



# AI2150 Theory of Science and Research Methods 7.5 credits

## Vetenskaplig grundkurs

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 AI2150 valid from Autumn 2012

## Grading scale

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

## Education cycle

Second cycle

## Main field of study

Built Environment

## Specific prerequisites

Students must have passed 75% of the first year's courses in the Masters programme in Real Estate Development and Financial Services.

## Language of instruction

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

## Intended learning outcomes

Theory of science and research methods prepares the students for their Master's thesis work, to be done the following semester. The aim is to provide an overview of theories and methods in research, with emphasis on methods in the field of social sciences. The course will provide the students with necessary practical skills to manage their master's thesis.

After this course the students will be able to demonstrate their understanding of the research process by:

- Formulate a thesis proposal.
- Write a literature review.
- Defend their thesis proposal.
- Discuss someone else's thesis proposal and thesis.
- Design a small-scale social science research project.
- Develop an outline for a dissertation.
- Formulate the most suitable method for a specific research project.

## Course contents

- Introduction to theory of science
- Concepts in science (hypothesis, model, theory, correlation, definition etc)
- The research process
- Research problems
- Research design
- Measurements
- Data sources
- Data collection
- Sampling
- Preparation and analysis of data
- Quantitative data analysis
- Qualitative data analysis
- Cross-cultural research
- Writing the final report

## Course literature

Meddelas vid kursstart.

## Examination

- INL1 - Thesis Proposal, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- SEM1 - Seminars, 2.5 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Exercises, 2.0 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.

## Other requirements for final grade

Assignments, 3.0 credits, grade A-E

Seminars, 2.5 credits, grade A-E

Exercises, 2.0 credits, grade Pass

## 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.