Technology
Arts Sciences
TH Köln

Course
PP - Programming Practice

Version: 1 | Last Change: 25.09.2019 12:01 | Draft: 0 | Status: vom verantwortlichen Dozent freigegeben

General information

Long name	Programming Practice
Approving CModule	PP_BaTIN
Responsible	Prof. Dr. Chunrong Yuan Professor Fakultät IME
Level	Bachelor
Semester in the year	winter semester
Duration	Semester
Hours in self-study	123
ECTS	5
Professors	Prof. Dr. Chunrong Yuan Professor Fakultät IME
Requirements	parallel participation of the course "Practical Informatics 1"
Language	German
Separate final exam	Yes

Final exam

Details

written report about the achieved results (made from individual reports)

Minimum standard

complete report

Exam Type

written report about the achieved results (made from individual reports)

^ Lecture

Learning goals

Skills

Presentation of selected standards for the design and development of programs

* Algorithm construction with structogram / program flow plan
* Automata
* Structured Analysis with data flow diagrams and data dictionary

Use of a programming development environment for programming and debugging

Recursion as a means to implement series used in mathematics

Expenditure classroom teaching

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

Separate exam

none

^ Practical training

Learning goals

Knowledge

Algorithm

Description formats

description using natural language

graphical representations (structogram, program flow plan)

data flow diagram and data directory

Algorithms for solving some standard problems iteration and repetition

recursion

regular automaton

Implementation of algorithms using control structures (in Java and C) using

conditionals (if, switch)

loops (iteration, repetition)

Design and use of subroutines (in Java)

especially: implementation of predefined interfaces

Structured data types

Arrays

Java objects and classes (in Java: Public classes without methods)

Program development environment

create projects

debug

test

Skills

Design algorithms solving given problems

From algorithm description to implementation

Work with program development environment

Programming as solution for scenario-based problems

Expenditure classroom teaching

Type	Attendance (h/Wk.)
Practical training	0.5
Tutorial (voluntary)	0

Separate exam

Exam Type

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

Details

Several tasks with strong relation to reality are given to the individual student or to a small team. The student resp. the team should analyse the task (text) and design, implement, test and deliver a solution in time. In a test date, they should be able to explain the solution and to make small extensions to it.

Minimum standard

Delivery of a design/program that fulfils most of the requirements in time, improvements done until a late delivery date