Valid from 2024.HS

Module description: Programming 1

Module Code	t.BA.IT.PROG1.19HS
ECTS Credits	4
Language of Instruction/Examination	German
Organizational Unit	InIT
Module Coordinator	Patrick Feisthammel
Legal Framework	The module description is part of the legal basis in addition to the general academic regulations. It is binding. During the first week of the semester a written and communicated supplement can specify the module description in more detail.
Module Characteristic	Type 3a 2 lecture lessons per semester week and class+ 2 lab bi-weekly lessons per semester and half-class
Module Description	Creating excellent, readable and maintainable code is a central requirement for all software projects. In this module, students learn the basics of object-oriented programming and can develop and test high quality and maintainable code after just a few classes.
Module Content	• Basic techniques and concepts are introduced by way of examples and applied in-depth in labs. This includes the concepts of object-oriented programming (classes, objects, etc.), the basics of programming (data types, control structures, etc.), basic principles and practices of clean code, software quality assurance (documentation and unit testing), inheritance, composition and polymorphism.
Prerequisite Knowledge	Basic programming knowledge is expected or can be acquired in a preparatory course offered by ZHAW.

Learning Objectives (Competences)

Students...	Competencies	Taxonomies
Students are able to judge the quality of code and the structure of a program to the extent of a few classes, and derive ways for improvement.	M, F	K4
Students can develop and test excellent, readable and maintainable code to the extent of a few classes.	M, F	K2, K3
Students understand and are able to apply the basic principles of object-oriented programming.	F, M	K2, K3
Students can analyse problems from an object-orientation perspective and develop suitable solutions.	M, F	K4, K5, K6

Performance Assessment

End-of-module exam	Assessment	Length (min.)	Weighting	Form
written exam	Grade	120	85	acc. to module agreement

Performance assessment during the semester	Assessment	Length (min.)	Weighting	Form
Learning control questions *Graded assignments during teaching semester*	Grade		15	acc. to module agreement

Classroom Attendance Requirement	None
Learning material	• Java lernen mit BlueJ, 6. Auflage, David J. Barnes und Michael Kölling, ISBN: 978-3-8689-4907-0

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Comments	None