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

Course syllabus for MJ2673 valid from Autumn 2008

Grading scale

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

Education cycle

Second cycle

Main field of study

Specific prerequisites

At least three years of academic studies in a program of engineering, or natural science

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:

- Describe the historical development of scientific methods and underlying ideas
- Describe and explain existing and ideal requirements on a scientific work
- Conduct a discussion about true and false science
- Explain the most common scientific methods and tools
- Analyse an example of completed theses work according to:

Delimitations, aim and methodsUncertainty of results due to chose if methods and gathered information Rules for spelling, contend and language styleSyntheses of the state of art

- Source critically examine the gathered information
- Explain rules for copying and citation of other works
- Describe how to formulate an scientific article for a journal

Course contents

Research Methodology and Theory of Science

Information gathering and analyses

Criticism of the information sources

Course literature

The litterateur will be presented during the course start

Examination

- PRO1 - Project Work and Presentation, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- UPP2 - Home Assignment 2, 1.5 credits, grading scale: P, F
- NÄR1 - Attendance, 1.5 credits, grading scale: P, F
- UPP1 - Home Assignment 1, 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.

Other requirements for final grade

Attendance (1.5 hp; P/F)Home assignment 1 (1.5 hp; A – F)Home assignment 2 (1,5 hp; A - F)Project work and presentation (3 hp; A – F)

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.