Introduction to System Administration

Programme course

8 credits

Grundläggande systemadministration

TDP031

Valid from: 2020 Spring semester

Determined by
Board of Studies for Computer Science and Media Technology

Date determined
2019-09-23

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.

Entry requirements
Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

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 kubernets
- 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 kubernets.

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 chaning external constraints.

The course runs over the entire autumn semester.

Examination

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

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