Linnæus University

# Course syllabus

Faculty Board of Science and Engineering
School of Computer Science, Physics and Mathematics

## 1DV201 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 Organisational Committee 2009-09-08

The course syllabus is valid from spring semester 2010

**Prerequisites**
At least one semester of university studies (equal to 30 higher education credits) in computer science, including a basic course in Programming (1DV006) and a course in Operating Systems (1DV012), or equivalent.

## Expected learning outcomes

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 written course evaluation will be carried out at the end of the course in accordance with the guidelines of the University. 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).
MSI,*Distributed material*. Pages 50 (50).