



# DD2484 Advanced Topics in Programming Languages 7.5 credits

## Avancerade områden inom programspråk

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

This official course syllabus is valid from the autumn semester 2023 in accordance with decision by the head of school: J-2022-2164. Date of decision: 09/10/2022

## Grading scale

P, F

## Education cycle

Second cycle

## Main field of study

Computer Science and Engineering

## Specific prerequisites

Knowledge in principles of programming languages, 7.5 higher education credits, equivalent to completed course DD2481.

Knowledge in software engineering, 7.5 higher education credits, equivalent to completed course DD2480. 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.

## Language of instruction

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

## Intended learning outcomes

After passing the course, the student shall be able to

- present the essential contents of scientific articles within the area of the course
- discuss advanced concepts within the area of the course
- create solution proposals for problems within the area of the course
- carry out practical work to retrieve technical solutions for problems within the area of the course

in order to

- obtain an understanding of current research and development in the programming language field
- become prepared for own research and development in the programming language field, for example in a degree project.

## Course contents

The course content can vary from course offering to course offering. Examples of subjects include, but are not limited to: concurrent programming, probabilistic programming, differentiable programming, knowledge-based programming, domain specific language technology, programming languages for security, subordinate types, type and effect systems, and program analysis. During the course, the students will get acquainted with several advanced subjects and then get the possibility to specialise within specific subjects.

## Examination

- ÖVN1 - Oral and written assignments and project work, 7.5 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.

## 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.