

COURSE NAME	LaTeX and Graphing Programs for Physicists						
Code	159411 (PMP071)	Year of study	1st and 3rd year of undergraduate study				
Course teacher	Petar Stipanović	Credits (ECTS)	1				
Associate teachers		Type of instruction (number of hours)	L	S	PK		
					30		
Status of the course	COMPULSORY	Percentage of application of e-learning	50%				
COURSE DESCRIPTION							
Course objectives	Competence in the use of Gnuplot. Competence in the use of LaTeX.						
Course enrolment requirements and entry competences required for the course	none						
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	After successful mastering of the course, students will be able to use: a) gnuplot - to plot 2D and 3D graphs, - to fit functions on numerical data, - to write scripts which generate plots; b) LaTeX - to make presentations, - to write seminars and laboratory reports, - edit the content (text, figures, equations, tables ...) for publication in the form of scientific articles, books ...						
Course content broken down in detail by weekly class schedule (syllabus)	1. Gnuplot (10 h) (3h) Plotting 2D graphs. (2h) Fitting curves. (2h) Diagrams by geometric shapes. (3h) Plotting 3D graphs. 2. LaTeX (20 h) (3h) Introduction to LaTeX2e. Writing and formatting text. (5h) Writing equations. (2h) Environments in LaTeX. Lists. Tables. (2h) Inserting figures and drawing using package TikZ. (2h) Organizing documents (articles, books...) (2h) Defining new commands and environments. (2h) Defining mathematical environments like theorems. (2h) Making presentations by package beamer.						
Format of instruction	Exercises and assignments.						
Student responsibilities	Active participation on classes and assignments.						
Screening student work (name the proportion of ECTS credits for each	Attendance = 0.7 ECTS Practical exam = 0.3 ECTS						

activity so that the total number of ECTS credits is equal to the ECTS value of the course)	
Grading and evaluating student work in class and at the final exam	<p>During the semester, students work on the computer is monitored and evaluated (20%). Students need orally defend written seminars on practical exams in LaTeX (50%) and Gnuplot (30%).</p> <p>The final grade is formed according to the following list:</p> <p>[50,60>% = D (2)</p> <p>[60,75>% = C (3)</p> <p>[75,90>% = B (4)</p> <p>[90,100]% = A (5)</p>
Required literature (available in the library and via other media)	<p>1) Š. Ungar, Ne baš tako kratak uvod u TeX s naglaskom na LaTeX2ε, Sveučilište u Osijeku, Odjel za matematiku, Osijek 2002.</p> <p>2) Software help documentation that is available in packages Gnuplot.</p>
Optional literature (at the time of submission of study programme proposal)	<p>1) Thomas Williams, Colin Kelley: An Interactive Plotting Program gnuplot 5.0, URL: http://www.gnuplot.info/docs_5.0/gnuplot.pdf, siječanj 2016.</p> <p>2) ShareLaTeX Documentation, URL: https://www.sharelatex.com/learn</p>
Quality assurance methods that ensure the acquisition of exit competences	<p>1) Professors, who teach other similar courses, cooperate and take care of the quality of the course program.</p> <p>2) Students using web applications can send anonymous comments regarding lectures.</p> <p>3) Statistics of test results.</p> <p>4) Students' evaluation via anonymous questionnaires at the end of the course. The survey is conducted according to the rules of the University of Split.</p>
Other (as the proposer wishes to add)	