EP111U Computer Networks 7.5 credits

Datornät

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

Establishment

Course syllabus for EP111U valid from Spring 2022

Grading scale

P, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

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

- explain principles and parts of system architectures for networks and describe system functions in the architecture that is necessary for functioning network summarise and explain how networks in whole function
- explain, calculate and discuss data communication and data links for both point-to-point and shared links describe necessary functions for links with correct descriptions and to carry out calculations of capacity, error handling and throughput
- explain network structures and principles of addressing and routing with correct terminology and distinguish and discuss networks on data link network layer carry out routing calculations and describe protocols for packet switching
- explain and illustrate the concepts of application and service and describe the function of given systems and user applications explain the functions in transport protocol for reliable transfer rightly descriptions and apply them on selected problems

in order to obtain an overview of the function of communication networks and a good basis for continued studies of the subject.

Course contents

The course spans over the functions in a communication system from transmission of data over a link to network services and applications and system architecture that organizes the functions in protocols. The course intends to give understanding and application of design principles of software engineering and overview of underlying system principles, communication technologies and considerable standardized systems.

The parts of the course are:

- Data communication and data links
- Networks with many links
- Transport and applications
- System architecture

Examination

- KON1 - Partial exam, 4.5 credits, grading scale: P, F
- PRO1 - Project assignment, 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.

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.