

SYLLABUS

Mathematics I - Calculus

7.5 credits M0038M

Matematik I - Differentialkalkyl

Course syllabus admitted: Autumn 2021 Sp 1 - Spring 2022 Sp 4

DECISION DATE
2021-02-17

Mathematics I - Calculus 7.5 credits M0038M

Matematik I - Differentialkalkyl

First cycle, M0038M

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 + Swedish upper secondary school courses Mathematics 3c (specifik entry A8).

Or:

Swedish upper secondary school courses Mathematics D (specifik entry 8)

Selection

The selection is based on final school grades or Swedish Scholastic Aptitude Test.

Examiner

Ove Edlund

Course Aim

After the course , students should

- have knowledge of and be familiar with key mathematical concepts, methods and logical structures necessary for independent work as an engineer
- have knowledge about elementary functions and their properties
- have knowledge in calculus
- have developed their capacity for critical reflection , planning and mathematical modeling
- be able to use mathematics as an effective tool for further studies in mathematics, science, technology and economics and in professional life

Contents

Basics. Equations . Functions . Limits , continuity, properties of continuous functions. Derivatives, differentials, extreme values , equations solving, graphing. Applications.

Realization

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

The course is taught through lectures and tutorials. Other forms of teaching can occur.

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.

To pass the course requires approved individual written exams. The course is graded .

Overlap

The course M0038M is equal to M0050M, M0029M

Literature. Valid from Autumn 2014 Sp 1

Forsling-Neymark: Matematisk analys en variabel. Liber, andra upplagan, ISBN 978-91-47-10023-1.

Course offered by

Department of Engineering Sciences and Mathematics

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0001	Written exam	G U 3 4 5	7.5	Mandatory	A10	

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 Department of Mathematics 2010-08-06