Technology
Arts Sciences
TH Köln

Course
SE - Software Engineering

Version: 1 | Last Change: 03.09.2019 11:28 | Draft: 0 | Status: vom verantwortlichen Dozent freigegeben

⌃ General information

Long name	Software Engineering
Approving CModule	SE_BaTIN
Responsible	Prof. Dr. Hans Nissen Professor Fakultät IME
Level	Bachelor
Semester in the year	winter semester
Duration	Semester
Hours in self-study	78
ECTS	5
Professors	Prof. Dr. Hans Nissen Professor Fakultät IME
Requirements	programming skills in Java
Language	German
Separate final exam	Yes

Final exam

Details

Written exam.

The exam ensures that each student also individually has reached the goals of the learning outcome,

through tasks of the following types:

Questions about basic knowledge regarding specification techniques, design principles, methods for software testing (K.2, K.3),

Modeling the different perspectives of a software system (K.1, K.2, K.4, K.5, K.9),

Creation of suitable test cases (K.7, K.9),

Application of simple design patterns (K.9).

Minimum standard

At least 50% of the total number of points.

Exam Type

Written exam.

The exam ensures that each student also individually has reached the goals of the learning outcome,

through tasks of the following types:

Questions about basic knowledge regarding specification techniques, design principles, methods for software testing (K.2, K.3),

Modeling the different perspectives of a software system (K.1, K.2, K.4, K.5, K.9),

Creation of suitable test cases (K.7, K.9),

Application of simple design patterns (K.9).

∧ Lecture / Exercises

Learning goals

Knowledge

overview of Software Engineering

software development process models

requirements engineering

system and software specification techniques

modelling in UML

modern system architectures

quality assurance methods

tasks and methods of configuration management

Skills

documentation of requirements

evaluation of process models

development of system specifications

design and evaluation of different system architectures

design and evaluation of different software architectures

design of logical test cases and precise test procedures

Creation of readable program code

Expenditure classroom teaching

Type	Attendance (h/Wk.)
Lecture	2
Exercises (whole course)	0
Exercises (shared course)	1
Tutorial (voluntary)	0

Separate exam

^ Practical training

Learning goals

Skills

text understanding

usage of modelling tools

development of models

writing object-oriented programs in Java

testing of programs

transform model into code

develop system models from requirements

develop system design from system model

implementation of system models

verification of program code

Expenditure classroom teaching

Type	Attendance (h/Wk.)
Practical training	1
Tutorial (voluntary)	0

Separate exam

Exam Type

working on practical scenarion (e.g. in a lab)

Details

Students work in small teams. Each team completes multiple rounds with assigned appointments in the lab. In each round, modelling and programming assigments are solved under supervision (and, if necessary, with assistance).
For the preparation of a laboratory appointment a homework sheet has to be solved.

Minimum standard

Successful participation in all laboratory appointments, i.e. in particular independent solution
(or with some assistance if necessary) of the assignments.