Offered by
ICT Engineering

IT-PME1
1.0

Process Management for ICT Engineering

ECTS
5

Prerequisites
Project experience from semester projects and internship.

Main purpose
The main purpose of the course is to provide students with the qualifications needed to understand the CMMI model and be able to transfer the CMMI level 1-2-3 knowledge into practical use in a project.

Knowledge
After successfully completing the course, the students will have gained knowledge about:

- How to ensure quality in projects
- How to improve your project performance
- How to handle change management in a project.

Skills
After successfully completing the course, the student will be able to:

- Apply techniques and results from Capability Maturity Model Integration (CMMI) to solve challenges in project processes
- Apply techniques and results from Lewin model to handle change management in project
- Apply "How to break software" to prevent making mistakes in your project
- Be able to describe and make use of testing concepts
- Use of terminology to kick-start Bachelor project.

Competences
To complete this course the students must make hand-in:

- "Test plan" document for a project
- "Test Specification" document for a project
- "Project relations to CMMI model" document for a project.

Topics
Software Process Improvement,
Software Development Strategy,
Software Testing Principles,
Improve Component Testing,
How to Break Software.

Teaching methods and study activities
Activities alternate between theory, self-study, group work, exercises and hands-on experiments.

Additional information:

Required workload for students is estimated at 100 hours where approximately two thirds are self-study, including exercises and preparing for the examination.

Description:
Capability Maturity Model Integration (CMMI) is a process improvement approach that helps organizations improves their performance. CMMI can be used to guide process improvement across a project, a division, or an entire organization.
CMMI in software engineering is a trademarked process improvement approach that provides organizations with the essential elements for effective process improvement.
According to the Software Engineering Institute (SEI, 2008), CMMI helps "integrate traditionally separate organizational functions, set process improvement goals and priorities, provide guidance for quality processes, and provide a point of reference for appraising current processes."

Resources

1.
Practical Insight into CMMI® (2nd Edition) ebrary Reader
Author: Kasse, Tim
Publisher: Artech House
Released: 2008
Subjects: Capability maturity model (Computer software) Computer software Development.

2.
How to Break Software, A Practical Guide to Testing,
Author: Whittaker James
Released: 2002
ISBN: 0-201-79619-8

3.
How to Break Software, Security
Author: Whittaker James
Released: 2003
ISBN: 0-321-19433-0

Evaluation
Internal examination.
The evaluation of the course is based on mandatory course work (50%) and the oral exam (50%) at the end of the course. Only students with approved course work will be allowed to attend the exam.

Examination

The exam is oral and it takes 20 minutes per student. The exam is in two parts. First part is a presentation and discussion of selected parts of the course work. Second part is drawn question from the theory of the course.

Grading criteria
Grading is according to the 7-point grading scale.

Mark 12:
Awarded to students who have shown excellent comprehension of the above-mentioned competences. A few minor errors and shortfalls are acceptable.

Mark 02:
Awarded to students for the just acceptable level of comprehension of the required competences.

Additional information

Responsible
Poul Væggemose

Valid from
1.2.2012

Course type
Global Business Engineering
ICT Engineering;6. semester;Elective for the specialization Enterprise Engineering;Elective for the specialization Embedded Engineering;Electives;

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