Introduction to System Administration

Programme course

8 credits

Grundläggande systemadministration

TDP031

Valid from: 2019 Spring semester

Determined by
Board of Studies for Computer Science and Media Technology

Date determined
2018-08-31

Main field of study
Computer Science and Engineering

Course level
First cycle

Advancement level
G1F

Course offered for
- Programming, Bachelor's Programme

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

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