

## PHY461-462-IIInd sem 2024-25

### Lab Instructions for students

Welcome to PHY461/462, the Experimental Physics Laboratory course.

1. Students must be present in the lab by 2:00 pm on their lab day. Nobody is allowed to leave the lab before 5:15 pm, except with the instructor's explicit permission.
2. You have to do eight experiments in this semester. Minimum time allotted for any experiment is two lab days. **Familiarize yourself with Origin & Excel in the lab for data analysis.**
3. You are expected to come prepared for the experiment allotted to you. Daily evaluation (10 marks) will depend on your **attendance, punctuality, preparedness and performance in the allotted experiment and discipline in the lab.**
4. You have to conduct your experiments with a partner. Although your data part may be the same, the **rest of the lab report should not be copied from your partner. 10 marks will be deducted from both the lab reports in case copying is detected.**
5. **You have to record the data in your lab sheet. Your data must be signed by your TA, indicating that it is verified, on the same day.**
6. **Please inform your TA once you complete an experiment and take the allotment of the next experiment.**
7. Lab report should contain a **brief introduction to the theory of the experiment, principle and formulae involved with relevant diagram(s), data in tabular form, results (data analysis), error analysis, and answer to questions given at the end of each experiment in the lab manual.**
8. **Viva will be taken by the TAs during the grading of lab reports.**
9. **The report is to be submitted within a week of completion of the experiment. In case of late submission by a maximum period of one week a penalty of 05 marks will be applicable. If the report is delayed further, it will be rejected.**
10. **Distribution of marks for regular laboratory report:**  
  
**Total: 40 Marks**
  1. Theory + Formula + Diagram (circuit/ray/block): 05
  2. Data: 10
  3. Result (05) with error (05) analysis: 10
  4. Answers to the questions given in the manual: 05
  5. Viva = 10
11. Please do not use mobile phones in the lab. You may go out of the lab to attend a call.

## **General Precautions:**

1. You are not allowed to do the experiment without shoes for safety reasons (to avoid getting electric shock!).
2. Do not exceed the voltage/current beyond the prescribed limit of an equipment as mentioned in your lab manual as well as on instruments.
3. Before switching on power supplies, make sure voltage/current knob is fully anticlockwise (minimum position) as a sudden spike in the voltage/current may damage the experimental equipment.
4. In optics experiments, please don't try to touch or clean any optical surface, as it may damage the polished/coated optical surface.
5. Do not look at a laser beam /UV lamp directly; it is harmful to your eyes.
6. Please do not interchange any instrument with other experimental setups.
7. Please do not start your experiment where electrical connections are already made (as they may be faulty).
8. If it is your first day on any experiment, do not switch on the setup without consulting your TA.
9. In case of any problem, contact your TA/lab staff.