Faculty of Science and Mathematics / PHYSICS / LABORATORY PHYSICS I/MEHANICS/

Course:	LABORATORY PHYSICS I/MEHANICS/			
Course ID	**Course status**	**Semester**	**ECTS credits**	**Lessons** (Lessons+Exercises+Laboratory)
3886	Mandatory	1	4	0+0+3
Programs	PHYSICS			
Prerequisites				
Aims	The aim of this course is learning the necessary skills to perform independently experiments, to analyse data and to deduce physically meaningful results. Getting acquainted with reporting the principles and the results of the performed experiment, taking into account error analysis and the reliability of the results obtained.			
Learning outcomes	This training enables students to develop skills and insights into the physics experiments. This should allow them to understand, to perform and to interpret more advanced experiments, which come up in the following part.			
Lecturer / Teaching assistant	prof. dr Mira Vučeljic			
Methodology	Lectures and seminars with the active student participation, individual performance of experiments by student.			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures				
I week exercises	Introduction to physical experimenting			
II week lectures				
II week exercises	Measuring physical quantities and error estimation			
III week lectures				
III week exercises	Error calculations - Error and statistics			
IV week lectures				
IV week exercises	Data treatment - Reporting			
V week lectures				
V week exercises	Determination of the free fall acceleration by simple pendulum			
VI week lectures				
VI week exercises	Determination of the rotational inertia of a body by torsion oscillator			
VII week lectures				
VII week exercises	determination of the surface tension of the water...			
VIII week lectures				
VIII week exercises	Bernoulli's equation			
IX week lectures				
IX week exercises	determination of the coeficient of viscosity			
X week lectures				
X week exercises	determination of the elasticity coeficient			
XI week lectures				
XI week exercises	determination of the dancity of the liquid			
XII week lectures				
XII week exercises	presentations of the results of experiments that students perform independently			
XIII week lectures				
XIII week exercises	presentations of the results of experiments that students perform independently			
XIV week lectures				

XIV week exercises	presentations of the results of experiments that students perform independently
XV week lectures	
XV week exercises	presentations of the results of experiments that students perform independently
Student workload	(3 hours in laboratory) per week, 15 hours in semester for consultations=60 contact hours in semester

Per week	Per semester
4 credits x 40/30=5 hours and 20 minuts 0 sat(a) theoretical classes 3 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	V.Vucic, Basic Measurements in Physics, Naučna knjiga, Beograd, 1984 (in Serbian). John R. Taylor, An Introduction to Error Analysis - The study of Uncertainties in Physical Measurements, Oxford University Press, ISBN 0-935702-10-5 G.L. Squires, Practic
Examination methods	Lectures and seminars with the active student participation, individual performance of experiments by student.
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