Course Unit Descriptor

Study Programme: Chemistry, Biochemistry

Course Unit Title: Physical Chemistry II

Course Unit Code: Z-202

Name of Lecturer(s): Associate professor Vesna Despotović, Associate professor Marko Rodić

Type and Level of Studies: Bachelor Academic Studies

Course Status (compulsory/elective): Compulsory

Semester (winter/summer): Summer

Language of instruction: English

Mode of course unit delivery (face-to-face/distance learning): Face-to-face

Number of ECTS Allocated: 8

Prerequisites: Physical Chemistry I

Learning objectives
Acquiring necessary theoretical and practical knowledge from selected topics of physical chemistry which will enable understanding and explanation of physicochemical phenomena and processes. To provide an easier understanding of relevant fields of chemistry in further education or professional work.

Learning outcomes
On completion of this course students should be able to:
- demonstrate the acquired theoretical knowledge on physicochemical principles and apply it to explanation of phenomena in real life
- set the experiments using standard laboratory procedures and explain the obtained results after graphical and mathematical interpretation of characteristic functions and constants

Syllabus
Theoretical instruction. Phase equilibria in binary systems. Thermodynamics of phase boundaries. Adsorption phenomena. Chemical equilibrium. Selected topics of chemical kinetics, catalysis, electrochemistry, colloidal chemistry and photochemistry.
Practical instruction. Laboratory work is consistent with delivered lectures.

Required Reading:
1. P. W. Atkins: Physical Chemistry, Oxford University Press, Oxford, 1998

Weekly Contact Hours: 120	**Lectures:** 45	**Practical work:** 45+30

Teaching Methods:
Lectures and laboratory work

Knowledge Assessment (maximum of 100 points): 100

Pre-exam obligations	points	**Final exam**	points
Activity	10	Test	10
Lab exercises	20	Written exam	20
		Oral exam	40