Level: bachelor

Course title:

Status: elective

ECTS: Selected Topics in Physics

Requirements:

Learning objectives

To expand students' basic knowledge in the field of physics, mechanics, thermodynamics, atomic and nuclear physics.

Learning outcomes

Developing skills and general knowledge and analytical abilities and scientific-based understanding of the physical processes in the selected areas of physics for later use in chemistry.

Syllabus

Theoretical instruction

Linear and rotational motion. Conservation laws. Collisions. Rigid-body rotation. Inertia forces. The principle of relativity in classical mechanics. The apparent weight of the body. The centrifugal force. The basics of special theory of relativity. Molecular-kinetic theory. Collisions of molecules and the occurrence of transfer. Transfer and heat conduction. Bohr's theory of the atom. Energy of stationary states. The origin of optical spectra. Core mass and charge. Bond energy. Spontaneous changes and radiation from the core. Stable core. Fission and fusion.

Practical instruction

Computational tasks which accompany the lectures.

Weekly teaching load				Other:
Lectures: 2	Exercises: 1	Other forms of teaching:	Student research:	