Problem Solving and Cooperation in the Design Process

Single subject and programme course

7.5 credits

Problemlösning och samarbete i designprocesser

725A29

Valid from:

Determined by
The Quality Board at the Faculty of Arts and Sciences

Date determined
2009-11-20

Revision date
2012-09-27

Main field of study
Information Systems

Course level
Second cycle

Advancement level
A1X

Course offered for
- Master Programme in IT and Management

Entry requirements
For admission to the course, general entry requirements for the Software Engineering Programme or entry requirements in accordance with the requirements of the master's programme apply.

Intended learning outcomes
On completion of the course, the student should be able to:
- describe and analyse different groups of actors, their roles and influence during software engineering as part of processes of change.
- analyse and evaluate difficulties and possibilities concerning different interested parties' participation and influence in software engineering processes.
- identify and evaluate the need for creativity, problem solving, formulating aims, dialogue, conflict management, impact evaluation, decision transparency and the user participation in design processes in software engineering.
- by means of methods and IT tools for modelling, participate in and support collective problem-solving and decision-making processes in connection with software engineering.

Course content

The course contains both theoretical and practical parts. The practical parts consist of project-oriented work in the form of cooperation in change and design-oriented work in the form of software engineering games (role play and design laboratory). Role play for illustration of cooperation and conflicts between different interested parties in software engineering in connection with problem solving and decision making. Analysis of different interested parties' preconditions for and possibilities of affecting and influencing software engineering based on experiences from implementation of software engineering games. Design laboratory in the form of group-based problem solving with the support of IT tools. The design laboratory is intended to illustrate collective analysis and decision-making processes in dealing with complex problems and possibilities and limitations with models and IT support for such processes.

The main contents of the course are:
- Different strategies for change in software engineering.
- Different roles in software engineering: business expert, investigation expert, facilitator.
- Cooperation, conflicts and influence in software engineering processes.
- Cooperation through genuine dialogues.
- Group decision making in design processes.
- Problem solving and creativity in software engineering.
- Argumentative design through problem analysis, aim analysis, formulation of alternatives and impact evaluation.
- Methods, technologies and IT tools as support for independent and group-based problem solving.
- Transparency, rationality and unification in complex and collective problem-solving processes

Teaching and working methods

The course consists of lectures, seminars, supervision and student controlled work in groups (software engineering games and design laboratory). Belonging to the work effort is preparing for lectures, seminars, group assignments and supervision through studies of literature. Participation in software engineering games, design laboratory and seminars are compulsory.

Examination

Written examination and active participation in compulsory parts.

Grades

Three-grade scale, U, G, VG

Other information

Planning and implementation of a course must take its starting point in the wording of the syllabus. The course evaluation included in each course must therefore take up the question how well the course agrees with the syllabus. The course is carried out in such a way that both men´s and women´s experience and knowledge is made visible and developed.

Department

Institutionen för ekonomisk och industriell utveckling