Advanced Software Engineering

Programme course

6 credits

Avancerad programutvecklingsmetodik

TDDD30

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
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
- Industrial Engineering and Management - International, M Sc in Engineering
- Industrial Engineering and Management, 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
Software engineering theory and practice. Practical programming. Basic courses in mathematics.

Intended learning outcomes
Passed students shall be able to:
- explain and exemplify advanced concepts of Software Engineering
- collect, analyse and discuss empirical data found in published articles or own investiation or experiment
- write a summary of a software engineering subject

Course content

- Guide to the Software Engineering Body of Knowledge.
- Experimentation in Software Engineering.
- Domain-specific languages.
- Specification and verification of software-intensive systems.
- System anatomies.

Teaching and working methods

Relevant concepts are taught and discussed in a seminar series. In groups of 1-4 students collect, analyze and present empirical material in software engineering. The material comes either from published papers or an own investigation or experiment.

Each student selects a subject together with the examiner and writes a self-contained summary in English. Advice will be given both individually and in some seminars.

Examination

HEM1	Home-assignment	2 credits	U, 3, 4, 5
UPG3	Presentation	1 credits	U, G
UPG1	Assignment	3 credits	U, 3, 4, 5

(When both moments are passed, the total grade for the course will be the arithmetic average of the grades, rounded to the nearest integer. If the decimal is exactly 0.5 the grade will be rounded to the highest nearest integer.)

Grades

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

Department

Institutionen för datavetenskap

Director of Studies or equivalent

Ahmed Rezine

Examiner

Kristian Sandahl

Education components

Preliminary scheduled hours: 36 h
Recommended self-study hours: 124 h

Course literature

Additional literature

Books

Lars Taxén (editor), *The System Anatomy. Enabling Agile Project Management*.
Studentlitteratur 2011
ISBN: 978-91-44-07074-2
Please note that the book is a recommendation.

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.