# LESSON PLAN

SUBJECT: APPLIED PHYSICS-I LAB

BRANCH: COMMON (MECHANICAL & TEXTILE)

SEMESTER: 1ST (2025-26)

NAME OF THE FACULTY: ASEEMA BARIK

# GOVERNMENT POLYTECHNIC, BHADRAK

HOD, Humanities & Sc

Academic Coordinator

Academic Co-ordinator

Principal
Govt. Polytechnic, Bhadrak

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## LESSON PLAN FOR WINTER SEMESTER – 2025
### Dept. of Humanities & Science, Govt. Polytechnic, Bhadrak

Name of the Faculty : Aseema Barik
Course Code: Pr-2
Theory: Applied Physics-I Lab
Total Periods : 30
Examination: Winter(2025)
Sem: 1ST

Sessional: 25
End Sem. Exam: 25
Total Mark : 50
Class Start : 06.08.2025

| **Discipline: Humanities & Science** | **Semester: 1ST (2025)** | **Name of the Teaching Faculty : Aseema Barik** |
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| **Subject: Applied Physics-I Lab** | **No. of Days/per week class allotted: 1 day/ 2 classes** | **Semester from date: 06.08.2025 To Date: 04.12.2025**<br><br>**No. of Weeks: 15** |
| **Week** | **Class Day** | **Practical/ Topics** |
| 1st | 1ST | ▪ Importance of experimentation and accurate measurement<br>▪ Instruction of maintaining lab record<br>▪ Introduction to vernier caliper, screw gauge, spherometer |
| | 2ND | ▪ Measurement of length, radius of a given cylinder (solid) using vernier caliper |
| 2nd | 1ST | ▪ Measurement of length, radius of a given cylinder (hollow) using vernier calipe |
| | 2ND | ▪ Determination of diameter of a wire using screw gauge |
| 3rd | 1ST | ▪ Determination of diameter of a solid ball using screw gauge |
| | 2ND | ▪ Determination of radius of curvature of a convex mirror using a spherometer |
| 4th | 1ST | ▪ Determination of radius of curvature of a concave mirror using a spherometer |

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| | 2ND | ▪ Demonstration to verify triangle and parallelogram law of forces |
| 5th | 1ST | ▪ Demonstration to verify law of conservation of mechanical energy(PE to KE) |
| | 2ND | ▪ Demonstration to find the co-efficient of friction between wood and glass using a horizontal board |
| 6th | 1ST | ▪ Demonstration to find the co-efficient if linear expansion of the material of a rod |
| | 2ND | ▪ Measurement of room temperature and temperature of a hot bath using mercury thermometer and convert into different scales |
| 7th | 1ST | ▪ Lab practice by the students of group<br>✓ Alpha – Measurement of length, radius of given cylinder using vernier caliper<br>✓ Beta – Diameter of a wire using screw gauge<br>✓ Gamma – Diameter of a solid ball using screw gauge |
| | 2ND | ▪ Lab practice by the students of group<br>✓ Alpha – Diameter of a wire using screw gauge<br>✓ Beta – Diameter of a solid ball using screw gauge<br>✓ Gamma – Measurement of length, radius of given cylinder using vernier caliper |
| 8th | 1ST | ▪ Lab practice by the students of group<br>✓ Alpha – Diameter of a solid ball using screw gauge<br>✓ Beta – Measurement of length, radius of given cylinder using vernier caliper<br>✓ Gamma – Diameter of a wire using screw gauge |
| | 2ND | ▪ Lab practice by the students of group<br>✓ Alpha – Radius of curvature of convex/concave surface using spherometer<br>✓ Beta – Verify triangle and parallelogram law of forces<br>✓ Gamma – Find co-efficient of friction between wood and glass |
| 9th | 1ST | ▪ Lab practice by the students of group<br>✓ Alpha – Verify triangle and parallelogram law of forces<br>✓ Beta – Find co-efficient of friction between wood and glass<br>✓ Gamma – Radius of curvature of convex/concave surface using spherometer |

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| | 2ND | ▪ Lab practice by the students of group<br>✓ Alpha – Find co-efficient of friction between wood and glass<br>✓ Beta – Radius of curvature of convex/concave surface using spherometer<br>✓ Gamma – Verify triangle and parallelogram law of forces |
| 10th | 1ST | ▪ Lab practice by the students of group<br>✓ Alpha – Verify law of conservation of mechanical energy<br>✓ Beta – Find the co-efficient of linear expansion of a rod<br>✓ Gamma – Measure room temperature and temperature of hot bath using mercury thermometer |
| | 2ND | ▪ Lab practice by the students of group<br>✓ Alpha – Find the co-efficient of linear expansion of a rod<br>✓ Beta – Measure room temperature and temperature of hot bath using mercury thermometer<br>✓ Gamma – Verify law of conservation of mechanical energy |
| 11th | 1ST | ▪ Lab practice by the students of group<br>✓ Alpha – Measure room temperature and temperature of hot bath using mercury thermometer<br>✓ Beta – Verify law of conservation of mechanical energy<br>✓ Gamma – Find the co-efficient of linear expansion of a rod |
| | 2ND | ▪ Re-practice on the basis of necessity<br>▪ Record correction |
| 12th | 1ST | ▪ Demonstration to find the moment of inertia of a flywheel |
| | 2ND | ▪ Demonstration to find the viscosity of a given liquid(Glycerin) by Stoke's law |
| 13th | 1ST | ▪ Demonstration to determine the atmospheric pressure at a place using Fortin' barometer |
| | 2ND | ▪ Lab practice by the students of group<br>✓ Alpha – To find the moment of inertia of a flywheel<br>✓ Beta – To find the viscosity of a given liquid(Glycerin) by Stoke's law<br>✓ Gamma – To determine the atmospheric pressure at a place using Fortin' barometer |
| 14th | 1ST | ▪ Lab practice by the students of group<br>✓ Alpha – To find the viscosity of a given liquid(Glycerin) by Stoke's |

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| | | law<br>✓ Beta – To determine the atmospheric pressure at a place using Fortin' barometer<br>✓ Gamma – To find the moment of inertia of a flywheel |
| | 2ND | ▪ Lab practice by the students of group<br>✓ Alpha – To determine the atmospheric pressure at a place using Fortin' barometer<br>✓ Beta – To find the moment of inertia of a flywheel<br>✓ Gamma – To find the viscosity of a given liquid(Glycerin) by Stoke's law |
| 15th | 1ST | ▪ Record checking and viva |
| | 2ND | ▪ Record checking and viva |

10.09.25

Signature of the Faculty