



AF0700 Introductory Mathematics 1.5 credits

Introduktionskurs i matematik

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

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

Establishment

The course syllabus is valid from autumn 2024 according to the Head of school decision: A-2023-1505, 3.2.2. Decision date: 2023-08-30

Grading scale

P, F

Education cycle

Pre-university level

Specific prerequisites

Language of instruction

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

Intended learning outcomes

After completing the course students shall be able to :

- Define and interpret the concepts described in the course contents.
- Solve standard problems within the area described in the course contents.

Course contents

- The exponent rules. Basic algebraic identities. The method of completing the square. Charts for analyzing the sign of an expression. The absolute value function. The equation of a straight line in the plane.
- First and second order equations. Some basic polynomial equations of higher degree. Equations with false roots. Linear and nonlinear inequalities.
- Exponential functions and logarithms. The laws of logarithms. Exponential equations and logarithmic equations. Logarithmic scale.
- Trigonometric functions. Inverse trigonometric functions. Trigonometric formulas and equations. The law of sines and the law of cosines.
- Basic terminology of sets and set operations.
- Standard notation for sums and products.

Examination

- TEN1 - Written exam, 1.5 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.

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.