

Study: Physics			
Type and level of studies: Bachelor studies			
Course name: Experiments in Teaching Physics			
Lecturer: Milić A Gordana			
Status: Compulsory			
ECTS: 7			
Attendance prerequisites: Mechanics and Thermodynamics 1,2; Electromagnetism 1,2; Optics			
Course aims The course should enable students to complement their knowledge in physics by learning to perform simple experiments related to the content taught, and by understanding the significance of simple experiments for understanding physical phenomena and processes.			
Course outcome By the end of the course, the student should: -be able to use professional literature and scientific terminology and to perform simple experiments related to the contents in physics teaching and teaching natural sciences in general. -be able to describe physical phenomena and laws related to the properties of water and air, movement, liquids; heat, optics, sound; electricity and currents, magnetism. -Understand the role of simple experiments in the development of creativity and scientific ideas significant for the introduction of scientific method in school practice.			
Course content <i>Theoretical part</i> A thematic approach to teaching mechanics, statics and dynamics of fluids, heat, waves and oscillations, sound, optical phenomena of electricity as well as currents and magnetism. Each topic is accompanied by an explanation of the theoretical basis of the given topic, as well as the analysis of simple experiments using the mathematical apparatus necessary for a detailed explanation of simply demonstrated phenomena. <i>Practical Part:</i> Demonstrating experiments suitable for processing topics in mechanics, statics and dynamics of fluids, heat, waves and oscillations, sound, optics, electricity and current, magnetism.			
Literature 1. Л.Л. Сикорук, “Физика за малишане”, Москва, Педагогика (1979). 2. Ф. Константиновић, “Учим на огледима 2 и 3”, Техничка књига, Загреб (1972). 3. Душанка Ж. Обадовић, Практикум експерименталних вежби «Једноставни експерименти у настави физике» (скрипта), Универзитет у Новом Саду Природно-математички факултет, (2005/2006) Линкови: 4. Physikalische freihandexperimente, Multimedia Physic Verlag, (1999) 5. www.multimedia-physik.com 6. http://www.chias.org/www/edu/activities/activity1/activity1.html			
Number of active classes			Other classes
Lectures: 2	Practical classes: 3	Other forms of teaching:	
Teaching methods Lectures (2 classes per week during the semester), laboratory exercises (3 classes per week during the semester).			
Assessment (maximum 100 points)			
Course assignments	points	Final exam	points
Lectures	10	Written exam	30
Practical classes	20	oral exam	40
		
Total	30		70