DD1363 Software Engineering 12.0 credits

Mjukvarukonstruktion

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Course syllabus for DD1363 valid from Autumn 2009

Grading scale

A, B, C, D, E, FX, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After attending this course, the student is expected to be able to:

- describe a broad range of software engineering techniques, processes and methodologies that have been developed over the past 30 years,
- perform requirements analysis and formulation, system architecture and design, system implementation, and system testing,
- evaluate the applicability of a particular software engineering technique, process or methodology to a given project from both a technical and financial perspective,
- use a variety of tools (both commercial and academic) that can be used to design and implement software systems,
- evaluate whether a specific software engineering tool is technically and economically viable for a given project,
- find information in the main sources of information regarding software engineering technology,
- be effective in both oral and written technical communication,
- in order to be able to
- work in industrial software development projects,
- keep up with and absorb developments in software engineering.

Course contents

Theory: Systematic principles for construction of correct and robust programs, life cycle models, PSS standard, software requirements, user requirements, architectural design specification, Capability Maturity Model (CMM), extreme programming, organization of work in group, group dynamics, experience from industry, testing, design patterns. Documentation.

Presentation of project ideas, assignment of projects. Constructing documents concerning the assigned project: documents on project planning, user requirements, software requirements, program architecture.

Program development project: Realization of a program development project. Design, including prototyping and implementation of an application is done in groups of 3-6 students. The projects are "real life projects" from outside the course. A project description, an user manual, and a system description are written and the project is presented orally including a live demonstration.

Course literature

To be announced at least 2 weeks before course start at the web page for the course.

Examination

- PRO1 - Project, 6.0 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Exercises, 6.0 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

In this course all the regulations of the code of honor at the School of Computer science and Communication apply, see: http://www.kth.se/csc/student/hederskodex/1.17237?l=en_UK.

Other requirements for final grade

Assignments (ÖVN1; 6 university credits).
Project (PRO1; 6 university credits).
Examination can only be done during the course.
There are elements in the course where attendance is mandatory.

Ethical approach

- All members of a group are responsible for the group's work.

- In any assessment, every student shall honestly disclose any help received and sources used.

- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.