



# MJ2673 Research Methodology and Theory of Science 7.5 credits

Forskningsmetodik och vetenskapsteori

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

## Establishment

The course syllabus is valid from Autumn 2023 according to the Head of school decision: A-2023-0461, 3.2.2. Decision date: 2023-03-27

## Grading scale

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

## Education cycle

Second cycle

## Main field of study

## Specific prerequisites

At least 150 higher education credits in science or technology.

Courses from upper secondary school corresponding to the courses Eng B/6 according to the Swedish upper secondary school system or equivalent.

# Language of instruction

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

## Intended learning outcomes

After finishing the course, the student should be able to:

- Reflect on what is science and underlying ideas
- Reflect on true and false science
- Debate about the role of science in society
- Explain requirements on a scientific work.
- Explain the most common scientific methods and tools for sustainability research, such as case study, surveys, interviews, data analysis, experimental methods and field studies
- Explain and apply rules for copying, citation and referencing.
- Critically review and constructively comment on a finalized thesis work/scientific paper with respect to aims, relevance, objectives, methods/theory, evidence and uncertainty.
- Design a framework for own Master thesis work/research paper, including for example thesis structure, research question/hypothesis, aims, relevance, methods and generalization of results.

## Course contents

The course Research Methodology and Theory of Science will give you deeper understanding of science and its different paradigms. The course will improve your skills in doing research projects and carrying out your Master thesis work. The course will cover quantitative and qualitative methods for sustainability research.

## Examination

- UPP4 - Home Assignment 2, 1.5 credits, grading scale: A, B, C, D, E, FX, F
- PRO1 - Project Work and Presentation, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- UPP3 - Home Assignment 1, 1.5 credits, grading scale: A, B, C, D, E, FX, F
- NÄR1 - Attendance, 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.

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.