

Study Program: Informatics			
Type and level of studies: Bachelor studies			
<b>Course name: Computational tools</b>			
<b>Lecturer: Stamenković M. Negovan</b>			
Status: Compulsory			
ECTS: 6			
Attendance Prerequisites: Basic, high-school level informatics knowledge.			
<b>Course aims</b> The students gain knowledge about using computational tools. They acquire programming knowledge and skills using educational computer software, as well as teaching skills while applying contemporary knowledge of theory and practice in the field.			
<b>Course outcome:</b> The students have gained theoretical and practical knowledge of the principles, forms and methods of teaching within the domain of computer tools; they can analyse, improve and critically observe their own understanding of theory and practical application of skills.			
<b>Course content:</b> <i>Theoretical part</i> MATLAB basics. Numerical data formatting. Mathematical functions in MATLAB. Using 'help'. 'Look for' command. Array operations. Simple arrays. Array element access. Array definitions. Matrix. Matrix operations and functions. Linear equation system solving. Special matrix. Symbolic mathematics. Symbolic algebra. Equation solving. Differentiations and integral. Graphical data representation. Two dimensioned diagrams. Three-dimension draw. Diagram design from menu. Diagram draw from working window. Text manipulation commands. M-files. MATLAB functions. Relation and logical operators. Control loops. For loop, while loop, if-else-end structures. Text editors. Scientific and technical publications preparation. TeX, LaTeX. <i>Practical part</i> Work on comuter.			
<b>Literature:</b> 1. Етер, Доларес М. и Давид Ц. Кунцицку са Холлу Мооре: Матлаб 7, Београд, ЦЕТ, 2005. 2. Рачунарство и програмски језици Izdavač: Prirodno-matematički fakultet u Kosovskoj MitroviciAutori: Negovan Stamenković, Vidosav Stojanović ISBN: 987-86-80795-08-9.			
<b>Number of active classes</b>		Lectures: 3	Practical classes: 3
<b>Teaching methods</b> Lectures are in accordance with the topic in <i>course content</i> , computer practice and independent student research work.			
<b>Assessment (maximum 100 points)</b>			
<b>Course assignments</b>	<b>points</b>	Final exam	<b>points</b>
activity during lectures	<b>10</b>	written exam	<b>20</b>
practical classes		oral exam	<b>20</b>
term test(s)	<b>40</b>		
seminar(s)	<b>10</b>		
<b>Total</b>	<b>60</b>		<b>40</b>