



УНИВЕРЗИТЕТ У БАЊОЈ ЛУЦИ
UNIVERSITY OF BANJA LUKA
ПРИРОДНО-МАТЕМАТИЧКИ ФАКУЛТЕТ
FACULTY OF NATURAL SCIENCES AND MATHEMATICS



CHEMISTRY DEPARTMENT

FIRST CYCLE OF STUDY

Chemistry/Chemistry Education

Course name	Stoichiometry			
Course code	Course status	Semester	Hours of instruction	ECTS
1C16HOS1098	required	I	1+3	8
Teacher(s)	Asst. Prof. Zvezdana Sandić, PhD			

Prerequisite course(s)	Entry requirements
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Course goals

The aim of this course is adopting the basic stoichiometric laws and learns chemical calculations based on chemical formulas and chemical equations through practical tasks.

Learning outcomes

The student solves problems and performs chemical calculations based on the stoichiometric relationships in chemical reactions using standard methodology.

Course content

Fundamental and derived units. Calculation with complete and approximate numbers.
Relative atomic and molecular mass. Amount of substance and chemical unit.
Quantitative meaning of symbols and chemical formulas. Determination of coefficients in chemical equations.
Calculation for empirical and molecular formula.
Calculation for reactants mass and products of chemical reactions.
Gas laws.
Percentage conversion of chemical reactions and processes.
Gas laws application to chemical reactions.
Solution concentrations - dilution and mixing.
Colligative properties of solutions.
Electrolyte solutions.

Teaching methods

Lectures and calculation exercises

Books and other learning materials

J. Penavin Škundrić et al: **Stoichiometry I**, Faculty of Technology, Banja Luka 2000.
J. Penavin Škundrić et al: **Stoichiometry II**, Faculty of Technology, Banja Luka 2009.
M. Sikirica: **Stoichiometry**, Školska knjiga, Zagreb, 2008.

Course activities and grading method

The activity refers to the active participation of students in calculation exercises. Tests - two tests per semester: the first for calculations based on chemical formulas and stoichiometric ratios in the equations of chemical reactions, the second for calculations the percentage conversion of chemical reactions and calculations related to solutions. The results are included in the final grade only if they exceed 50% of the predicted points for a given form of test during the semester.

Activity	10	Tests	30
		Final exam	60

Additional course notes

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Name of the teacher who prepared this form	Zvezdana Sandić
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