

<b>Course title: Selected topics in methods of physics teaching</b>				
<b>Lecturer: Dušan Lazar</b>				
<b>Required Course:</b> elective				
<b>Number of ECTS:</b> 15				
<b>Prerequisites:</b>				
<b>Course Objective:</b> Acquiring a high level of knowledge and understanding of current issues in science teaching, scientific research and highly professional work with the transfer of original ideas in teaching practice				
<b>Course Outcome:</b> Upon completion of the course and after successfully passing the exam, the student should have developed: - General skills: using scientific literature, scientific terminology, different teaching methods and interdisciplinary approach in teaching. Subject-specific skills: knowledge basic didactic principles, methods and procedures in teaching physics, with the emphasis on the experimental methods				
<b>Course Content:</b> <i>Theoretical instruction:</i> Physics as a science and as a subject. Physics and other subjects (mathematics, chemistry, biology, astronomy, technology, geography, humanities, philosophy). Basic didactic principles on which is based the teaching of physics. The main problems, objectives and outcomes of teaching physics. The methods and methodological procedures used in teaching physics. Using the Internet in teaching physics. The scientific (inquiry) method. Method of laboratory and practical work. Educational excursions. Organisation of teaching physics. Teaching hour/class. Problems in teaching physics. The textbook in teaching physics. Extra school work. Preparing of teachers. Testing and evaluation. Practical . <i>Students research:</i> pedagogical experiment linked to the introduction of modern methods in teaching physics				
<b>Reading List:</b> 1. <i>Research Methods for the Self-Study of Practice, Self-Study of Teaching and Teacher Education Practices</i> , Springer, 2009. 2. Isabel Gedgrave, <i>Modern Teaching of Physics</i> , Global Media, 2009. 3. <i>Visualization in Science Education, Models and Modeling in Science Education</i> , Springer, 2005. 4. Ibrahim A. Halloun, <i>Modeling Theory in Science Education</i> , Springer, 2006. Additional references are based on international and domestic journals and materials from international and domestic conferences.				
<b>Total hours:</b>			10	
Lectures: 5	Practicals:	Other:	Student research work:5	
<b>Methods of instruction:</b> Scientific, monologue-dialogue and experimental methods				
<b>Assessment (maximum number of points 100)</b>				
<b>Requirements</b> Active participation in lectures Active participation in practicals 25pts Seminar work 15pts Oral exam 60pts				