



# II2209 ICT System Design 30.0 credits

## ICT System Design

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

## Establishment

Course syllabus for II2209 valid from Autumn 2008

## Grading scale

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

## Education cycle

Second cycle

## Main field of study

Information Technology, Information and Communication Technology

## Specific prerequisites

B-level courses in all and C-level courses in at least one of the areas  
Computer Systems (computer architecture and operating systems)  
Data communication, Computer Networks and Internetworking  
Programming, software engineering

## Language of instruction

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

## Intended learning outcomes

### Learning Objectives

The overall objective of the course is to enable the student to:

Acquire the skills to design, build and operate communication applications, services and networks in innovative ways

- wired and wireless
- triple play
- data, voice, video
- Internet and mobile phone networks

Learn how to lead, manage, communicate and how to become an entrepreneur

Become a global citizen At the end of this course the student will be able to:

1. Demonstrate their ability to solve a "real-world" problem

Identify and select a relevant problem

Define the project scope

Evaluate possible solutions

Implement a working prototype

Present a "successful" business plan

2. Demonstrate independent learning skills

Integrate learning from different sources into the proposed solution (e.g., past learning, course materials provided in the course, contact with teachers, external material, external contacts)

Show self-assessment skills

Handle the infinite/open-ended ("real-world") character of the project

3. Demonstrate effective project management

Devise a realistic and structured project plan

Carry out the project according to the plan

Motivate and document deviations from the plan

Meet deadlines

Reinforce team credibility by being on time, within budget, and taking special care to insure quality in the details. These include correct grammar, spelling, and numbers, complete footnotes showing your sources, a thorough, consistent bibliography, and the aesthetics of the paper.

4. Show communication skills when working with the project

Manage scope and stakeholder expectations effectively as the project evolved

Communicate with stakeholders effectively by voice mail/e-mail

Make wise use of stakeholder time and project budget

Respect the stakeholders points of view

Take criticism non-defensively

Revise the deliverable when stakeholders have a better idea;

Give credit to stakeholders and other peoples input where appropriate

## 5. Show communication skills when presenting the solution

Include relevant content

Apply proper structure

Use correct and appropriate language

Devise a realistic and structured project plan

Make presentations interesting and enjoyable to others

## 6. Work as a successful team

Communicate effectively within group

Contribute to the group work

Contribute to the learning experience of the whole group

Handle conflicts effectively

Interact with other project groups

Be aware of their competence and act out of it with authority

# Course contents

## Examination

- PRO2 - Project Report, 12.0 credits, grading scale: A, B, C, D, E, FX, F
- PRO1 - Midterm Report, 7.5 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Video, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- PRO3 - Project Presentations, 4.5 credits, grading scale: A, B, C, D, E, FX, F
- ANN1 - Contract and Project Plan, 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.

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

## Other requirements for final grade

The examination of this course is based on the quality of project specific deliverables and individual contributions.

The deliverables from each project team include a contract, a project web site at which all deliverables are posted, a project plan, lessons learned papers, a midterm presentation, a final report, an oral presentation of the results at a concluding workshop, a demonstration at a public exhibition associated with the workshop, a press release announcing the demonstration and a 3 minute video about the project. Extra bonus will be given if the results are accepted by a peer reviewed workshop, conference or publication.

The students will be graded based on two dimensions:

The quality of the project related deliverables described above

Individual contribution to the learning in the course, i.e., active participation during seminars and other course activities, and the level of participation in the projects

All deliverables have to be posted on the team web site, before or at the date of the deadline. Not keeping the deadlines is considered as serious in this course! If the deliverables for any reason would be posted late, the grade will be affected.

The grading process will involve the teachers, the teaching assistants and the principals (for the project deliverables) as well as input from team members.

Only material on the project website will be considered in the grading of the project deliverables. More information about the examination and grading is available at the course web site.

Contract and Project plan (MOM1; 2p)

Midterm presentation (MOM2; 5p)

Video (MOM2; 2p)

Project report (MOM3; 8p)

Presentation, press release and exhibition (MOM4; 3p)

## **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.