

PHYS2011: MECHANICS

(Theory)

- This course recapitulates some fundamental ideas of Newtonian Mechanics, etc., in an extended form.
- Besides this, it discusses the important topic of dynamics of an object, such as rotational dynamics, motion in the central force field, and non-inertial frames.
- It deals with the general properties of matter such as elasticity, gravitation, fluid motion, etc.
- It conveys the idea of wave oscillation to the student.
- It introduces the idea of the special theory of relativity.

(Practical)

- The students in this course will learn to handle some basic laboratory equipment used in physics.
- In this course, they will study the fundamentals of systematic experimental observation, data collection, data recording, and graph plotting.
- They learn to acquire the data from a graph and implement it in a working formula to measure the required general physical parameter, such as gravitational acceleration on the earth's surface, elasticity, the viscosity of a liquid, moment of inertia of a rotating body, etc.
- Students will also learn how to calculate experimental data error estimates.
- They will discover the value of teamwork in any laboratory.
- They will become aware of taking precautions to perform an experiment and handle the laboratory equipment.