

Study Programme: Physics			
Course Unit Title: Methodology of Problem Solving			
Course Unit Code: P18MRRZ			
Name of Lecturer(s): Full Professor Maja Stojanović			
Type and Level of Studies: Master of Science in Teaching Physics			
Course Status (compulsory/elective): Elective			
Semester (winter/summer): Summer			
Language of instruction: English			
Mode of course unit delivery (face-to-face/distance learning): Face-to-face			
Number of ECTS Allocated: 8			
Prerequisites: None			
Course Aims: The study of physical laws through numerical problems.			
Learning Outcomes: After completing the course, students should have developed: - General abilities: solving problems in physics and explaining the physics background of the particular problem. - Subject-specific abilities: knowledge of the methodological approach to explaining the basic physical laws through problem solving.			
Syllabus: <i>Theory</i> Treatment of particular sections of the General physics in terms of numerical problems with emphasis on students' theoretical knowledge necessary for problem solving. Solving of particular problems and the analysis of solutions obtained by different methods. <i>Practice</i> Independent problem solving related to various sections of physics.			
Required Reading: Rubin H. Landau, Manuel José Páez Mejía, Computational Physics: Problem Solving With Computers, Wiley-Interscience, 1997			
Weekly Contact Hours:	Lectures: 3	Practical work: 2	
Teaching Methods: Theoretical classes are performed using modern methods of presentation, with the active participation of students, a practical training includes preparation and presentation of a seminar work			
Knowledge Assessment (maximum of 100 points): 100			
Pre-exam obligations	points	Final exam	points
Active class participation		written exam	30
Practical work		oral exam	30
Preliminary exam(s)		

Seminar(s)	40		
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