

COURSE NAME		Mathematical program tools I			
Code	PMM017	Year of study	2rd year of undergraduate study		
Course teacher	Jurica Perić	Credits (ECTS)	2		
Associate teachers		Type of instruction (number of hours)	L	S	E
					30
Status of the course	COMPULSORY COURSE	Percentage of application of e-learning	50%		
COURSE DESCRIPTION					
Course objectives	Competence in the use of LaTeX. Competence in the use of Maxima.				
Course enrolment requirements and entry competences required for the course					
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	<p>The student is able to:</p> <ul style="list-style-type: none"> <li>- prepare the text for reading and printing using LaTeX</li> <li>- connect smaller units of the document written in LaTeX (main page, a list of figures and tables, contents, chapters) in the final document</li> <li>- show standard mathematical expressions (matrices, integrals, sums, products, piecewise defined function) using LaTeX</li> <li>- prepare a seminar and presentation using LaTeX</li> <li>- define basic objects using Maxima (functions, lists, matrices)</li> <li>- solve mathematics problems using Maxima</li> <li>- create graphics for functions of two and three variables with the change of features of the graphics using Maxima</li> <li>- modify algorithms for implementation in Maxima</li> </ul>				
Course content broken down in detail by weekly class schedule (syllabus)	<p>Introduction to Maxima. - 2 hours            Notation and arithmetic. - 2 hours            Defining functions. - 2 hours            Lists, matrices. - 2 hours            Differential calculus, solving equations. - 2 hours            Graphics. - 6 hours            Introduction to LaTeX. - 1 hour            Composing plain text. - 1 hour            Environments in LaTeX. Tables. - 2 hours            The colors in the text. - 1 hour            Graphics. - 1 hour            Composing mathematical text. - 1 hour            Writing mathematical formulas. Parts of mathematical formulas. - 2 hours            Array environment. - 1 hour            The environment for the theorem. - 2 hours            Beamer. - 2 hours</p>				
Format of instruction	Exercises				
Student	Attendance at 70% of exercises.				

responsibilities	
Screening student work ( <i>name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course</i> )	Attendance – 0.5 ECTS Written exam – 1.5 ECTS
Grading and evaluating student work in class and at the final exam	During the course students work on the computer is monitored. The exam is taken using a computer and consists of two parts, part for the Latex and part for the Maxima.
Required literature (available in the library and via other media)	Š. Ungar, Ne baš tako kratak uvod u TeX s naglaskom na LaTeX2ε, Sveučilište u Osijeku, Odjel za matematiku, Osijek 2002.
Optional literature (at the time of submission of study programme proposal)	
Quality assurance methods that ensure the acquisition of exit competences	Statistics of test results and student evaluation via anonymous questionnaires at the end of the course. The survey is conducted according to the rules of the University of Split.
Other (as the proposer wishes to add)	