

NAME OF THE COURSE		Laboratory in Modern Physics					
Code	PMP20F	Year of study	GU-1 GU-2				
Course teacher	Ante Bilušić, PhD, Professor	Credits (ECTS)	3,0				
Associate teachers	Lucija Krce	Type of instruction (number of hours)	L	S	E	F	
					40		
Status of the course	Elective course	Percentage of application of e-learning					
COURSE DESCRIPTION							
Course objectives	Understanding the laws of modern physics through the independent performance of selected experiments. Understanding and applying statistical analysis of experimental results. Computer application in statistical processing of results.						
Course enrolment requirements and entry competences required for the course	None						
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	by applying knowledge from modern physics to understand the theoretical background of selected experiments using the understanding of modern physics to describe the parts and principles of operation of selected experiments by applying knowledge in the field of measurement in physics and by applying computers, statistically analyze the results obtained by measurements, by using knowledge in the field of measurement in physics and based on the results of statistical analysis to identify and understand measurement errors						
Course content broken down in detail by weekly class schedule (syllabus)	Specific charge of an electron Hall effect Planck's law of radiation Measurement of the Planck constant Temperature dependence of resistance of conductors and semiconductors Determination of silver nanoparticle size by UV-VIS spectroscopy						
Format of instruction	<input type="checkbox"/> lectures <input type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work			<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia <input checked="" type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> homework assignments <input type="checkbox"/>			
Student responsibilities	Writing reports on the conducted experiments. Attendance.						
Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Name	Ects	Name	Ects	Name	Ects	
	Class attendance	1.0	Research		Experimental work		
	Oral exam	0.5	Report	1.5	Homework assignments		
	Seminar essay		Essay				
	Tests		Practical training				
	Written exam		Project				
Grading and evaluating student work in class and at the final exam	During each term the student's knowledge of the experiment is verbally verified, while on each performed experiment students have to write a report that will be evaluated. The exam consists in the performance of one of the						

	experiments. The final score is based on the knowledge shown during classes and exam, and on reports on conducted experiments.		
Required literature (available in the library and via other media)	Title	Number of copies in the library	Availability via other media
	Internal script.	0	yes
Optional literature (at the time of submission of study programme proposal)	Halliday, Resnick, Walker: Fundamentals of Physics, John Wiley & Sons, 2003. Scientific journals in physics education		
Quality assurance methods that ensure the acquisition of exit competences	Statistics of students' results and students' evaluation via anonymous questionnaires at the end of the course. The survey is conducted according to the rules of the University of Split.		
Other (as the proposer wishes to add)			