Blekinge Institute of Technology
Department of Computer Science

COURSE SYLLABUS

UNIX och Linux, en översikt och introduktion

UNIX and Linux, an overview and introduction

6 ECTS credit points (6 högskolepoäng)

Course code: DV1563
Educational level: First cycle
Course level: G1N
Field of education: Technology
Subject group: Computer Technology

Subject area: Computer Science
Version: 6
Applies from: 2017-10-30
Approved: 2017-10-30
Replaces course syllabus approved: 2017-08-30

1 Course title and credit points
The course is titled UNIX and Linux, an overview and introduktion/UNIX och Linux, en översikt och introduktion and awards 6 ECTS credits. One credit point (högskolepoäng) corresponds to one credit point in the European Credit Transfer System (ECTS).

2 Decision and approval
This course is established by 2016-05-12. The course syllabus was revised by Head of Department of Computer Science and Engineering and applies from 2017-10-30.
Reg.no: BTH-4.1.1-2066-2017.

3 Objectives
The aim of this course is to introduce students to the command prompt, basic tools and commands, their areas of application, and ways to combine them into larger workflows.

4 Content
The key components of the course are:
•comparison between dialogue based on the command line interface and graphical user interface (GUI) with predefined menu selections
•use of pipelines as a method for incremental development based on problem specifications and partial solutions for advanced testing
•operating systems based on files: introduction to hierarchical filing systems, the taxonomy problem and its solution through hard and soft links, streams, authorisation and ownership
•text as a general format for semi-structured data: creation, extraction, processing and output of multi-level delimiters (e.g. fields and posts). Operations of filtering and limiting, and how they can be constructed from standard commands such as head, tail, awk, grep and sed (POSIX standard)
•methods to combine different tools: string escaping, embedded commands and expansions, regular expressions, pipelines and redirection

5 Aims and learning outcomes
Knowledge and understanding
On completion of the course, the students shall be able to:
• demonstrate an understanding of the functionality of the POSIX core tools
Competence and skills
On completion of the course, the students shall be able to:
• break down problems into smaller parts with well-defined inputs and outputs
• analyse the usefulness of tools in different problem-solving phases
• create suitable test data for both partial and holistic solutions, and identify test cases
• integrate partial solutions into holistic solutions to solve problems.

6 Learning and teaching
The course is held on campus and is laboratory based with integrated lectures. These lectures give the necessary starting point for the remainder of the course which is self-directed learning with supervision from the teacher. The students acquired skills are measured through a series of laboratory assignments. Assignments can be handed in either individually or in groups. The purpose of these assignments are to make the students familiar with the skills needed to locate reference material and use these for solving a specific problem.
English

7 Assessment and grading
Examination of the course

Code	Module	Credit	Grade
1710	Written assignment 2	2 ECTS	A-F
1720	Written assignment 3	2 ECTS	A-F
1730	Written assignment 4	2 ECTS	A-F

The course will be graded A Excellent, B Very good, C Good, D Satisfactory, E Sufficient, FX Fail, supplementation required, F Fail.The final grade is based on a weighted average. Rounding occurs downwards.

8 Course evaluation
The course coordinator is responsible for systematically gathering feedback from the students in course evaluations and making sure that the results of these feed back into the development of the course.

9 Prerequisites
General requirements for university studies.

10 Field of education and subject area
The course is part of the field of education and is included in the subject area Computer Science.

11 Restrictions regarding degree
The course cannot form part of a degree with another course, the content of which completely or partly corresponds with the contents of this course.

12 Course literature and other teaching material
The Linux Command Line: A Complete Introduction.
January 2012, 480 pp.
ISBN-13:
978-1-59327-389-7
William E. Shotts, Jr.
https://sourceforge.net/projects/linuxcommand/files/TLCL/17.10/TLCL-17.10.pdf/download
■