

Study program	Level of the study program		Second cycle studies	
	Name of the study program		Physics Education	
Course name	ACTIVE LEARNING STRATEGIES IN PHYSICS TEACHING			
Course ID	Semester	Course status	ECTS credits	L+E
PED0411	II	ELECTIVE	4	2+2
Lecturer	Prof. dr. Vanes Mešić			
Aims and intended learning outcomes	<p>The aim of this course is to further develop the students' abilities to use active learning strategies in physics teaching.</p> <p>Intended learning outcomes:</p> <ol style="list-style-type: none"> <li>1. Evaluate the pedagogic opportunities of various teaching strategies.</li> <li>2. Identify the factors that moderate the effectiveness of active learning strategies in physics teaching.</li> <li>3. Prepare and conduct lessons based on different variants of active learning approaches in physics teaching.</li> </ol>			
Course content				
Basic principles of cognitive psychology. Model of a teaching environment. Role of the teacher in a teaching environment that promotes active learning. Use of active learning strategies in different teaching formats. Overview of most important active learning approaches in physics teaching. Inquiry-based teaching. Case studies and problem-based learning. Project-based learning. Assessing students' learning outcomes in active learning classrooms.				
Student workload (hours)		Grading		
Lectures and Exercises	60	Assessment method	Points	
Exam preparation	20	Partial exam	30	
Assignments	10	Preparing and conducting lessons	30	
Other	10	Final exam	40	
Total	100			
		Total	100	
Literature				
<ol style="list-style-type: none"> <li>1. Mešić, V. (2015). Uvod u didaktiku fizike. Sarajevo: Prirodno-matematički fakultet.</li> <li>2. Mattes, W. (2007). <i>Nastavne metode: 75 kompaktnih pregleda za nastavnike i učenike</i>. Zagreb: Naklada Ljevak.</li> <li>3. Michael, J.A., &amp; Modell, H.I. (2003). <i>Active learning in secondary and college science classrooms</i>. Mahwah, NJ: Lawrence Erlbaum.</li> <li>4. Bass, J. L., Contant, T. L., &amp; Carin, A. A. (2014). <i>Teaching Science Through Inquiry and Investigation</i>. Boston: Pearson.</li> <li>5. Selected articles from physics education journals.</li> </ol>				
Remarks				