

Faculty of Science and Mathematics / PHYSICS / PHYSICS EDUCATION I

Course:	PHYSICS EDUCATION I			
Course ID	Course status	Semester	ECTS credits	Lessons (Lessons+Exercises+Laboratory)
12091	Mandatory	1	4	3+0+0
Programs	PHYSICS			
Prerequisites				
Aims	This training enables students to develop skills and insights into the processes of teaching a physics. This training should allow them to get insights in epistemological processes occur among primary students.			
Learning outcomes	Student will be able to transfer knowledge from fundamental physics area to primary and secondary students on systematic and reasonable way. Student is able to use several teaching methods.			
Lecturer / Teaching assistant	Prof. dr M.Vučeljić			
Methodology	Lectures and seminars with active students participation, individual homework, students presentation, group and individual consultations.			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Introduction in basic epistemology			
I week exercises				
II week lectures	Theory of Piaget, Skinner, Vigotski			
II week exercises				
III week lectures	Didactics in kinematics			
III week exercises				
IV week lectures	Didactics in kinematics-extension			
IV week exercises				
V week lectures	Graphical presentation of motion			
V week exercises				
VI week lectures	Graphical presentation of motion-extension			
VI week exercises				
VII week lectures	Students are teaching lessons from kinematics. Discussion			
VII week exercises				
VIII week lectures	Students are teaching lessons from kinematics. Discussion			
VIII week exercises				
IX week lectures	Didactics in kinematics-projectile motion			
IX week exercises				
X week lectures	Didactics in kinematics-projectile motion			
X week exercises				
XI week lectures	Didactics in kinematics-circular motion			
XI week exercises				
XII week lectures	Didactics in kinematics-circular motion			
XII week exercises				
XIII week lectures	Students are teaching lessons from kinematics. Discussion			
XIII week exercises				
XIV week lectures	Students are teaching lessons from kinematics. Discussion			
XIV week exercises				

XV week lectures		colocvium				
XV week exercises						
Student workload						
Per week			Per semester			
4 credits x 40/30=5 hours and 20 minuts 3 sat(a) theoretical classes 0 sat(a) practical classes 0 excercises 2 hour(s) i 20 minuts of independent work, including consultations			Classes and final exam: 5 hour(s) i 20 minuts x 16 =85 hour(s) i 20 minuts Necessary preparation before the beginning of the semester (administration, registration, certification): 5 hour(s) i 20 minuts x 2 =10 hour(s) i 40 minuts Total workload for the subject: 4 x 30=120 hour(s) Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) 24 hour(s) i 0 minuts Workload structure: 85 hour(s) i 20 minuts (cources), 10 hour(s) i 40 minuts (preparation), 24 hour(s) i 0 minuts (additional work)			
Student obligations						
Consultations						
Literature			A. B. Arons: Teaching Introductory Physics, John Wiley & Sons, (1997), Resnic,Halliday and Krane: Physics, volume 1 and 2 (fifth edition); P.G.Hewit Conceptual Physics T.Petrović Didaktika fizike-teorija nastave fizike, Fizički fakultet u			
Examination methods			Written exams (one brief and final), seminar, homework, estimation of individual presentation of teaching a lessons from physics.			
Special remarks						
Comment						
Grade:	F	E	D	C	B	A
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points