



KE2060 Computational Project in Chemical Engineering 7.5 credits

Kemitekiskt beräkningsprojekt

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

Course syllabus for KE2060 valid from Spring 2025

Grading scale

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

Education cycle

Second cycle

Main field of study

Chemical Science and Engineering, Chemistry and Chemical Engineering

Specific prerequisites

Completed bachelor's degree, 75 higher education credits (hp) in chemistry or chemical engineering, 20 hp mathematics (including numerical methods), 6 hp thermodynamics, 6 hp programming/computer science. English B/6.

Language of instruction

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

Intended learning outcomes

The overall aim of the course is to give students enhanced understanding of Chemical Engineering computations, understanding and ability to analyse and solve complicated computational problems.

For a passing grade the students should be able to:

- Define and formulate the problem in mathematical terms, choose suitable numerical procedures and computer software, schedule the computational procedure, generate and report the results and formulate conclusions. (PRO1)

Course contents

Computational assignment concerning an industrial or academic problem. The project includes data collection, background studies required to understand the problem, and deepening of the solution methods and computer tools required to solve the problem. The results are presented orally and written.

The project also improves:

- the ability to extend students own knowledge to handle new problems in new areas using different computational instruments.
- the ability to find, adopt and apply the necessary information in a suitable manner.
- the self-confidence needed to handle complicated problems and take the responsibility to deliver reasonable results.
- the ability to work in groups, and in oral and written communication.

Examination

- PRO1 - Project, 7.5 credits, grading scale: A, B, C, D, E, FX, 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.