6309 Linear Algebra

lectures:2 **exercises: 2** **ECTS credits: 5**

requirements for admission: **requirements for examination:**
organisation of lectures: oral **organisation of exercises:** oral
assessment: **final examination:** written and oral

goal:
The students are acquainted in more details with the theory of linear algebra emphasizing its application in geodesy.

description:
Description of lectures:
Matrices. Determinants. Range and inverse matrices. Linear systems. Vectors. Vector space. Linear operators. Eigenvectors and eigenvalues. Diagonalising of symmetric matrices. Square forms. Curves and second order surfaces. Some applications of linear algebra in geodesy. Elements of tensor calculus.
Program of exercises:
During the exercises the students solve the problems in accordance with the theory presented during the lectures.

References:

1. Elezović, N.: Linearna algebra (Linear Algebra), Element, Zagreb, 1996
2. Filić, M.: Linearna algebra (Linear Algebra), Sveučilišna naklada Liber, Zagreb, 1972
3. Horvatić, K.: Linearna algebra I, II, III (Linear Algebra I, II, III), Faculty of Natural Sciences – Department of Mathematics, Zagreb, 1995
4. Kurepa, S.: Uvod u linearnu algebru (Introduction into Linear Algebra), Školska knjiga, Zagreb, 1975
5. Elezović, N., Aglić, A.: Linearna algebra (Linear Algebra), Collection of Problems, Element, Zagreb, 1996.

last change: acad. year 1998/1999 **lecturing : Beban-Brkić, J.**