KH1110 Mathematics 12.0 credits

Matematik

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

Establishment

Course syllabus for KH1110 valid from Autumn 2007

Grading scale

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

Education cycle

First cycle

Main field of study

Technology, Chemistry and Chemical Engineering

Specific prerequisites

Language of instruction

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

Intended learning outcomes

This course aims to give its students the knowledge required to tackle the technical problems included in other courses of this chemical engineering study program, including good abilities to apply mathematical thinking to new applications in technology.

Course contents

Mathematics I: Algebra and geometry. Elementary functions. Complex numbers. Polynomes and algebraic equations. Linear equation systems. Matrixes and determinants. Vectors and vector geometry. Lab exercises with computer support.

Mathematics II: Calculus. Boundary values and continuity. Derivatives. Integrals. Differential equations. Taylor´s formula. Sequences and series. Multidimensional calculus. Applications in chemical engineering.

Course literature

Rodhe, Sollevall, Matematik för ingenjörer

Examination

- TEN2 - Analysis, 6.0 credits, grading scale: P, F
- TEN1 - Algebra and Geometry, 4.5 credits, grading scale: P, F
- LAB1 - Computer Lab Works, 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.

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

Other requirements for final grade

Written exam, part I (TEN1; 4,5 cr.). Written exam, part II (TEN2; 6 cr.). Passed lab sessions (LAB1; 1,5 cr.).

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.