IS1204 IT Project Course, part 2 7.5 credits

IT-projekt, del 2 - Autonoma inbyggda system

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

Establishment

Course syllabus for IS1204 valid from Spring 2008

Grading scale

P, F

Education cycle

First cycle

Main field of study

Information Technology, Technology

Specific prerequisites

Completed upper secondary education including documented proficiency in Swedish corresponding to Swedish B and English corresponding to English A. For students who received/will receive their final school grades after 31 December 2009, there is an additional entry requirement for mathematics as follows: documented proficiency in mathematics corresponding to Mathematics A. And the specific requirements of mathematics, physics and chemistry corresponding to Mathematics D, Physics B and Chemistry A.

and

IS1200, IE1204, ID1004

Language of instruction

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

Intended learning outcomes

Just like its alternative sister ID1003 (IT Project Course, Part 2 - Software Techniques), this course supplements and supports the course IV1301 (IT Project Course, Part 1 - Methodology). The methods studied in IV1301 are applied to an actual embedded system, such as an aotunomous robot. The participants experience methods and techinques relevant to the design of an autonomous embedded system. This work is performed in a group, and is constrained by limited resources and limited time. After the course, the participants will be able to:

- participate in design projects for mixed hardware-software systems.
- design complete technical systems of limited size, including digital and/or analog electronics, and including mechanics and/or software.
- select developmental process methodologies for different kinds of projects.
- apply important methods, and use important tools, for lean development - including tools for configuration management, version management, test-driven development, and project planning.
- use well-known methods for efficient communication, such as oral presentation, written documentation, visual project communication, or communication for intra-project conflict management.
- reflect upon a completed project, in order to improve future projects with similar properties.

Course contents

Design of electronics, computer-controlled mechanics, and software. Developing autonomous embedded systems in a project group of 4-6 people. Applying lean development methods.

Examination

- PRO1 - Project, 7.5 credits, grading scale: P, 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.

Project work: one project is assigned to each group. A group consists of 4-6 students. (PRO1 7,5 hp)

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.