



AK2028 Scientific Quality, Project Course 7.5 credits

Vetenskaplig kvalitet, projektkurs

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 AK2028 valid from Spring 2012

Grading scale

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

Education cycle

Second cycle

Main field of study

Built Environment

Specific prerequisites

AK2002 Good and Bad Science, 7.5 credits (former code 1H1602), or
AK2036/AK2038/AK2040 Theory and Methodology of Science, 7.5 credits, or equivalent knowledge.

Language of instruction

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

Intended learning outcomes

After completed course, the student will be able to

- select independently a proper method of investigation for a scientific study, especially in areas where the student possesses prior knowledge,
- demonstrate a deepened ability to critically scrutinize scientific studies, especially in areas where the student possesses prior knowledge,
- account for and critically discuss quality criteria in science,
- analyze scientific studies in relation to common scientific demarcation criteria.

Course contents

The course consists of seminars and lectures on general issues in science, as well as an individual project work under supervision. The project work may be an actual scientific investigation, but it may alternatively be a literature study pertaining to the scientific quality in a particular area, or it may be a philosophical investigation of issues related to methodology or quality in a particular scientific area.

Topics to be covered in the seminars and lectures:

- Hypothesis testing
- Sources of error and how to avoid them in experimental and observational method
- Quality criteria in science
- Demarcation criteria for science
- Methods for providing systematic overviews of the scientific evidence in a particular area.

Disposition

Lectures, seminars, and individual project work under supervision.

Course literature

Course literature will be selected according to each student's project topic.

Equipment

None.

Examination

- PRO1 - Written Report, 6.0 credits, grading scale: A, B, C, D, E, FX, F
- SEM1 - Seminar Participation, 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.

Other requirements for final grade

Seminar participation (SEM1; 1.5 credits) and written report (PRO1; 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.