



KF2340 Chemical Sciences 15.0 credits

Chemical Sciences

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 KF2340 valid from Autumn 2007

Grading scale

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

Education cycle

Second cycle

Main field of study

Specific prerequisites

Language of instruction

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

Intended learning outcomes

You should be able to use correctly the language appropriate to chemical sciences. Specifically, you should:

- be able to define, recognize, comprehend, and use correctly every word which is emphasized in the course materials.
- be able to state each important chemical law or theory related to thermodynamics, heat and mass transfer, or kinetics in both verbal and equation form.

You should be able to use correctly and quantitatively the elementary data and laws of chemistry in computations. Specifically, you should:

- be able to select those chemical data and laws which are appropriate and useful in solving a given chemical problem.
- be able to use the appropriate data and equation form of chemical laws to calculate the chemical properties of materials and systems, expressing the results in appropriate SI units.

You should be able to choose and use an appropriate sequential approach to qualitative and quantitative chemical problems. Specifically, you should:

- be able to choose which of the chemical laws, and which of the possible forms of them, is most appropriate to obtain the desired result from available data.
- be able to devise a correct and reasonable sequential order of steps required to obtain the desired result from available data.
- be able to carry out computations in the above sequential order with correct data and units.

Course contents

Advanced modules of lectures and seminars covering specialist topics in chemical engineering, polymers and fiber based materials are taken, together with an individual research project.

Examination

- PRO1 - Project, 6.0 credits, grading scale: P, F
- SEM1 - Seminar, 4.0 credits, grading scale: P, F
- TEN1 - Examination, 5.0 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

Written examination 5 credits.

SEM (seminar) 4 credits

Research project (report + seminar) 6 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.