



DT2151 Project in Conversational Systems 7.5 credits

Projekt i konverserande system

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

Establishment

The official course syllabus is valid from the autumn semester 2026 as decided by the director of first and second cycle education. Decision date: 2026-03-23

Grading scale

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

Education cycle

Second cycle

Main field of study

Computer Science and Engineering

Specific prerequisites

Knowledge of basic machine learning, speech technology or multimodal interactions, 7.5 credits, equivalent to completion of courses DD1420/DD2421, DT2112 respectively DT2140.

Intended learning outcomes

After passing the course, the student shall be able to

- evaluate strengths and weaknesses in conversational systems by referring to theories of linguistic interaction
- implement a conversational system using an existing framework
- search for, summarise and report on scientific and technical literature in the area
- plan and carry out a project in the domain of conversational systems.

Course contents

Conversational systems interact with people through linguistic interaction (speech, writing, body language, etc.), for example in the form of chatbots, social robots or voice assistants. The course provides students with a theoretical and practical introduction to conversational systems, as well as the opportunity for a specialisation in the form of a project.

The course covers:

- Introduction to conversational systems: history, concepts, application areas
- Overview of speech- and language-engineering components for conversational systems, including both rule-based and data-driven methods based on large language models and generative AI
- Methods for design and evaluation
- Examples of different frameworks and tools for implementing conversational systems

Examination

- LAB1 - Laboratory assignments, 1.5 credits, grading scale: P, F
- INL1 - Home assignments, 1.5 credits, grading scale: P, F
- PRO3 - Project assignment, 4.5 credits, grading scale: A, B, C, D, E, FX, 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.

Transitional regulations

Earlier, two examination modules were related to the project: PRO1 and PRO2. These have now been replaced by PRO3. There were also labs and a written assignment that did not have separate modules. If these have already been submitted in an earlier course offering, the student can be considered to have completed INL1 and LAB1.

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.