

Sample Course Description

Faculty: Natural Sciences

Study program: Biology-Chemistry

Course Title: Physical chemistry

Course Credits: 7

Language of Instruction: Albanian

Course Description: During the study of physical chemistry students are introduced to the concepts: Ideal gases, real gases. Chemical thermodynamics, thermodynamic functions of the state. Phase, phase system. Rule of phases. Phase transformations and their energy. Solutions, colligative properties of solutions. Chemical kinetics and chemical equilibrium. Electrolyte solutions. Electrochemical concepts and colloidal solutions.

Course Goals: Students gain knowledge on the chemical and physical properties of some classes of elements. The chemical properties of substances are further deepened using a deeper mathematical apparatus. The properties of gases are studied, the study of chemical thermodynamics, the properties of solutions, kinetics and chemical equilibrium are deepened. Of importance is the treatment of topics in electrochemistry, the connection between the chemical reaction and the electric current. The study delves into colloidal chemistry, the colloidal properties of solutions.

The seminars apply the theoretical knowledge of the students by solving exercises related to the theoretical topics addressed in the lectures.

Through practical laboratory sessions students are trained to work independently and to become specifically acquainted with the chemical and physical properties of chemical elements and thermodynamic systems.

Course Requirements: Attendance of lectures by the student is optional

Attendance of seminars is mandatory to the extent of 75%, attendance of laboratories 100%

Grading: The final evaluation is done with 100 points

Ongoing evaluation during the year 20 points

Course Schedule: 2 lessons, 1 seminar and 2 laboratories per week second term.