THE IT FACULTY BOARD

DIT842, Software Project and Quality Management, 7,5 higher education credits
Software Project and Quality Management, 7.5 högskolepoäng

Second Cycle

1. Confirmation
The course syllabus was confirmed by The IT Faculty Board on 2010-09-10 to be valid from 2011-01-17.

Field of education: Science 100 %
Department: Computer Science and Engineering

2. Position in the educational system
This course is one of several single subject courses included in the Software Engineering Master's Programme within the IT Faculty.

Main field of studies: Applied IT, Software Engineering and Management
Specialization: A1N, Second cycle, has only first-cycle course/s as entry requirements

3. Entry requirements
This course is accessible for students with a bachelor degree in the IT area. In particular:
• A minimum of 90 higher education credits (1.5 study years) in the one of the areas: Software Engineering, Computer Science, Informatics, Information Technology, Systems Engineering, Computer Engineering
• Qualifications in English corresponding to English A or Certificate in Advanced English (CAE) or Test of English as a Foreign Language (TOEFL)
• Knowledge in software engineering corresponding to the course Introduction to Software Engineering and Management, 7.5 ECTS.

4. Course content
The contents of this course consist of the following parts:
• Software leadership and management with a focus on how to manage software engineers in software development projects
• Measuring software processes, products and projects,
• Software project management skills planning, executing, concluding and re-scheduling projects
• Software Quality with an emphasis on statistical quality control.

The focus in the course is on understanding and working with methods, techniques and tools in each of the four. In particular the students are expected to be able to generalize the techniques to other projects than the projects studied in the course.

The course will include several small assignments complemented with lectures and seminars.

5. Learning outcomes

5.1. Knowledge and understanding
1) explain the characteristics of a good leader of technical people
2) explain contemporary approaches to software project management, in particular the relationships between modern software processes and software project management styles
3) explain PERT, GANTT, and WBS charts in project plans
4) explain the contents of project plans, vision documents and quality assurance plans
5) explain the techniques used for project management and quality management
   explain different statuses of defects in software projects

5.2. Skills and abilities
1) construct a project plain, in particular the student specifies Work Breakdown Structure, GANTT charts and resource allocations and concrete risks in project plans.
2) construct quality assurance plan, the student details of quality assurance activities, details of defect management processes
3) synthesize project and quality metrics, e.g., the student defines and realizes metrics required for project monitoring and control, and realizes metrics required for monitoring the quality of projects, products and processes in software engineering,

5.3. Judgement and approach
1) recognize emerging techniques and methods for quality and project management using relevant information sources,
2) select appropriate techniques and tools for the project at hand

6. Literature

Literature is specified in a separate document and communicated to students before the course starts.

7. Assessment

Examination consists of two parts: a Written examination / Tentamen (4.5 hec) and an Assignment examination / Inlämningsuppgift (3 hec). The written examination is individual. The assignment examination is based on the outcome of group work. The parts are examined separately, and combined into a grade for the whole course, when both parts are passed.
A student who has failed a test twice has the right to change examiners, if it is possible. A written application should be sent to the Department.

8. Grading scale
The grading scale comprises Fail (U), Pass (G), Pass with Distinction (VG).
For Pass (G) the student should receive at least 60% of the points from the exam, and for Pass with Distinction (VG) at least 85%.

Regarding the application of ECTS scales, please see Vice-Chancellors decision 2007-05-28, dnr G 8 1976/07.

9. Course evaluation
The course is evaluated through discussion with students, and through the course portals discussions forums. Immediate changes to the course, as well as changes affecting next year are announced in lectures and through the course portal. Results of course evaluations will be communicated to next years' course participants in the beginning of the course.

10. Additional information
Language of instruction: English.