



# IK2215 Advanced Internetworking 7.5 credits

Avancerad internetteknik

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

The official course syllabus is valid from the autumn semester 2022 in accordance with the decision from the head of school: J-2022-0532. Decision date: 28/03/2022

## Grading scale

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

## Education cycle

Second cycle

## Main field of study

Computer Science and Engineering, Electrical Engineering

## Specific prerequisites

Knowledge in Internet technique, 6 higher education credits, equivalent completed course IK1552.

## 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

- describe functions of different network elements and explain design principles for protocols and functions at different logical levels.
- identify and describe examples of sustainability aspects related to the subject area of communication systems.
- design, configure and handle TCP/IP networks and provide services to end users by primarily use PC hardware and Unix.

For higher grades, the student should also be able to

- compare and explain advantages and disadvantages of different protocol designs based on general principles and studies of different standards for protocols.
- critically evaluate existing and new designs for communications protocol by using technical bases of assessment as scalability, robustness and usability as a basis for comparisons.

## Course contents

The course focuses on communications protocol for Internet, and the emphasis lies on generic mechanisms on the different protocols in the protocol stack TCP/IP. To give a deeper understanding of such mechanisms, designs of different protocols are evaluated and compared at these levels. To further illustrate different principles and to give practical experience contains the course in addition to theoretical items as lectures, a set labs and a project task.

## Examination

- LAB1 - Laboratory Work, 3.0 credits, grading scale: P, F
- PRO1 - Project work, 1.5 credits, grading scale: P, F
- TEN1 - Examination, 3.0 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.

TEN1 is carried out as continuous digital examination in a computer room.

## 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.