Large-Scale Software Development: Contributions and Evolution

Programme course

6 credits

Storskalig mjukvaruutveckling - bidrag och evolution

TDDE14

Valid from: 2017 Spring semester

Determined by
Board of Studies for Computer Science and Media Technology

Date determined
2017-01-25

Replaced by
TDDE52

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

Large-Scale Software Development: Structures and Processes

- Understanding different roles in a large-scale software development project
- Understand the organization, requirements and conventions of large-scale software development
- Explain definitions, and provide examples, of software architectures
- Use software development tools tailored to large-scale software development.

Intended learning outcomes

After the course, students shall be able to:

1. Use existing conventions and follow established processes to contribute through software to a distributed, large-scale development project.
2. Present changes and updates so external parties may approve submissions.
3. Create a time plan and monitor progress through a common development project
4. Use appropriate tools for contemporary, large-scale software development
5. Independently acquire new knowledge and skills in order to contribute to a large-scale software project.

Course content

The course entails contributing to a large-scale software project in a team.

Teaching and working methods

Project, seminars, lectures.
Students work in teams of 6-8 people where each participant is responsible for developing functionality in a common, existing large software project, and all contributions are documented electronically during the course. The group selects tasks that are sufficiently extensive and interesting to the external project, and actively help one another learn about techniques and processes relevant to the project, plan,conduct and review contributions along the way.
The course runs over the entire sutumn semester.

Examination

PRA1	Project	6 credits	U, 3, 4, 5

Projects are assessed orally and individually. At the start of the course, specific criteria for assessing project contributions according to course goals are presented. During the oral examination, activity traces from collaboration platforms such as Gitlab or Github are used as a basis for assessment. Artifacts to be reviewed are individual code changes contributed, reviews of other team members' submissions, internal team support, time planning and review. Individual changes are reviewed based on acceptance in external projects, as well as course staff criteria, including assessment of the technical level of difficulty, adherence to good industrial practice and design.
Re-examination is conducted 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: 0 h
Recommended self-study hours: 160 h

Course literature
Fastställs senare/To be decided

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.