# Vector Analysis

Single subject course

4 credits

Vektoranalys

916G45

Valid from: 2020 Spring semester

**Determined by**
The Board of Educational Science

**Date determined**
2019-06-04

**Revision date**
2019-09-10

## Main field of study
Mathematics

## Course level
First cycle

## Advancement level
G1X

## Intended learning outcomes
The course deals with vector functions and vector fields, and gives the mathematical theory of potentials and flows which are at the basis of, amongst other areas, theoretical electrotechnology and fluid mechanics. After the course one can

- find potentials for a vector field
- calculate path and flux integrals, with and without the use of integral theorems
- use spherical and cylindrical coordinates in calculations

## Teaching and working methods
Teaching is done in lectures and problem classes.

# Examination

Applies to all courses regardless of grading scale.

- Students failing an exam covering either the entire course or part of the course two times are entitled to have a new examiner appointed for the reexamination.

If the course has a three-graded grading scale (U - VG), following applies:

- Students who have passed an examination may not retake it in order to improve their grades.

The following applies to courses that include a compulsory component:

- If special circumstances prevail, and if it is possible with consideration of the nature of the compulsory component, the examiner may decide to replace the compulsory component with another equivalent component.

If the LiU coordinator for students with disabilities has granted a student the right to an adapted examination for a written examination in an examination hall, the student has the right to it. If the coordinator has instead recommended for the student an adapted examination or alternative form of examination, the examiner may grant this if the examiner assesses that it is possible, based on consideration of the course objectives.

# Grades

Four-grade scale, LiU, U, 3, 4, 5

# Other information

Planning and implementation of a course must take its starting point in the wording of the syllabus. The course evaluation included in each course must therefore take up the question how well the course agrees with the syllabus.

The course is carried out in such a way that both men´s and women´s experience and knowledge is made visible and developed.

# Department

Matematiska institutionen