DA150X Degree Project in Computer Science and Engineering, First Cycle 15.0 credits

Examensarbete inom datateknik, grundnivå

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

Establishment

The official course syllabus is valid from the spring semester 2026 as decided by the director of first and second cycle education: HS-2025-1963. Date of decision: 2025-10-20

Grading scale

P, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

In order to begin the degree project, at least one of the following sets of requirements must be fully met. Requirement set 1 is introduced for admission for VT26 and will be applied going forward. Requirement set 2 is the same as in effect since 2021 and will be applied for the last time for admission for VT26.

Requirement set 1 (VT26 and onwards):

In order to begin the degree project, the following two points must be met:

1. At least 120 credits from years 1-3 of the mandatory courses within the curriculum for the Master of Science in Computer Engineering (CDATE) must be completed no later than two weeks after the start date of period 3.

For students who have been admitted to CDATE from COPEN (open admission at KTH), the mandatory courses in year 1 at COPEN replace the mandatory courses in year 1 at CDATE in the above point calculation.

Courses that qualify for one of the master's programs included in the CDATE curriculum may be counted towards the 120 credits.

2. In addition, courses/exams in all of the following areas must be completed no later than two weeks after the start date of period 3:

- Knowledge and skills in programming, 7 credits, equivalent to completed course DD1337 or DD1310 together with DD1380.
- Knowledge in algorithms and data structures, 6 credits, equivalent to completed course DD1338.
- Skills in engineering writing, 4.5 credits, equivalent to completed course DA1600.
- Knowledge in sustainable development, 3 credits, equivalent to completed exam PRO1 or INL1 within AL1504.

Requirement set 2 (until spring 26):

At least 102 credits from years 1-2 and period 1 of year 3 of the mandatory courses within the curriculum for the Master of Science in Computer Engineering (CDATE) must be completed by the start date of period 2 in order for the student to begin the degree project. In addition, courses in all of the following areas must be completed:

- Programming, 7 credits, equivalent to completed course DD1337 or DD1310 together with DD1380.
- Algorithms and Data Structures, 6 credits, equivalent to completed course DD1338.
- Engineering Writing, 4.5 credits, equivalent to completed course DA1600.
- Sustainable Development, 6 credits, equivalent to completed course AL1504 (see below for active participation).
- Experience of project work in a group, for example from DD1367/DD1369.

The following text applies only to requirement set 2:

Active participation in a course offering where the final examination is not yet reported in LADOK is considered equivalent to completion of the course.
Being registered for a course counts as active participation.
The term 'final examination' encompasses both the regular examination and the first re-examination.

Intended learning outcomes

After passing the course, the student should be able to

- independently identify, formulate and contextualize relevant research problems in computer science
- apply skills and systematically and critically integrate knowledge acquired in the Master of Science in Computer Science program to deal with complex problems at the undergraduate level in computer science
- identify their own information needs and independently acquire the knowledge and skills required to deal with such problems
- compile and describe current research and current development work in the area relevant to the project
- justify their own conceptual approach and choice of appropriate methods to produce adequate research results based on scientific evidence
- systematically evaluate, critically discuss and reflect on different types of impact from their own and others' research work, taking into account the problem area as well as ethical, societal and sustainability-related aspects
- report and present their work orally and in writing in accordance with requirements for structure, formal content, style and language
- independently plan and carry out a research assignment taking into account limitations in time and other resources.

Course contents

The degree project is carried out by students in pairs or, in exceptional cases, individually.

Students first identify, motivate, contextualize and formulate a relevant research problem within the field of computer science. In order to produce scientific evidence and research results, students independently propose a methodological approach and choose appropriate methods to address the research problem. The work should be based on scientific foundations and engineering principles and contain research-based investigation and analysis.

With some support from a supervisor, students should independently plan and carry out their study.

Students present their work both orally and in writing and summarize it in the form of a popular science description that accounts for societal impact and sustainability aspects. Peer review of other students' project work is included.

Examination

- PRO1 - Project, 15.0 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.

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.