

Study program	Level of the study program		First cycle	
	Name of the study program		Physics	
Course name	LABORATORY IN PHYSICS EDUCATION II			
Course ID	Semester	Course status	ECTS credits	L+E
<b>PED6311</b>	<b>VIII</b>	<b>ELECTIVE</b>	<b>3</b>	<b>0+3</b>
Lecturer	Prof. dr. Vanes Mešić			
Aims and intended learning outcomes	<p>The aim of this course is to develop students' knowledge, skills and habits that are important for effective implementation of the experimental method in physics classrooms.</p> <p>Intended learning outcomes:</p> <ol style="list-style-type: none"> <li>1. Systematically prepare physics experiments, including a written plan for implementation of the experimental method.</li> <li>2. Conduct physics experiments and thereby take into account the potential safety risks.</li> <li>3. Analyse experimental data, identify sources of error and suggest potential ways of improving the experimental setup.</li> <li>4. Present and discuss the experimental results by using multiple representations and taking into account of basic principles of cognitive psychology.</li> <li>5. Identify, evaluate and design hands-on experiments in physics.</li> </ol>			
Course content				
<p>Introducing the students with the syllabus.</p> <p>Electrostatics – part I.</p> <p>Electrostatics – part II.</p> <p>Direct current – part I.</p> <p>Direct current – part II.</p> <p>Magnetic field.</p> <p>Electromagnetic induction.</p> <p>Electric motor. Generator.</p> <p>Oscillations and waves.</p> <p>Ray optics – part I.</p> <p>Ray optics – pat II.</p>				
Student workload (hours)		Grading		
Lectures and Exercises	45	Assessment method	Points	
Exam preparation	15	Partial exam	40	
Assignments	10	Project	10	
Other	5	Final exam	50	
Total	75			
		Total	100	
Literature				
<ol style="list-style-type: none"> <li>1. Vrcelj, A. (n.d.). <i>Metodički praktikum – elektromagnetizam i optika</i> (interna skripta). Sarajevo: Prirodno-matematički fakultet.</li> <li>2. Physics textbooks for primary and secondary school.</li> </ol> <p>ŽSprott, J. C. (2006). <i>Physics Demonstrations: A sourcebook for teachers of physics</i>. University of Wisconsin Press.</p>				
Remarks				
A passing grade on individual laboratory reports is a prerequisite for getting access to the final exam.				