HI1018 Communication Networks 7.5 credits

Kommunikationsnät

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 HI1018 valid from Autumn 2007

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Basic knowledge in data communication, e.g. HI1000 Data communication and networks and HE1001 Telecommunication

Language of instruction

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

Intended learning outcomes

Course contents

- Layered architectures of protocols and networks. The OSI model and the Internet protocols.
- The physical layer: transmission media, coding, and modulation.
- Transmission networks: pulse code modulation (PCM), multiplexing, networks based on synchronous digital hierarchy (SDH), optical networks
- The data link layer: error detection, error control, retransmission, link utilization
- Local area networks: network topologies, access methods, DSMA/CD, LAN standards, bridges and switches
- The network layer: addressing, routing, packet switching, circuit switching and cell-based switching
- The Internet protocol. Routing protocols.
- Telephony networks: ISDN, mobile networks, signaling
- Virtual circuit networks: cell-based networks, frame relay
- Network planning and applied traffic theory

Examination

- LAB1 - Laboratory Work, 3.0 credits, grading scale: P, F
- RED1 - Account, 4.5 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Examination, 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.

Other requirements for final grade

Passed exam (TEN1; 4,5 cr.), credit rate A-F
Passed lab assignments (LAB1; 3 cr.), credit rate A-F
In total, credit rate A-F

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.