



*Course syllabus*

# Datorkommunikation Computer Communication

**EITA60, 6 credits, G1 (First Cycle)**

**Valid for:** 2023/24

**Faculty:** Faculty of Engineering, LTH

**Decided by:** PLED C/D

**Date of Decision:** 2023-04-18

## General Information

**Compulsory for:** IDA1, IEA1

**Language of instruction:** The course will be given in Swedish

## Aim

The aim of the course is to give the student basic knowledge of Computer Communications. It is also intended to give a thorough understanding of system principles and implementation of computer communication, computer networks and distributed systems.

## Learning outcomes

### *Knowledge and understanding*

For a passing grade the student must

- be able to explain fundamental concepts such as protocol, layer, package and routing
- be able to describe the OSI and TCP/IP models
- be able to explain and compare different methods for access, flow control and error detection.

### *Competences and skills*

For a passing grade the student must

- be able to analyze routing tables in simple networks
- be able to make use of protocol analysing software for analysis and diagnosis of computer network traffic.

### *Judgement and approach*

For a passing grade the student must

- Show knowledge of the possibilities and limitations of computer communication
- Be able to cooperate in a group

## Contents

Protocols and standards. The Internet Model (TCP/IP) and the OSI Model. Digital and analog coding and modulation techniques. Transmission media. Error detection and error correction. Flow and error control. Multiple access and Ethernet. LAN and WAN. ARP, ICMP, IP and routing. UDP and TCP. DNS, SMTP, FTP and HTTP.

## Examination details

**Grading scale:** UG - (U,G) - (Fail, Pass)

**Assessment:** For a passing grade, approved exam, approved laboratory work and approved presentation task are required, as well as participation in Engineering Day.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

### Parts

**Code:** 0118. **Name:** Written exam.

**Credits:** 4. **Grading scale:** UG. **Assessment:** Passed exam. **Contents:** Written exam

**Code:** 0218. **Name:** Laboratory Work.

**Credits:** 1,5. **Grading scale:** UG. **Assessment:** Passed laboratory exercises.

**Code:** 0318. **Name:** Presentation.

**Credits:** 0,5. **Grading scale:** UG. **Assessment:** Approved presentation.

**Code:** 0418. **Name:** Seminar.

**Credits:** 0. **Grading scale:** UG. **Assessment:** Participation in Engineering Day. **Contents:** Compulsory participation in Engineering Day.

## Admission

**The number of participants is limited to:** No

**The course overlaps following course/s:** ETS130, ETS302, EITF45

## Reading list

- Maria Kihl och Jens A. Andersson: Datakommunikation och nätverk. Studentlitteratur, 2020, ISBN: 9789144135021.

## Contact and other information

**Course coordinator:** Christian Nyberg, [Christian.Nyberg@eit.lth.se](mailto:Christian.Nyberg@eit.lth.se)

**Course homepage:** <http://www.eit.lth.se/kurs/eita60>

**Further information:** Some of the compulsory moments are parts of the Engineering days (Ing-dagar)