# LESSON PLAN

SUBJECT: - APPLIED PHYSICS – I (LAB)

BRANCH: - COMMON (ELECTRICAL & COMP. SC.)

SEMESTER: - 1st (2024-2025)

NAME OF THE FACULTY: - JYOTIRMAYEE DASH



## GOVERNMENT POLYTECHNIC, BHADRAK

HOD, Math& Sc          Academic Coordinator          Principal

Govt polytechnic, Bhadrak

LESSON PLAN FOR WINTER SEMESTER- 2024

## Dept. of Math & Science, Govt. Polytechnic, Bhadrak

Name of the Faculty: Jyotirmayee Dash

Course Code: Pr – 2

Theory: APPLIED. PHY-I (LAB)

Total Periods: 30

Examination: WINTER (2024)

Sem:1st

Internal assessment/Sessional: 25

End Sem. Exam: 25

Total Mark :50

Class Start:16.08.2024

| Discipline: Electrical & Comp. Sc. | Semester:1st (2024) | Name of the Teaching Faculty: Jyotirmayee Dash | |
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| Subject: APPLIED. PHY-I (LAB) | No. of Days/per week class allotted:1 day/2 classes | Semester from date: 16.08.2024    To Date: 11.12.2024    No. of Weeks: 15 | |

| Week | Class Day | Practical/ Topics |
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| 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 solid cylinder using vernier caliper |
| 2nd | 1st | • Measurement of length, radius of a given hollow cylinder using vernier caliper |
|  | 2nd | • Determination of 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 |
|  | 2nd | • Demonstration to verify triangle and parallelogram law of forces |

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| 5th | 1st | • Demonstration to verify law of conservation of mechanical energy (PE to KE) |
| | 2nd | • Demonstration to find the coefficient of friction between wood and glass using a horizontal board |
| 6th | 1st | • Demonstration to find the coefficient of 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><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 coefficient 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 coefficient of friction between wood and glass<br>• Gamma - Radius of curvature of convex/concave surface using spherometer |
| | 2nd | Lab practice by the students of group<br>• Alpha - Find coefficient of friction between wood and glass |

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| | | • 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 coefficient of linear expansion of 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 coefficient of linear expansion of rod<br>• Beta- Measure room temperature and temperature of hot bath using mercury thermometer<br>• Gamma – Verify law of conservation of mechanical energy |

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| 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 coefficient of linear expansion of 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's barometer |
| | 2nd | Lab practice by the student of group<br>• Alpha- To find the moment of inertia of a flywheel<br>• Beta- To find the viscosity of a given (Glycerin) by Stoke's law<br>• Gamma- To determine the atmospheric pressure at a place using Fortin's barometer |
| 14th | 1st | Lab practice by the student of group<br>• Alpha- To find the viscosity of a given (Glycerin) by Stoke's law |

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| | | 1st | • Beta- To determine the atmospheric pressure at a place using Fortin's barometer<br>• Gamma- To find the moment of inertia of a flywheel |
| | | 2nd | Lab practice by the student of group<br>• Alpha- To determine the atmospheric pressure at a place using Fortin's barometer<br><br>• Beta- To find the moment of inertia of a flywheel<br>• Gamma - To find the viscosity of a given (Glycerin) by Stoke's law<br>• Beta- To determine the |
| 15th | | 1st | • Record checking and viva |
| | | 2nd | • Record checking and viva |

14/18/2024

**SIGNATURE OF THE FACULTY:**