Course Description  Distributed Systems

Keywords: distribution in the software development process

Target Group: 6th Semester SWB  Module Number: SWB 643

Workload: 5 ECTS  150 h
Divided into:  
Contact time  60 h
Self-study  60 h
Exam preparations  30 h

Course language: German and English
Module director: Prof. PhD Hans-Gerhard Groß

Valid from: 01.03.2014

Requirements:
- Recording requirements and recognising constraints (Software Engineering)
- Efficient application of software building and management tools (Software Engineering)
- Object-oriented programming in Java (Object Oriented Systems 1-2)
- Selection and application of approaches (Software Engineering)

Overall Aims of the Module:
Students will be able to evaluate documents from the software development process. They will be capable of implementing methods and tools for quality control, and of efficiently testing. In addition, they will learn how to integrate and test modules and systems. Students will become proficient in the engineering approaches to problem-solving, including the evaluation and selection of technology.

Contents:
- Quality of software systems, attributes
- Quality control measures, metrics
- Process quality and improvement measures
- Validation and verification
- Evaluating documents, inspection, reviews
- Testing and integration, testing organisation
- Programme testing, statistic and dynamic methods
- Tool support for testing (J unit)
- Test Patterns
- Re-factoring, test-driven development

Literature:

Offered: Every semester
Submodules and Assessment:

**Type of instruction/learning:** Lecture with self-study and exam preparations

**Type of assessment:** Written exam (90 minutes)

**Hours per week:** 3 SWS

**Estimated student workload:** 120 hours

**Learning outcomes:**
Students will be able to evaluate the quality of given software and their documentation from past projects.

**Type of instruction/learning:** Laboratory exercises

**Type of assessment:** Attendance certificate

**Hours per week:** 1 SWS

**Estimated student workload:** 30 hours

**Learning outcomes:**
Students will be able to evaluate the quality of given software and their documentation from past projects.

**Overall Assessment:**
Written exam, non-graded attendance certificate