Linnæus University

Course syllabus

Faculty of Technology
Department of Computer Science and Media Technology

1DV701 Datornät - introduktion, 7,5 högskolepoäng
Computer Networks - an introduction, 7.5 credits

Main field of study
Computer Science

Subject Group
Informatics/Computer and Systems Sciences

Level of classification
First Level

Progression
G1F

Date of Ratification
Approved by Faculty of Technology 2015-05-22
The course syllabus is valid from spring semester 2016

Prerequisites
30 credits in Computer Science, including Problem Solving and Programming (1DV506),
7.5 credits and Operating Systems (1DV512), 7.5 credits or equivalent.

Objectives
Upon completion of the course the student should be able to:

- give an account of the design and architecture of modern computer networks and the services offered in these networks
- describe the functionality in different layers of the TCP/IP protocol stack
- explain how the most important protocols in the TCP/IP stack works and how they are used
- write client/server applications
- explain how computer networks and data communication is an important part of modern society.

Content
The purpose of the course is to give theoretical knowledge about data communication and computer networks as well as practical skills in network programming.
The course covers:

- private, public and local networks
- network architectures such as the ISO reference model and TCP/IP
- methods for data transmission, coding, flow control and error handling
- routing and routing algorithms
- standrad protocols in the TCP/IP protocol stack
- network programming

- network programming.

Type of Instruction
Teaching consists of lectures, seminars and practicals. Practicals are individual or carried out in groups. Attendance at some activities is mandatory.

Examination
The course is assessed with the grades A, B, C, D, E, Fx or F.
The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail (i.e. received the grade F).

Assessment of the student's performance is made through written examination and/or assignments which are presented orally and/or in written form. The assessment method is decided at the start of the course.

Course Evaluation
During the course or in close connection to the course, a course evaluation is to be carried out. The result and analysis of the course evaluation are to be communicated to the students who have taken the course and to the students who are to participate in the course the next time it is offered. The course evaluation is carried out anonymously. The compiled report will be filed at the Faculty.

Credit Overlap
The course cannot be included in a degree along with the following course/courses of which the content fully, or partly, corresponds to the content of this course:1DV201 Computer Networks - an introduction, 7.5 credits

Other
Grade criteria for the A–F scale are communicated to the student through a special document. The student is to be informed about the grade criteria for the course by the start of the course at the latest.

Required Reading and Additional Study Material
Required reading
Comer D., *Computer Networks and Internets*, 6 ed. Pearson, 2015. Pages 640 (667).
DFM,*Distributed material*. Pages 50 (50).