



# II1302 Projects and Project Methods 7.5 credits

## Projekt och projektmetoder

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

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

## Establishment

Course syllabus for II1302 valid from Spring 2013

## Grading scale

A, B, C, D, E, FX, 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.

Basic technical skills in an ICT field, such as programming, computer, electronics, embedded systems and more.

This skill is needed to participate as a team member with the task of building an ICT product or ICT service.

## Language of instruction

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

## Intended learning outcomes

After the course student should be able to:

- Apply an appropriate project processes appropriate to the art Information Technology (IT).
- Reflect on the social interaction between individuals, groups and leaders in a smaller project.
- Capture, document and organize the requirements of typical IT projects.
- Establish, monitor and evaluate a project plan, risk analysis and test specifications for typical IT projects.
- Evaluate, document and present the completed design.
- Have achieved increased skills in oral and written presentation.
- Search for and evaluate information about components, communication protocols or other technical specifications current IT project.
- Personally design and develop a part of a larger system.
- Build a prototype and troubleshoot a product that is typical in IT.
- Participate in IT project economics and time accounting.
- Analyze and propose how to ensure that society's objectives for economically, socially and ecologically sustainable development into account in project product and project process.
- Explain and use good personal ergonomics.

## Course contents

- Group Dynamics, project methodology, leadership and communication
- Work environment
- Specific project methodology depending on the scope
- Working in groups of 3-8 persons
- Project Finance

## Disposition

The course is conducted, from the beginning of the course, as a project with planning and implementation. Instruction, study work, project work and discussions are carried out directly to the project teams and their scheduled work hours. Lectures are rare. Reading literature is preferably done on non-scheduled time. In the beginning the teacher leads the project work with the main objective to teach and instruct students how project work can be organized and implemented. As participants and groups gain knowledge of project methodology the steering and leading of the project goes to them. Soon works project groups by themselves.

The course, with a project task, has two objectives (this is the difference with "normal" projects), namely a knowledge (learning) objective and design/construction objective (ICT-construction). Design project task is used to drive the need for project methodology and it is not a requirement that the technical design will be completed.

A very important feature of the course is that all students and groups of workers together at the same time and same place. The reason is that modern projects often work this way, but also the ability to take spontaneous discussions that everyone can enjoy and benefit from. Approximately 16 hours per week are scheduled for the course and are compulsory. Additional course time is planned by the student and the group itself.

## Course literature

1. Bok: "Arbeta i projekt, -individen, gruppen, ledaren", Sven Eklund, Förlag Studentlitteratur, upplaga 3 eller senare. Köps av varje student. Hela boken skall läsas.
2. Kompendium: "Scrum och XP from the Trenches" , hela kompendiet skall läsas se <http://www.infoq.com/minibooks/scrum-xpfrom-the-trenches>.
3. Kompendium: "KanBan from the Trenches", hela kompendiet skall läsas.
4. Boken "Software Engineering 9, Sommerville" , ( delar skall läsas) tillhandahålls av kursansvarig och är en bok per grupp.
5. Boken "The Essence of Software Engineering" Draft av Ivar Jacobsson m. fl. (hela boken skall läsas).  
Boken tillhandahålls av kursansvarig till varje student som pdf-fil. Ett tryckt ex ges till varje grupp att dela på.
6. Artiklar och dokument som finns på Internet. Dessa anges under kursen gång och finns listade i "Bilda"-systemet.
7. Viss referenslitteratur med obligatoriskt läsinnehåll finns i projektsalen.

## Equipment

Own LapTop

## Examination

- PRO1 - Project, 4.5 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Examination, 3.0 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.

**Exam questions** are essay-type and judged according to quality principles of Bloom's Taxonomy.

- Score A: S = synthesis, V = valuation presented in any area.
- Score B: Level A = analysis in several areas.
- Score C: A = Analysis in any area.
- Score D: T = Application.
- Score E: F = Understanding.
- Score F: K = Knowledge just is not enough to pass.

**Project part** is the practical part of the course and the associated ability to develop and agree on responsibility, knowledge and skills in various project roles and quality of related artifacts.

## Other requirements for final grade

- **Attendance Requirements:** the requirement for compulsory attendance at scheduled project work period corresponding to about 140h.
- **Pass exam TEN1:** 3,0 credits, grade graduation A to F
- **Approved project PRO1:** 4.5 credits, grade graduation A to F

The grade is calculated on a weighted average where AF is translated into the numbers 1-5. Rounding of half the values are up.

## 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.