

Course Manual PP

Programming Practice

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– General information

Long name Programming Practice

Approving CModule [PP_BaTIN](#)

Responsible Prof. Dr. Chunrong
Yuan
Professor Fakultät IME

Valid from winter semester
2020/21

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

Literature

Online-Dokumentation der Java-Pakete
(java.sun.com)

Online-Dokumentation der verwendeten
Softwareentwicklungsumgebung (Eclipse)

Mössenböck, Sprechen Sie Java?, dpunkt 2011

Schiedermeier/Köhler, Das Java-Praktikum, dpunkt
2011

Vogt, Informatik, Spektrum Verlag 2004

Final exam

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

Minimum standard complete report

Exam Type EN schriftlicher
Ergebnisbericht

– Lecture / Exercises

Learning goals

Goal type	Description
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
Skills	Use of a programming development environment for programming and debugging
Skills	Recursion as a means to implement series used in mathematics

Expenditure classroom teaching

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

Special requirements

none

Accompanying material	Course slides, Examples (e.g. models, programs)
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Separate exam	No
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– Practical training

Learning goals

Goal type	Description
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
Knowledge	Implementation of algorithms using control structures (in Java and C) using conditionals (if, switch) loops (iteration, repetition)
Knowledge	Design and use of subroutines (in Java) especially: implementation of predefined interfaces
Knowledge	Structured data types Arrays Java objects and classes (in Java: Public classes without methods)
Knowledge	Program development environment create projects debug test
Skills	Design algorithms solving given problems
Skills	From algorithm description to implementation
Skills	Work with program development environment
Skills	Programming as solution for scenario-based problems

Special requirements

none

Accompanying material	Course slides, Software development environment, Links to web pages
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Separate exam	Yes
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Separate exam

Exam Type	EN praxisnahes Szenario bearbeiten (z.B. im Praktikum)
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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.
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Minimum standard	Delivery of a design/program that fulfils most of the requirements in time, improvements done until a late delivery date
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Expenditure classroom teaching

Type**Attendance (h/Wk.)**

Practical training

0.5

Tutorial (voluntary)

0