# ML1000 Engineering Mathematics 11.0 credits

## Matematik för ingenjörer

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

## Establishment

Course syllabus for ML1000 valid from Autumn 2019

## Grading scale

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

## Education cycle

First cycle

## Main field of study

Technology

## Specific prerequisites

## Language of instruction

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

## Intended learning outcomes

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On completion of the course, the student should be able to:

- choose and use methods, as well as understand concepts from the different areas of the course, to solve problems, both theoretical and applied
- present mathematical reasoning to solve and present solutions in a structured manner, with correct mathematical language
- use a computer-based tool to perform calculations on basic problems in linear algebra

## Course contents

- Calculations with real and complex numbers, absolute values, algebraic expressions, differences and equation solution
- Sums and products
- Elementary functions: the natural logarithm function, exponential and power functions, trigonometric functions and the complex exponential function
- Inverse functions
- Differential and integral calculus in one variable with applications
- Simple ordinary differential equations
- Vectors and geometry in two and three dimensions. Matrices and determinants. Solution of linear equation systems

## Examination

- TENB - Written Examination, 5.0 credits, grading scale: A, B, C, D, E, FX, F
- TENA - Written Examination, 5.0 credits, grading scale: A, B, C, D, E, FX, F
- DÖV1 - Computer Exercises, 1.0 credits, grading scale: P, 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.

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

## 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.