

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:

J. Goll: Methoden der Softwaretechnik, Vieweg-Teubner, 2012.
Hunt, D. Thomas: Unit-Tests mit J Unit, Hanser 2004.
G.J. Myers: Methodisches Testen von Programmen, Oldenbourg, 1991.

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