>
	2 <sup>nd</sup>	
	3 <sup>rd</sup>	<ul style="list-style-type: none"> <li>▪ Practice of determination of time period of simple pendulum and value of g by the students</li> </ul>
	4 <sup>th</sup>	
14 <sup>th</sup>	1 <sup>st</sup>	<ul style="list-style-type: none"> <li>▪ Practice of determination of time period of simple pendulum and value of g by the students</li> </ul>
	2 <sup>nd</sup>	

	3 <sup>rd</sup>	▪ Record checking and viva
	4 <sup>th</sup>	
15 <sup>th</sup>	1 <sup>st</sup>	▪ Record checking and viva
	2 <sup>nd</sup>	
	3 <sup>rd</sup>	▪ Record checking and viva
	4 <sup>th</sup>	
16 <sup>th</sup>	1 <sup>st</sup>	▪ Lab practice of all the experiment
	2 <sup>nd</sup>	
	3 <sup>rd</sup>	▪ Lab practice of all the experiment
	4 <sup>th</sup>	

*A. Barik*  
12.8.23  
Signature of Faculty

*[Signature]*  
12/8/23  
Signature of Sr. Lecturer/ HOD(I/C)

*[Signature]*  
12/8/23  
Signature of Academic Co-ordinator  
**Academic Co-ordinator**