# FDD3511 Seminar course in Formal Methods and Cyber Security, stage 1 3.0 credits

**Seminariekurs i formella metoder och cybersäkerhet, steg 1**

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

## Establishment

Course syllabus for FDD3511 valid from Spring 2021

## Grading scale

P, F

## Education cycle

Third cycle

## Specific prerequisites

Compatible with the admission requirements to the doctoral program in computer science.

## 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 should be able to review techniques, methods, and tools within the particular subject area covered by the course offering, in order to be able to use these techniques, methods, and tools in their own research.

## Course contents

Each stage of the seminar course gives an introduction to the research state of the art within a subject necessary to apply formal methods to problems within the domain of cyber security. Examples of such subjects are 1) formal modelling av computer systems and components, 2) advanced techniques for low level program analysis, 3) formalization and proof of security properties, 4) term rewriting, 5) logics for security modelling and analysis.

## Examination

- EXA1 - Examination, 3.0 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.

Beside the presentation itself the course has the following examination elements: Activity at the seminars, hand in of a set of questions as preparation of the week's seminar, and homeworks.

## Other requirements for final grade

Presentation at one seminar and for other seminars 1) active participation and preparation of discussion points, and 2) four homeworks.

## 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.