

SYLLABUS

Linear Algebra and Integral Calculus 7.5 credits M0048M

Linjär algebra och integralkalkyl

Course syllabus admitted: Autumn 2023 Sp 1 - Present

**DECISION DATE
2021-02-17**

Linear Algebra and Integral Calculus 7.5 credits M0048M

Linjär algebra och integralkalkyl

First cycle, M0048M

| Education level | Grade scale | Subject | Subject group (SCB) |
|-----------------|-------------|-----------|---------------------|
| First cycle | G U 3 4 5 | Matematik | Mathematics |

Entry requirements

In order to meet the general entry requirements for first cycle studies you must have successfully completed upper secondary education and documented skills in English language and the course Differential Calculus (M0047M) or equivalent.

Selection

The selection is based on 1-165 credits.

Course Aim

To learn concepts, theory and methods from linear algebra and integral calculus.

Contents

Integration: Definition, properties, methods of computation, primitive functions, area and volume, generalized integrals. **Linear algebra:** Vectors and matrices, linear independence, linear systems of equations, determinants. **Matlab :** Linear systems of equations, numerical integration, elementary programming.

Realization

Each course occasion's language and form is stated and appear on the course page on Luleå University of Technology's website.
Lectures, tutorials, computer exercises.

Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided. Matlab report and written examination.

Unauthorized aids during exams and assessments

If a student, by using unauthorized aids, tries to mislead during an exam or when a study performance is to be assessed, disciplinary measures may be taken. The term "unauthorized aids" refers to aids that the teacher has not previously specified as permissible aids and that may assist in solving the examination task. This means that all aids not specified as permissible are prohibited. The Swedish version has interpretative precedence in the event of a conflict.

Overlap

The course M0048M is equal to M0030M

Course offered by

Department of Engineering Sciences and Mathematics

Modules

| Code | Description | Grade scale | Cr | Status | From period | Title |
|------|------------------|-------------|-----|-----------|-------------|-------|
| 0002 | Report in Matlab | U G# | 1.5 | Mandatory | A19 | |
| 0003 | Written exam | G U 3 4 5 | 6 | Mandatory | A21 | |

Study guidance

Study guidance for the course is to be found in our learning platform Canvas before the course starts. Students applying for single subject courses get more information in the Welcome letter. You will find the learning platform via My LTU.

Last revised

by Head Faculty Programme Director Niklas Lehto 2021-02-17

Syllabus established

by Niklas Lehto 2019-02-15