

Study Program: Informatics			
Type and level of studies: Bachelor studies			
Course name: Numerical analysis			
Lecturer: Petković S. Dojčin			
Status: Compulsory			
ECTS: 7			
Attendance Prerequisites:			
Course aims The students gain basic knowledge in numerical analysis, and are able to apply it in practice.			
Course outcome The students are able to use simple numerical methods, to use their knowledge on numerical mathematics linked with other mathematic disciplines and computer sciences.			
Course content <i>Theoretical part</i> Approximate numbers and errors. Errors in finding function values. Interpolation. Interpolation polynomial. Interpolation error. Numerical differentiation. Differential quotients. Numerical differentiation error. Numerical integration. Primitive quadratic form. Newton-Cotes formulas. Numerical solving of equations. Localization of solution. General iteration method. Specific iteration methods. <i>Practical part</i> Practice. Other forms of teaching. Research work. Solving mathematical problems using computers.			
Literature 1. Херцец Д., Крејић Н., Нумеричка анализа, Универзитет у Новом Саду, Стилос, Нови Сад, 1997. 2. Херцец Д., Крејић Н., Нумеричка анализа, Збирка задатака I и II, Универзитет у Новом Саду, Институт За математику, Нови Сад, 1998. 3. Херцец Д., Херцег Ђ., Нумеричка анализа, Стилос, Нови Сад, 2003.			
Number of active classes			Other classes
Lectures: 3	Practical classes: 3	Other forms of teaching:	
Teaching methods Lectures, solving problems with and without computers. Laboratory practice and term tests.			
Assessment (maximum 100 points)			
Course assignments	points	Final exam	points
activity during lectures	10	written exam	30
practical classes		oral exam	20
term test(s)	40	
seminar(s)			
Total	50		50