

NAME OF THE COURSE		Fundamental Concepts in Quantum Physics						
Code	PMP11C	Year of study			III.			
Course teacher	F. Sokolić	Credits (ECTS)			4			
Associate teachers		Type of instruction (number of hours)			L	S	E	F
					30		15	
Status of the course	Elective	Percentage of application of e-learning			20%			
COURSE DESCRIPTION								
Course objectives	To enable understanding of basic concepts in quantum mechanics							
Course enrolment requirements and entry competences required for the course	Learning outcomes in general physics, classical mechanics, mathematics I-IV.							
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	Understand and explain: What problems of classical physics led to the development of quantum physics? What are conjugation and nonlocality? What are the problems of quantum measurement? What are macroscopic quantum phenomena?							
Course content broken down in detail by weekly class schedule (syllabus)	Heat capacities, black body radiation. Quantum Measurement EPR Paradox and Bell Inequalities Quantum Statistics Lasers Superconductivity							
Format of instruction	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input checked="" type="checkbox"/> exercises <input type="checkbox"/> <i>on line</i> in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work			<input checked="" type="checkbox"/> independent assignments <input type="checkbox"/> multimedia <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)				
Student responsibilities								
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)	Class attendance	1	Research		Practical training			
	Experimental work		Report		Self-study (Other)	3		
	Essay		Seminar essay		(Other)			
	Tests		Oral exam		(Other)			
	Written exam		Project		(Other)			
Grading and evaluating student work in class and at the final exam	Seminar work and exam							
Required literature (available in the library and via other media)	Title				Number of copies in the library	Availability via other media		
	Jim Bagot: Beyond Measure, Oxford 2004. Tim Maudlin: Quantum Non-Locality & Relativity, Wiley 2011.				1			
	Different web pages with solutions of problems					web		

	Popular and research papers and presentations from the lectures		web
Optional literature (at the time of submission of study programme proposal)			
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)			