



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



CHEMISTRY DEPARTMENT

FIRST CYCLE OF STUDY

Chemistry Education

Course name	Organic Chemistry 3			
Course code	Course status	Semester	Hours of instruction	ECTS
1C16HNS405	required	V	3+2	7
Teacher(s)	Prof. Vesna Antić PhD			

Prerequisite course(s)	Entry requirements
Organic Chemistry 1	Passed exam

Course goals
The aim of the course Organic Chemistry 3 is to introduce students to the consequences of the three-dimensional structure of organic molecules and the influence of the spatial distribution of atoms on the properties of molecules and the mechanisms of organic reactions.

Learning outcomes
After passing the exam, students present the three-dimensional structure of organic molecules in different ways, translate the planar view into three-dimensional and vice versa. The student clearly distinguishes the different levels of structural organization in the molecule and between the molecules and can explain the mechanisms of the most important organic reactions using stereochemical terms.

Course content
Chemical bond and structure of molecules. Hybridization of atomic orbitals of carbon atoms. Structure of organic molecules (constitution, configuration, conformation). Elements of symmetry and basic stereochemical concepts. Asymmetric atom and optical isomerism. Binding theories and geometry of organic molecules. Stereochemistry of cyclic compounds. Intermolecular actions. Stereospecific and stereoselective reactions. Acids and bases in organic chemistry

Teaching methods
Lectures, computational exercises

Books and other learning materials
M. Lj. Mihailović: Osnovi teorijske organske hemije i stereochemije , Građevinska knjiga, Beograd, 1990. S. H. Pine, J. B. Hendrikson, D. J. Cram, G. S. Hammond: Organska kemija , Školska knjiga, Zagreb, 1984. H. B. Kagan: Organska stereochemija , Hemijski fakultet, Beograd, 2005. M. Baranac-Stojanović: Zbirka zadataka iz stereochemije sa rešenjima , Hemijski fakultet, Beograd, 2013.

Course activities and grading method
The results of the tests are entered in the final grade only if they exceed 50% of the planned points for a given form of test during the semester.

Activity	10	Test	30
		Final exam	60

Additional course notes
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Name of the teacher who prepared this form	Vesna Antić
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