

Study Program: Informatics			
Type and level of studies: Bachelor studies			
Course name: Linear Algebra			
Lecturer: Petrović J. Milena			
Status: Compulsory			
ECTS: 7			
Attendance prerequisites: none			
Course aims Understanding the basic concepts of linear algebra, its significance and role among other mathematical disciplines.			
Course outcome The student has grasped the basic principles of linear algebra and is able to solve complex problems on his/her own.			
Course content <i>Theoretical part</i> Vector spaces. Basis and dimension. Inner product, orthogonality, Gram–Schmidt process. Linear transformations. Matrices. Polynomial matrices. Characteristic polynomial of a matrix. Characteristic values and vectors. Matrix similarity, similarity invariance and canonical forms. Cubic forms. <i>Practical part</i> Practice, other forms of teaching. Applied research work. Vector spaces, examples. Finding bases. Basis orthogonalisation algorithm. Rank matrices and inverse matrix. Elementary transformations. Basis change. Determining the characteristic polynomial. Characteristic values and characteristic vectors. Canonical form of quadratic form.			
Literature 1. M. Stojaković, Elementi linearne algebre. Zavod za izdavanje udžbenika, Beograd 1961. 2. Z. Stojaković, I. Bošnjak, Zadaci iz linearne algebre. PMF, Simbol, Novi Sad, 2004.			
Number of active classes			Other classes
Lectures: 3	Practical classes: 3	Other forms of teaching:	
Teaching methods Common teaching methods are used in lectures. During practical classes, students apply the principles presented, examine typical problems and solutions.			
Assessment (maximum 100 points)			
Course assignments	points	Final exam	Points
activity during lectures	10	written exam	25
practical classes		oral exam	25
term test(s)	40	
seminar(s)			
Total	50		50