Large-Scale Software Development - Structures and Processes

Programme course

6 credits

Storskalig mjukvaruutveckling - strukturer och processer

TDDE06

Valid from: 2017 Spring semester

Determined by
Board of Studies for Computer Science and Media Technology

Date determined
2017-01-25

Replaced by
TDDE51

Main field of study
Information Technology, Computer Science and Engineering, Computer Science

Course level
Second cycle

Advancement level
A1X

Course offered for
- Computer Science and Engineering, M Sc in Engineering
- Computer Science and Software Engineering, M Sc in Engineering
- Information Technology, M Sc in Engineering

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
Students should be proficient in unit-level testing and software design principles and patterns. Students should also have basic proficiency in source code management tools and build tools for software. Students must be proficient in reading technical English texts.

Intended learning outcomes
After this course, students shall be able to:

1. account for roles in large-scale development projects
2. describe the organization, requirements and coding conventions of a large-scale development project
3. use tools and methods appropriate for large-scale development projects
4. analyze the utility of tools and methods for large-scale development within the context of a specific development project.

Course content

- Module systems for large-scale software projects,
- Communications in distributed development teams,
- Techniques and tools for automated dependency management, testing and deployment of software, such as, for example, Maven, Jenkins and Docker.
- Principles for distributed version control systems such as, for example, Git and Mercurial.

Teaching and working methods

Labs, lectures, seminars
The course runs over the entire spring semester,

Examination

LAB1	Computer assignments	4 credits	U, 3, 4, 5
UPG1	Hand-in assignments	2 credits	U, G

UPG1: Individual submissions in preparation to seminars. Goals 1 and 2 are primarily assessed by UPG1
LAB1: Conducted in groups. Individually assessed orally at the end of the course for final grade. Goals 3 and 4 are primarily assessed by LAB1.
There will be three opportunities per year to be assessed in the course, during exam periods.

Grades

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

Department

Institutionen för datavetenskap

Director of Studies or equivalent

Ahmed Reinze

Examiner

Ola Leifler

Education components

Preliminary scheduled hours: 30 h
Recommended self-study hours: 130 h