Linnæus University

Course syllabus

Faculty of Technology
Department of Computer Science

1DV21U 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 2014-05-15
The course syllabus is valid from spring semester 2014

Prerequisites
30 credits in Computer Science, including Problem Solving and Programming (1DV006),
7.5 credits and Operating Systems (1DV012), 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.

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 Fail (U), Pass (G) or Pass with Distinction (VG).
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.

On request, students may have their credits translated to ECTS-marks. Such a request must be sent to the examiner before the grading process starts.

Course Evaluation
A course evaluation will be carried out at the end of the course in accordance with the guidelines of the University. The result of the course evaluation will be filed at the department.

Required Reading and Additional Study Material
Required reading
Comer, D,*Computer Networks and Internets - with Internet Applications*, 4 ed. Prentice Hall, 2004. Pages 580 (768).
DFM,*Distributed material*. Pages 50 (50).