KE2060 Computational Project in Chemical Engineering 7.5 credits

Kemitekniskt 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 2019

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

Admission requirements for independent students:
75 university credits (hp) in chemistry or chemical engineering, 20 university credits (hp) in mathematics and 6 university credits (hp) in computer science or corresponding. Documented proficiency in English corresponding to English B.

Admission requirements for programme students at KTH:
At least 150 credits from grades 1, 2 and 3 of which at least 110 credits from years 1 and 2, and bachelor's work must be completed, within a programme that includes:
75 university credits (hp) in chemistry or chemical engineering, 20 university credits (hp) in mathematics and 6 university credits (hp) in computer science or corresponding.

Language of instruction

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

Intended learning outcomes

To give students enhanced understanding of Chemical Engineering computations, understanding and ability to analyse and solve complicated computational problems.

After passing this course you should be able to carry out the following:

Problem definition, formulation of the problem in mathematical terms, choosing suitable numerical procedure and computer software, scheduling and generating the computational procedure and reporting the results and conclusions.

Moreover you should have acquired

- 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.
- Acquire the self confidence needed to handle complicated problems and take the responsibility to deliver reasonable results.
- Improved the ability to work in groups, and in oral and written communication.

Course contents

Computational assignment concerning an industrial or academic problem. Data collection, background studies required to understand the problem, problem required to solve the problem. Oral written and web based presentation of the results.

Course literature

Anpassad till projektuppgifterna.

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.

Other requirements for final grade

Approved computational assignment including seminar, web pages and computer program presentation (PRO1; 7,5 credits).

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.