CK2030 Scientific Methodology and Research Horizons 7.5 credits

Vetenskapsmetodik och forskningsperspektiv

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

Establishment

Course syllabus for CK2030 valid from Spring 2025

Grading scale

P, F

Education cycle

Second cycle

Main field of study

Specific prerequisites

Bachelor's degree in Chemistry or a closely related subject within a programme that includes:

50 university credits (hp) in chemistry or closely related subject , 20 university credits (hp) in mathematics, numerical analysis and computer science.

Language of instruction

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

Intended learning outcomes

After passing the course the student should be able to:

- Explain basic concepts within scientific theory, methodology and ethics related to questions, problems and research projects within the chemical sciences
- Discuss how basic concepts within scientific theory, methodology and ethics can be used to formulate hypotheses and research questions as well as identify and perform research projects of relevance for the chemical sciences.
- Describe and discuss sustainable development in chemical sciences within academia and industry from social, economical and ethical perspectives, including equality, diversity and inclusion

Course contents

- Scientific theory
- Scientific methodology
- Scientific ethics and risk analysis
- The chemical engineer’s role for sustainable development, equality, diversity and inclusion.

Examination

- SEM1 - Seminar, 1.5 credits, grading scale: P, F
- SEM2 - Seminar, 2.0 credits, grading scale: P, F
- INL3 - Project, 3.0 credits, grading scale: P, F
- INL4 - Hand-in assignment, 1.0 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.

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.