Study program	Cycle		**First cycle**	
	Study program		**Physics Education**	
Physics	**GENERAL CHEMISTRY FOR PHYSICISTS**			
Course ID	Semester	Course status	ECTS credits	L+E
POT2411	**VI**		**4**	**2+1**
Lecturer				
Aims and intended learning outcomes	Introducing students with basic chemistry concepts in the field of compounds naming, chemical bonds, solution properties, energy changes and electrochemistry.			

Course syllabus

1. Types of substances. Separation of substances into pure substances. Properties and types of pure substances. Work in the chemical laboratory.
2. Relative atomic mass. Relative molecular mass. Mole.
3. Solutions and their properties. Quantitative calculations of solution composition. Decantation, distillation, filtration.
4. Diffusion and osmosis. Electrolyte solutions.
5. Colloid-dispersive systems. Colloids.
6. Periodic system of the elements.
7. General properties of the elements (atom size, ionisation energy, electron affinity, electronegativity, polarisation ability and polarisability, coordination number and oxidation state.) Molar mass determination (CO_2 or metal)
8. Classification of elements (s-, p-, d- and f- elements). Electrolytes. Galvanic elements.
9. Chemical bond – ionic, covalent.
10. Chemical bond – energy of covalent bond. Allotropy and isomorphism. Types of chemical reaction.
11. Energy changes in chemical reactions.
12. Main classes of inorganic compounds.
13. Concept of chemical equilibria in homogenous and heterogenous systems. Chemical equilibria.

Student workload (hours)		Assessment of knowledge and grading scale	
Literature and practical work	30+15	Grading scheme	Points
Exam study time	55	Attendance	5 (minimum 3)
Written papers	-	I exam	27,5 (minimum 15)
Other (state)	-	II exam	27,5 (minimum 15)
Total	100	Final exam	40 (minimum 22)
		Total	100 (minimum 55)

Literature

MANDATORY

1. Ivan Filipović, Stjepan Lipanović, Opća i anorganska hemija I dio, Školska knjiga Zagreb,1995.

RECOMMENDED

1. Emira Kahrović, Anorganska hemija, Bemust, 2005, Sarajevo
2. Praktikum iz opšte hemije, interna skripta

Remarks