



# IK2213 Network Services and Internet-based Applications 7.5 credits

**Nätverkstjänster och internetbaserade tillämpningar**

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**

Course syllabus for IK2213 valid from Autumn 2007

## **Grading scale**

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

## **Education cycle**

Second cycle

## **Main field of study**

## **Specific prerequisites**

## **Language of instruction**

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

## Intended learning outcomes

The goal is to give deep understanding of how Internet work and are designed. In addition, the course provides insights into how protocols and services can be designed and implemented on different types of network systems.

## Course contents

The course consists of two parts: lectures and a project. The lectures cover the following topics:

- Principles for design of distributed applications: client/server, peer-to-peer, multi-cast-based applications.
- Design and implementation of network systems of different types, such as packet switches, servers, server clusters, “Content Delivery Networks”, mobile systems and sensor networks.
- Network programming: socket programming, principles for event-driven programs and multiprocess programs. Representation of data types, etc..

The project part consists of number of projects (four to five). In each project, the goal is to design and implement a protocol, service, network function, etc, based on a given requirement specification. Projects are performed in groups of two persons, and should result in a written report and a working solution.

## Course literature

Ingen obligatorisk kurslitteratur.

## Examination

- NÄR1 - Attendance, 1.5 credits, grading scale: P, F
- PRO1 - Project, 6.0 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.

## Other requirements for final grade

- Compulsory lectures
- Written report and a demonstration

## 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.