



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	Nomenclature of Organic Compounds			
Course code	Course status	Semester	Hours of instruction	ECTS
1C16HOS1107	elective	VI	2+2	4
Teacher(s)	Prof. Milica Balaban PhD			

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

Course goals

The aim of the course *Nomenclature of organic compounds* is to get acquainted in detail with the rules of naming complex organic compounds.

Learning outcomes

After passing the exam *Nomenclature of organic compounds*, the student recognizes different types of complex organic compounds and gives them systemic names.

Course content

Fundamentals of systematic nomenclature in organic chemistry. Basic structures of molecular skeletons (hydrocarbons, heterochains, carbomonocycles, selection of the basic chain, prefixes of appropriate substituents). Polycyclic hydrocarbons (condensed, bridged hydrocarbons, spiro compounds). Heterocyclic compounds (mono- and polycyclic). Radicals, cations, anions, zwitterions, radical ions. Priority of functional groups. Carboxylic and related acids and corresponding salts. Sulphonic and related acids and corresponding salts. Oxo-acids of carbon, selenium, tellurium, nitrogen, phosphorus, arsenic, antimony, bismuth, silicon, boron. Acid derivatives - anhydrides, esters, lactones, acyl halides. Nitrogen acid derivatives - amides, lactams, imides, amidines, hydrazides, nitriles. Aldehydes and ketones, their derivatives, alcohols and phenols, hydroperoxides. Amines, imines, other functional groups containing nitrogen, phosphorus, arsenic, antimony and bismuth. Other functional groups include boron, silicon, germanium, tin, lead, oxygen, sulfur, selenium, tellurium and halogens. Types of nomenclature (substitution, radical-functional, additive, subtractive, conjunctive, substitute, nomenclature of combined identical units). Nomenclature of natural products. Polymer nomenclature. Nomenclature of organometallic compounds. Nomenclature of coordination compounds.

Teaching methods

Lectures, theoretical exercises

Books and other learning materials

U. Bünzli-Trepp, Systematic Nomenclature of Organic, Organometallic and Coordination Chemistry, EPFL Press, Lausanne, 2007.

K. Peter C. Vollhardt, Neil E. Schore, Organska hemija, Hemijski fakultet, Beograd, 2004.

V. Rapić, Nomenklatura organskih spojeva, Školska knjiga, Zagreb, 1995

Teacher's internal material

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	Tests	30
		Final exam	60

Additional course notes

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Name of the teacher who prepared this form Milica Balaban