



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	Physics 2			
Course code	Course status	Semester	Hours of instruction	ECTS
1C16HOS319	required	II	3+3	7
Teacher(s)	Assistant Prof. Blanka Škipina PhD			

Prerequisite course(s)	Entry requirements
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Course goals
The aim of this course is to provide basic knowledge in *Physics 2*, to encourage the students' interest in Physics, to develop a scientific-research approach, as well as to study the basic physical phenomena, concepts and laws necessary for successful mastering of other subjects as well as to develop certain creativity in engineering.

Learning outcomes
After successfully mastering of the module students will be able to: Explain the principles of Electromagnetism, Optics, The Basic of Atomic Physics and The Basics of Nuclear Physics, explain physical phenomena and physical concepts in these fields and analyze and solve physical problems in the field of *Physics 2*.

Course content
Electromagnetism, Electric Current in Solid States and Fluids, Magnetic Fields and Magnetic Properties of Materials, Electromagnetic Induction, AC Current, Electromagnetic Waves, Geometric Optics, Photometry, Wave Optics, Spectrum and Spectral Analysis, Thermal Radiation, Basics atomic physics, Atoms with multiple electrons, Molecules, Luminism and Stimulated Light Emission, The Basics of Nuclear Physics.

Experimental exercises:
Measurements and Error Analysis, Method of Least Square.
Experimental verification of basic principles in the field of *Physics 2*.

Teaching methods
Lectures, computational and laboratory exercises

Books and other learning materials
J. P. Šetrajčić, D. Lj. Mirjanić: **Biofizičke osnove tehnike i medicine**, Banja Luka 2012
Lj. Ristovski, N. Burić: **Fizika**, Belgrade 2002
W. Bauer, G.D. Westfall: **University Physics with Modern Physics**
S. Pelemiš, Blanka Škipina, F. Ler: **Zbirka zadataka iz fizike**, University of Banjoj Luci, Banja Luka 2015

Course activities and grading method
The activity refers to the lab exercises, which are a condition for taking the final exam. Tests, two tests per semester. The first from the knowledge of Electromagnetism and Optics. Second test from The Basic of Atomic Physics and Nuclear Physics. The results of the above 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	8	Tests	32
		Final exam	60

Additional course notes
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Name of the teacher who prepared this form Blanka Škipina