SF1624 Algebra and Geometry
7.5 credits

Algebra och geometri

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment
Course syllabus for SF1624 valid from Autumn 2019

Grading scale
A, B, C, D, E, FX, F

Education cycle
First cycle

Main field of study
Mathematics, Technology

Language of instruction
The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes
After the course the student should be able to
• use concepts, theorems and methods to solve and present solutions to problems within the parts of linear algebra described by the course content,
• read and comprehend mathematical text.

Course contents
Vectors, matrices, linear equations, Gaussian elimination, vector geometry with dot product and vector product, determinants, vector spaces, linear independence, bases, change of basis, linear transformations, the least-squares method, eigenvalues, eigenvectors, quadratic forms, orthogonality, inner-product space, Gram-Schmidt’s method.

Specific prerequisites
Basic requirements.

Course literature
Announced no later than 4 weeks before the start of the course on the course web page.

Examination
• TEN1 - Examination, 7.5 credits, grading scale: A, B, C, D, E, FX, F
Based on recommendation from KTH’s coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

The examiner decides, in consultation with KTHs Coordinator of students with disabilities (Funka), about any customized examination for students with documented, lasting disability.

Other requirements for final grade
Written exam, possibly with the possibility of continuous examination.

Ethical approach
• All members of a group are responsible for the group's work.
• In any assessment, every student shall honestly disclose any help received and sources used.
In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.