

**Syllabus for Linear Algebra 7,5 ECTS credits****1. Course details**

Approved by the Education Committee of the Faculty of Science 01-03-2007 with a decision about amendment 19-11-2007 (2<sup>nd</sup> version). The syllabus is valid from 01-01-2008. The course is at the First cycle.

**2. General information**

The course is part of the main field of study in Mathematics at the Faculty of Science. The course is optional at the First cycle in a Bachelor's degree in Science. The course is also offered as a single subject course. The language of instruction is contingently English.

**3. Learning outcomes**

On completion of the course, the students shall:

- have developed the ability for mathematical communication orally and in writing,
- be familiar with the theory and applications of linear algebra,
- have acquired basic knowledge for further studies in mathematics, numerics, statistics and other fields of science.

**4. Course content**

Linear spaces and mappings, matrix representation of linear mappings. Euclidean spaces. Determinants. Eigenvalues and eigenvectors. The spectral theorem. Quadrics and quadratic forms.

**5. Teaching and assessment**

Teaching consists of lectures and group exercises. An essential element of the group exercises consists of training in problem solving.

Examination takes place at the end of the course. It takes the form of a written test. Compulsory hand-in exercises might be given during the course.

Students who fail the ordinary tests will have an opportunity to take another test in close proximity to the ordinary test.

**6. Grades**

Students are awarded one of the following grades: Distinction, Pass or Fail.

**7. Admission requirements**

To be eligible for the course requires: Basic eligibility and courses corresponding to MATA11 Mathematics 1 alpha, 15 ECTS credits and MATA12 Mathematics 1 beta, 15 ECTS credits.

**8. Literature**

According to a list established by the department, available at least five weeks before the start of the course. See the web-page for Mathematics NF.

**9. Further information**

The course cannot be credited as part of a degree along with MAT241 Linear algebra, 5p.