Introduction to System Administration

Programme course

8 credits

Grundläggande systemadministration

TDDI41

Valid from: 2017 Spring semester

Determined by
Board of Studies for Computer Science and Media Technology

Date determined
2017-01-25

Main field of study
Computer Science and Engineering

Course level
First cycle

Advancement level
G1X

Course offered for
- Computer Engineering, B Sc in Engineering
- Programming

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
Before the course, participants must be able to use a Unix-based system from the command line, be able to explain how RIP (Routing Information Protocol) works, be able to explain what DNS (Domain Name System) is and what it is for, and be able to explain roughly how it works, be able to explain what SMTP (Simple Mail Transfer Protocol) is and what it is for, and be able to explain roughly how it works and be able to explain how addressing works in IPv4, as well as explain terms such as “prefix” and “netmask”.

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.

Course content

Installation, configuration and maintenance of Unix systems. Configuration of routing, DNS, time services, storage systems and network storage. Advanced configuration of e-mail, including spam and virus protection.

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/~TDDI09/

Education components
Preliminary scheduled hours: 64 h
Recommended self-study hours: 149 h

Course literature

Additional literature

Other

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.