

Software Architectures

Programme course

6 credits

Programvaruarkitekturer

TDDE41

Valid from: 2019 Spring semester

Determined by

Board of Studies for Computer Science
and Media Technology

Date determined

2018-08-31

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
- Master's Programme in Computer Science
- Industrial Engineering and Management, M Sc in Engineering
- Industrial Engineering and Management - International, M Sc in Engineering

Specific information

The course can not be included in degree together with TDDDo5

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. Object-oriented programming. It is not required but good to have some experience in reading software engineering papers. Software quality. Metaprogramming.

Intended learning outcomes

After the course students should be able to

- Describe technical platforms, conditions for and challenges with the development of larger software systems
- Describe how techniques such as metaprogramming and virtualization are used in component-based models such as, for example, Enterprise Java Beans, OSGi, and Web Services
- Relate industrial and theoretical issues in the development of larger software systems to contemporary software development methods and techniques
- Analyze and critically evaluate a software architecture and relate its properties to Software Engineering research.

Course content

Component Models, Object-Oriented Frameworks for Component Systems, Metaprogramming, Messaging Systems, Web Services, Application Frameworks, Software Architectures, Software Quality Analysis

Teaching and working methods

The course consists of seminars and a set of lab sessions.

Examination

UPG1	Written assignment	3 credits	U, 3, 4, 5
PRA1	Project assignment	3 credits	U, G

Grades

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

Course literature

Richard N. Taylor, Nenad Medvidovic, Eric M. Dashofy. Software Architecture - Foundations, Theory & Practice, John Wiley & Sons, 2010

Department

Institutionen för datavetenskap

Director of Studies or equivalent

Ola Leifler

Examiner

Lena Buffoni

Education components

Preliminary scheduled hours: 30 h

Recommended self-study hours: 130 h

Course literature

Other

Further literature will be announced on the course home page.