

Study program: Environmental protection			
Type and level of study: Bachelor academic studies			
Course Title: General Chemistry			
Teachers: Gordana Racić			
Status: Obligatory, semester I			
ECTS: 8			
Prerequisite: None			
The goal of course Students acquire the basic theoretical and practical knowledge of general and inorganic chemistry, as a base for general and specific subjects in the study program.			
The outcome of the subject Course content focuses on the gaining knowledge and understanding of the relationship between the structure of matter and chemical properties of atoms, types of chemical bonds and properties of molecules, the knowledge of the chemical laws and principles of chemical reactions, classification and nomenclature of inorganic compounds. The subject also provides practical knowledge in the field of computing in chemistry, as well as basic skills in performing experiments in chemistry and processing of experimental results.			
Syllabus <i>Theoretical study</i> - Matter, mass and energy. Basic chemical and gas laws. The structure of the atom and atom models. Periodic Table of Elements. Chemical bond and structure of molecules. Intermolecular bonds. The chemical symbols, formulas and equations. Types and names of inorganic chemical compounds. Complex compounds. The solutions and the properties of the solution. Properties of dilute solutions. Colloids. Types of chemical reactions. Oxidation - reduction processes. Chemical kinetics - speed of chemical reactions. Theory of acids and bases. Chemical equilibrium in homogeneous and heterogeneous systems. <i>Practical classes</i> - Computing in chemistry. <i>Laboratory exercises</i> - Introduction to basic laboratory work and laboratory operations. Characteristics of the elements, compounds and mixtures. Characteristics of the inorganic compounds. Chemical reactions. Types of chemical reactions. Preparation, properties and classification of solutions. Chemical equilibrium in homogeneous and heterogeneous systems.			
Literature 1. Radosavljević, S. & Danilović G. (2013). Osnove hemije-računanje u hemiji. Školska knjiga d.o.o. Novi Sad. 2. Filipović, I. & Lipanović, S. (1991). Opća i anorganska kemija I. Školska knjiga. Zagreb. 3. Filipović, I. & Lipanović, S. (1991). Opća i anorganska kemija II. Školska knjiga. Zagreb. 4. Perišić-Janjić, N., Radosavljević, S. & Češljević V. (1987). Praktikum eksperimentalnih vežbi iz opšte i neorganske hemije. PMF. Univerzitet u Novom Sadu. 5. Vollhardt, K.P.C. & Schore N.E. (1996). Organska hemija. Ед. Haydigraf. Beograd. (prevod na srpski jezik B. Šolaja). 6. Joseph A. Mascetta, Chemistry-the easy way, 2 nd edition.			
Number of lectures: 6			Other Classes
Lectures: 3	Practices: 3	Other forms of teaching:	
Student research work:			
Teaching methods: Lectures, interactive work, experimental work			
Score (maximum 100 points)			
Pre-commitments	Poens	The final exam	Poens
Activity during lectures	10	Written exam	40
Practical classes	10	Oral examination	
Colloquia	2x20		
Seminars			
<i>Total</i>	60		40