Study Programme :BSc in Biology

Level: Bachelor

Course title: Physical chemistry

Status: required

ECTS: 8

Requirements: /

Learning objectives

Mastery of fundamental knowledge in physical chemistry that is necessary for understanding physical and chemical processes.

Learning outcomes

Mastery of the necessary knowledge to understand the nature of matter, its physical and chemical properties and interactions with the environment, as well as mastery of representative experimental techniques that are required for testing of physical and chemical processes. The knowledge acquired in this course will provide students with a better understanding of the physical and chemical entities in the environment.

Syllabus

Theoretical instruction

Polarization electric field, refraction, optical activity and molecular spectra. Solid, liquid and gaseous states of matter. Chemical thermodynamics and thermochemistry. Equilibrium phases in one-and two-component systems. Dilute electrolyte and nonelectrolyte - Colligate properties and solubility. Adsorption, types and patterns. Chemical equilibrium. Chemical kinetics. Fundamentals of colloid chemistry and electrochemistry.

Practical instruction. Practical instruction follows the theoretical instruction

Weekly teaching load				Other:
Lectures: 3	Exercises: 3	Other forms of teaching: 1	Student research:	