

DESCRIPTION OF THE COURSE OF STUDY

Course code		
Name of the course in	Polish	I pracownia fizyczna
	English	Physical laboratory I

1. LOCATION OF THE COURSE OF STUDY WITHIN THE SYSTEM OF STUDIES

1.1. Field of study	technical physics
1.2. Mode of study	Full-time
1.3. Level of study	1 st degree
1.4. Profile of study	General academic
1.5. Person/s preparing the course description	Dr Sławomir Wąsik
1.6. Contact	s.wasik@ujk.edu.pl

2. GENERAL CHARACTERISTICS OF THE COURSE OF STUDY

2.1. Language of instruction	English
2.2. Prerequisites	Knowledge of physics and mathematics at high school level

3. DETAILED CHARACTERISTICS OF THE COURSE OF STUDY

3.1. Form of classes	laboratory	
3.2. Place of classes	Courses in the UJK teaching rooms of the Faculty of Exact and Natural Science	
3.3. Form of assessment	Credit with grade	
3.4. Teaching methods		
3.5. Bibliography	Required reading	<ol style="list-style-type: none"> 1. H.Szydłowski, Pracownia fizyczna 2. T.Drynski, Ćwiczenia laboratoryjne z fizyki 3. R.Resnick, D.Halliday, Fizyka t.1,2 4. J.R. Taylor, Wstęp do analizy błędu pomiarowego 5. Sz.Szczeniowski, Fizyka doświadczalna t.2,3,4
	Further reading	<ol style="list-style-type: none"> 1. G.I. Squires, Praktyczna fizyka 2. I.W.Sawieliew, Wykłady z fizyki t.1,2,3 3. A.Zawadzki, H.Hofmokr, Laboratorium fizyczne 4. A.K.Wróblewski, J.A.Zakrzewski, Wstęp do fizyki,t.2

4. OBJECTIVES, SYLLABUS CONTENT AND INTENDED LEARNING OUTCOMES

4.1. Course objectives (including form of classes)
<p>Knowledge (lectures and laboratories) C1. The knowledge of the physical laws describing given physical phenomena</p> <p>Abilities (laboratories and project) C2. Preparation for experimental work C3. Preparation for writing test reports, assessing measurement errors, discussing test results</p>

4.2. Detailed syllabus (including form of classes)
<p>Laboratories: As part of the 1st Laboratory, students perform exercises during the semester in various departments of physics (mechanics, heat, electricity, magnetism, optics). Students are bound by the material set out in the questions for each exercise, which are included in the general studies of individual exercises. The subject of exercises and the sequence of their execution are included in the program of the 1st Laboratory.</p>

4.3. Education outcomes in the discipline		
Code	A student, who passed the course	Relation to learning outcomes
within the scope of KNOWLEDGE:		
W01	has knowledge of the physical laws describing given physical phenomena	FIZT1A_W01 FIZT1A_W04
within the scope of ABILITIES:		
U01	Is prepared for experimental work	FIZT1A_U03 FIZT1A_U04 FIZT1A_U05 FIZT1A_U16
U02	Is prepared for writing test reports, assessing measurement errors, discussing test results	FIZT1A_U05 FIZT1A_U06

4.4. Methods of assessment of the intended learning outcomes																								
Teaching outcomes (code)	Method of assessment (+/-)																							
	Oral answer			Project			Self-study			Group work			Report			Effort in class								
	Form of classes			Form of classes			Form of classes			Form of classes			Form of classes			Form of classes			Form of classes					
	L	C	P	L	C	P	L	C	P	L	C	P	L	C	P	L	C	P	L	C	P			
W01																								
U01																								
U02																								

4.5. Criteria of assessment of the intended learning outcomes		
Form of classes	Grade	Criterion of assessment
project (P)	3	at least 50% and not more than 60% of the total number of available points
	3,5	more than 60% and not more than 70% of the total number of available points
	4	more than 70% and not more than 80% of the total number of available points
	4,5	more than 80% and not more than 90% of the total number of available points
	5	more than 90% of the total number of available points

5. BALANCE OF ECTS CREDITS – STUDENT’S WORK INPUT

Category	Student's workload	
	Full-time studies	Extramural studies
<i>NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE TEACHER /CONTACT HOURS/</i>		
<i>Participation in lectures</i>	45	
<i>Participation in laboratories/project</i>		
<i>Preparation for the exam</i>		
<i>Others</i>		
<i>INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/</i>		
<i>Preparation for the lecture</i>		
<i>Preparation for the laboratories</i>	45	
<i>Preparation for the exam</i>		
<i>Gathering materials for the project</i>		
<i>Preparation of multimedia presentation</i>		
<i>Others*</i>		
TOTAL NUMBER OF HOURS	90	
ECTS credits for the course of study	4	

Accepted for execution (date and signatures of the teachers running the course in the given academic year)

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