DD1363 Mjukvarukonstruktion 12,0 hp

Software Engineering

När kurs inte längre ges har student möjlighet att examineras under ytterligare två läsår.

Fastställande

Kursplan för DD1363 gäller från och med HT08

Betygsskala

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

Utbildningsnivå

Grundnivå

Huvudområden

Teknik

Särskild behörighet

Undervisningsspråk

Undervisningsspråk anges i kurstillfällesinformationen i kurs- och programkatalogen.

Lärandemål

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.

Kursinnehåll

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.

Kurslitteratur

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

Examination

- PRO1 - Projekt, 6,0 hp, betygsskala: A, B, C, D, E, FX, F
- ÖVN1 - Övningar, 6,0 hp, betygsskala: A, B, C, D, E, FX, F

Examinator beslutar, baserat på rekommendation från KTH:s handläggare av stöd till studenter med funktionsnedsättning, om eventuell anpassad examination för studenter med

dokumenterad, varaktig funktionsnedsättning.

Examinator får medge annan examinationsform vid omexamination av enstaka studenter.

Övriga krav för slutbetyg

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.

Etiskt förhållningssätt

- Vid grupparbete har alla i gruppen ansvar för gruppens arbete.
- Vid examination ska varje student ärligt redovisa hjälp som erhållits och källor som använts.
- Vid muntlig examination ska varje student kunna redogöra för hela uppgiften och hela lösningen.