

# Introduction to System Administration

Programme course

8 credits

Grundläggande systemadministration

TDP031

Valid from: 2021 Spring semester

**Determined by**

Board of Studies for Computer Science  
and Media Technology

**Date determined**

2020-09-29

## Main field of study

Computer Science and Engineering

## Course level

First cycle

## Advancement level

G1X

## Course offered for

- Bachelor's Programme in Programming

## Specific information

Can not be included in degree together with TDDI41.

## Prerequisites

Participants are expected to have working knowledge of a Unix-based system from the command line.

## Intended learning outcomes

This course gives students practical experience with basic installation and maintenance of computer systems with a focus on networks and network services. After completing this course, participants will:

- be able to explain how a modern Unix-based system is constructed;
- rapidly locate, evaluate and structure information in standards, technical documentation and professional literature to create solutions to new problems;
- be able to design, implement and maintain a computer system suitable for a small office or company;
- be able to test and troubleshoot services and other functionality in a small computer system;
- be able to demonstrate a system, including the services provided by the system, to show that system requirements have been met;
- have the basic knowledge and skills required to start working as a system administrator.
- to be able to use tools such as docker, lxc and kubernetes
- have a basic understanding of the technologies and tools used for deployment of software system (dev-ops)

## Course content

Installation, configuration and maintenance of Unix systems. Configuration of routing, DNS, time services, storage systems and network storage. Tools and platform for deployment such as docker and kubernetes.

## Teaching and working methods

The course consists of a series of laboratory exercises and a number of lectures. During the course, participants will:

- plan and structure the work in a team to implement a system that meets given requirements;
- evaluate alternative solutions to select the solution that best meets system requirements as well as external constraints;
- be exposed to realistic scenarios and learn to adapt plans and solutions to changing external constraints.

The course runs over the entire autumn semester.

## Examination

LAB1	Laboratory exercise	8 credits	U, 3, 4, 5
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## Grades

Four-grade scale, LiU, U, 3, 4, 5

## Other information

### About teaching and examination language

The teaching language is presented in the Overview tab for each course. The examination language relates to the teaching language as follows:

- If teaching language is Swedish, the course as a whole or in large parts, is taught in Swedish. Please note that although teaching language is Swedish, parts of the course could be given in English. Examination language is Swedish.
- If teaching language is Swedish/English, the course as a whole will be taught in English if students without prior knowledge of the Swedish language participate. Examination language is Swedish or English (depending on teaching language).
- If teaching language is English, the course as a whole is taught in English. Examination language is English.

### Other

The course is conducted in a manner where both men's and women's experience and knowledge are made visible and developed.

The planning and implementation of a course should correspond to the course syllabus. The course evaluation should therefore be conducted with the course syllabus as a starting point.

## Department

Institutionen för datavetenskap

## Director of Studies or equivalent

Jalal Maleki

## Examiner

Anders Fröberg

## Course website and other links

<http://www.ida.liu.se/~TDDI41/>

## Education components

Preliminary scheduled hours: 64 h

Recommended self-study hours: 149 h

## Course literature

**Other**