

<b>Course title</b> Fizyka II/Physics II		<b>ECTS code</b> 13.3.0964	
<b>Name of unit administrating study</b>			
<b>Faculty of Chemistry</b>			
<b>Studies</b>			
<b>Field of study</b>	<b>Type</b>	<b>Form</b>	
Chemistry	Bachelor	Full-time studies	
<b>Teaching staff</b> Prof. dr hab. Stanisław Pogorzelski			
<b>Forms of classes, the realization and number of hours</b>		<b>ECTS credits</b>	
<b>A. Forms of classes, in accordance with the UG Rector's regulations</b> lecture, audytorium classes		classes 45 h tutorial classes 20 h student's own work 60 h TOTAL: 125 h - 5 ECTS	
<b>B. The realization of activities</b> In-class learning			
<b>C. Number of hours</b> lecture 15 h, audytorium classes 30 h			
<b>The academic cycle</b> 2019/2020 semestr zimowy			
<b>Type of course</b> obligatory		<b>Language of instruction</b> Polish	
<b>Teaching methods</b>  Lecture with multimedia presentation Own student work( for instance preparation for the exam)		<b>Form and method of assessment and basic criteria for evaluation or examination requirements</b>	
		<b>A. Final evaluation, in accordance with the UG study regulations</b> Course completion (with a grade), exam	
		<b>B. Assessment methods</b> written exam: test with additional open questions; credit: determining the final grade on partial grades obtained during duration of the semester, midterm colloquium	
		<b>The basic criteria for evaluation</b>  The exam covers lecture programm contents, 2/3 multiple-choice questions, and 1/3 open questions also taking into account the attendance of student at classes	
<b>Required courses and introductory requirements</b>			
<b>A. Formal requirements</b> none			
<b>B. Prerequisites</b> basic knowledge required of physics and mathematics at the secondary school level			
<b>Aims of education</b> Knowledge of basic physics phenomena, cognition at the level wider than in the scondary school using formalisms of mathematics also higher than in the school. Learned physics laws have to became basis of knowledge, for a student, to further knowledge subjects to be met during the accademic course. Student has to acquire a skill to analyze and explain, from the physical point of view, the observed phenomena and processes in chemistry.			

### Course contents

Principal components of liquids and gases mechanics.

Electricity and magnetics.

Electromagnetic waves, and their properties and application.

Principles of geometrical and wave optics.

Principal components of electrotechnics: Ohm law, Kirchhoff laws, voltage and current measurements.

### Bibliography of literature

#### A. Literature required to pass the course

##### A.1. Literature used during classes

D. Halliday, R. Resnick, J. Walker, „Postawy fizyki” (t. 1-5), Wydawn. Naukowe PWN, Warszawa, 2003 (dodruki 2005-2017).

J. Orear, „Fizyka” (t. 1 i 2), Wyd. Naukowo-Techniczne, Warszawa, 2004 (i późniejsze dodruki).

B. Jaworski, A. Dietłaf, (t.3 L. Miłkowska) – „Kurs fizyki” (t. 1-3), PWN 1984.

Materiały z wykładów udostępnione studentom przez wykładowcę.

##### A.2. Literature for individual studies

as above

#### Extracurricular readings

1. A. Bałanda, Fizyka dla chemików, skrypt UJ, Kraków 1994.

### Knowledge

- able to list, enumerate fundamental laws and theories of physics;
- possesses knowledge necessary to understand and describe the physical processes important particularly to understand chemistry;
- knows calculation methods necessary to solve physical problems

### Skills

- be capable to effectively solve physical tasks and problems from the lecture given physics branches;
- be able to learn independently;

### Social competence

-identifies the level of self-knowledge and skills, the need for continuous learning, personal development, understanding practical applications of physics

