# KIIT POLYTECHNIC, BHUBANESWAR

## LESSON PLAN

**Session (2021 -2022)**

| Discipline: Civil/ Mechanical/ Metallurgy | Semester: 1$^{st}$ , Winter /2021 | Name of the faculty:Sradhanjali Das Email Id:sradhanjalifpy@kp.kiit.ac.in |
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| **Subject: Engineering Physics Practical (Pr-2a)** | **No. of Days/week: 02 (2 periods / Day) Experiments will be performed in small groups of 5 to 6 students** | **Start Date: 25/10/2021 End Date: 10/02/2022** |

| Week | Class Day | Practical Topics |
|---|---|---|
| 1$^{st}$ | 1st | Familiarization with various shapes, measuring instruments like slide caliper, screw gauge and spherometer |
| | 2nd | Find the least count of the different measuring instruments. |
| 2nd | 1st | • To Find the Cross-Sectional Area of a Wire Using Screw Gauge<br>• To Find the Volume of a Solid Cylinder Using a Vernier Calipers<br>• To Determine the Radius of Curvature of a Convex Surface Using a Spherometer<br>• To Verify Ohm's Law by Ammeter – Voltmeter Method |
| | 2nd | • To Find the Cross-Sectional Area of a Wire Using Screw Gauge<br>• To Find the Volume of a Solid Cylinder Using a Vernier Calipers<br>• To Determine the Radius of Curvature of a Convex Surface Using a Spherometer<br>• To Verify Ohm's Law by Ammeter – Voltmeter Method |
| 3rd | 1st | • To Find the Cross-Sectional Area of a Wire Using Screw Gauge<br>• To Find the Volume of a Solid Cylinder Using a Vernier Calipers<br>• To Determine the Radius of Curvature of a Convex Surface Using a Spherometer<br>• To Verify Ohm's Law by Ammeter – Voltmeter Method |

| | 2nd | To Find the Cross-Sectional Area of a Wire Using Screw Gauge<br>• To Find the Volume of a Solid Cylinder Using a Vernier Calipers<br>• To Determine the Radius of Curvature of a Convex Surface Using a Spherometer<br>• To Verify Ohm's Law by Ammeter – Voltmeter Method |
|---|---|---|
| 4th | 1st | • To Find the Cross-Sectional Area of a Wire Using Screw Gauge<br>• To Find the Volume of a Solid Cylinder Using a Vernier Calipers<br>• To Determine the Radius of Curvature of a Convex Surface Using a Spherometer<br>• To Verify Ohm's Law by Ammeter – Voltmeter Method |
| | 2nd | • Repeat Class/Defaulter |
| 5th | 1st | • To Find the Volume of a Hollow Cylinder Using a Vernier Calipers<br>• To Find the Thickness and Volume of a Glass Piece Using Screw Gauge<br>• To Determine the Radius of Curvature of a Concave Surface Using a Spherometer<br>• To Trace Lines of Force Due to A Bar Magnet with North Pole Pointing North and Locate the Neutral Points |
| | 2nd | • To Find the Volume of a Hollow Cylinder Using a Vernier Calipers<br>• To Find the Thickness and Volume of a Glass Piece Using Screw Gauge<br>• To Determine the Radius of Curvature of a Concave Surface Using a Spherometer<br>• To Trace Lines of Force Due to A Bar Magnet with North Pole Pointing North and Locate the Neutral Points |
| 6th | 1st | • To Find the Volume of a Hollow Cylinder Using a Vernier Calipers<br>• To Find the Thickness and Volume of a Glass Piece Using Screw Gauge<br>• To Determine the Radius of Curvature of a Concave Surface Using a Spherometer<br>• To Trace Lines of Force Due to A Bar Magnet with North Pole Pointing North and Locate the Neutral Points |
| | 2nd | • To Find the Volume of a Hollow Cylinder Using a Vernier Calipers<br>• To Find the Thickness and Volume of a Glass Piece Using Screw Gauge |

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| | | • To Determine the Radius of Curvature of a Concave Surface Using a Spherometer<br>• To Trace Lines of Force Due to A Bar Magnet with North Pole Pointing North and Locate the Neutral Points |
| 7th | 1st | • To Find the Volume of a Hollow Cylinder Using a Vernier Calipers<br>• To Find the Thickness and Volume of a Glass Piece Using Screw Gauge<br>• To Determine the Radius of Curvature of a Concave Surface Using a Spherometer<br>• To Trace Lines of Force Due to A Bar Magnet with North Pole Pointing North and Locate the Neutral Points |
| | 2nd | • Repeat Class |
| 8th | 1st | • To Trace Lines of Force Due to A Bar Magnet with North Pole Pointing South and Locate the Neutral Points<br>• To Determine the Angle of Prism<br>• To Find the Time Period of a Simple Pendulum and Determine Acceleration Due to Gravity (g)<br>• To Determine the Angle of Minimum Deviation By I – D Curve Method |
| | 2nd | • To Trace Lines of Force Due to A Bar Magnet with North Pole Pointing South and Locate the Neutral Points<br>• To Determine the Angle of Prism<br>• To Find the Time Period of a Simple Pendulum and Determine Acceleration Due to Gravity (g)<br>• To Determine the Angle of Minimum Deviation By I– d Curve Method |
| 9th | 1st | • To Trace Lines of Force Due to A Bar Magnet with North Pole Pointing South and Locate the Neutral Points<br>• To Determine the Angle of Prism<br>• To Find the Time Period of a Simple Pendulum and Determine Acceleration Due to Gravity (g)<br>• To Determine the Angle of Minimum Deviation By I – D Curve Method |
| | 2nd | • To Trace Lines of Force Due to A Bar Magnet with North Pole Pointing South and Locate the Neutral Points<br>• To Determine the Angle of Prism |

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| | | • To Find the Time Period of a Simple Pendulum and Determine Acceleration Due to Gravity (g)<br>• To Determine the Angle of Minimum Deviation By I – D Curve Method |
| 10th | 1st | • To Trace Lines of Force Due to A Bar Magnet with North Pole Pointing South and Locate the Neutral Points<br>• To Determine the Angle of Prism<br>• To Find the Time Period of a Simple Pendulum and Determine Acceleration Due to Gravity (g)<br>• To Determine the Angle of Minimum Deviation by I – D Curve Method |
| 11th | 2nd | Repeat Class |
| 12th | 1st | Repeat Class for experiment 1,2 & 3 |
| | 2nd | Repeat Class for experiment 4,5 & 6 |
| 13th | 1st | Repeat Class for experiment 7,8 & 9 |
| | 2nd | Repeat Class for experiment 10,11 & 12 |
| 14th | 1st | Practical Test |
| | 2nd | Practical Test |