

SYLLABUS

Programming for computer network 7.5 credits D0042D

Programmering för datornätverk

Course syllabus admitted: Autumn 2023 Sp 1 - Present

**DECISION DATE
2021-06-16**

Programming for computer network 7.5 credits D0042D

Programmering för datornätverk

First cycle, D0042D

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	G U 3 4 5	Datorkommunikation	Computer Technology

Entry requirements

In order to meet the general entry requirements for first cycle studies you must have successfully completed upper secondary education and documented skills in English language and the course D0007E Computer Networks or equivalent.

Selection

The selection is based on 1-165 credits.

Course Aim

The course aims to develop the students ability to construct correct and well structured programs in a modern programming language.

After course completion, the student should be able to demonstrate:

- knowledge in software development
- an understanding of the software development process
- knowledge in design and how to apply computer based solutions to common algorithmic problems - competence to master the major features of a modern programming language
- ability to develop program documentation
- knowledge in network communication within software
- ability to develop automated software for network equipment configuration

Contents

Introduction to program development and development environments. Variables and program states, choice, iteration, arithmetic and logic expressions, strings and text processing, data structures, parameterization and function abstraction. The file concept, standard libraries and error handling. References vs. values, dynamic data structures. Introduction to objects. Problem solving, program structure and documentation. Knowledge of and insight in how to automate maintenance and configuration of network equipment with software.

The course includes a number of individual assignments where the student develops programs and practice problem solving. The course gives the student the ability to design their own programs and understand how they work and evolve. The course includes a number of individual assignments where the student develops programs and practice problem solving. The course gives the student the ability to design their own programs and understand how they work and evolve.

Realization

Each course occasion's language and form is stated and appear on the course page on Luleå University of Technology's website.

Instruction consists of lectures and laboratory work.

Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided. Written exam and mandatory laboratory assignments.

Unauthorized aids during exams and assessments

If a student, by using unauthorized aids, tries to mislead during an exam or when a study performance is to be assessed, disciplinary measures may be taken. The term "unauthorized aids" refers to aids that the teacher has not previously specified as permissible aids and that may assist in solving the examination task. This means that all aids not specified as permissible are prohibited. The Swedish version has interpretative precedence in the event of a conflict.

Overlap

The course D0042D is equal to SMD180, D0019N, SMD134, D0009E, SMD170, D0017D, D0028E, L0002B

The course D0042D is equal to D0009E.

Course offered by

Department of Computer Science, Electrical and Space Engineering

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0003	Laboratory work	U G#	3	Mandatory	A17	
0004	Written exam	G U 3 4 5	4.5	Mandatory	S22	

Study guidance

Study guidance for the course is to be found in our learning platform Canvas before the course starts. Students applying for single subject courses get more information in the Welcome letter. You will find the learning platform via My LTU.

Last revised

by Jonny Johansson, HUL SRT 2021-06-16

Syllabus established

by LTU Skellefteå 2010-02-19