

HS-PHYS1001 University Physics

Course Outline:

This is an introductory, calculus-based physics course for the students who want to have an overview in physics at the university level. It covers mechanics, gravitation, oscillations, waves and sound, heat and thermodynamics, electricity and magnetism, and physical optics. Conceptual ideas in physics are emphasized and the mathematical treatment is moderate.

Learning Outcomes:

On successful completion of this course, students should be able to:

CLO 1 describe and explain the fundamental physical principles

CLO 2 apply these principles, together with logical and mathematical reasoning, to situations of the physical world

CLO 3 analyse and solve problems with the aids of mathematics

CLO 4 acquire and interpret experimental data to examine the physical laws

Study Load:

Lectures	36 hours
Tutorials	9 hours
Laboratory work	3 hours
Reading/Self study	72 hours

Assessments:

One two-hour written examination	50%
Laboratory reports	15%
Assignments	35%