



F1N5114 Theory of Science and Research Methodology, Social Science 7.5 credits

Vetenskapsteori och forskningsmetodik, samhällsvetenskap

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 F1N5114 valid from Spring 2009

Grading scale

Education cycle

Third cycle

Specific prerequisites

Basic degree 180 hp.

Language of instruction

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

Intended learning outcomes

The course provides an introduction to the theory and methodology of science and is intended for the beginning PhD student. One aim is to supply the basic concepts needed for placing the techniques and knowledge acquired in the student's other courses in the wider context of the social sciences. Another aim is to provide the basic intellectual tools that allow for a reasoned and critical assessment of results and methods from the wide variety of disciplines that the student is likely to encounter during his or her continued career in research and/or in professional life.

The course is mainly focused on the general theoretical and methodological issues that arise in science, with an emphasis on the social sciences; but basic theoretical issues, techniques and problems from the natural and technological sciences are also covered to provide the student with a wider outlook. Emphasis is placed on the fundamental problems common to the social and natural sciences and on the general strategies, methods and concepts that modern science has developed to address these problems.

Course contents

- Scientific knowledge
- Hypothesis testing
- Causes and correlations
- Observations and measurements
- Science and social science - A contrastive approach
- Explanations and source analysis
- The philosophy of economics
- Models
- Science for societal decision-making
- The development of science
- Research ethics

Course literature

- Malcolm Williams "Introduction to philosophy of social research"
- Sven Ove Hansson "The art of being scientific"

Examination

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

- Participation in seminars, 1,5 hp
- Final exam 3 hp
- Project 3 hp

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.