Valid from 2024.HS

Module description: Computer Science 1

Module Code	t.BA.XXI.INF1.19HS
ECTS Credits	4
Language of Instruction/Examination	German
Organizational Unit	InES
Module Coordinator	Elio Bazzi
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	Introduction to the basic concepts of the procedural programming language C
Module Content	**(1) Computer basics and infrastructure** **Hardware / software, operating system** **Editor, character encodings** **Programming language C** **Working with an IDE and on the command line** **(2) Basics of procedural programming with C** **Variables, data types, numbers, expressions** **Library functions, input/output** **Decisions and loops** **Functions, parameters und return value** **(3) Advanced concepts of the programming language C** **Arrays and data structures (struct)** **Character-arrays, strings** **Pointers** **Two-dimensional arrays** **Bit-arithmetic**
Prerequisite Knowledge	

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Learning Objectives (Competences)

Students...	Competencies	Taxonomies
(1) The students know the basics of programming and the role of programming languages, as well as the tools that are used for programming.	M, F	K1, K2
They also know the more advanced concepts of programming in C, e.g., one- and two-dimensional arrays, strings. structs, pointers, bit arithmetic.	M, F	K1, K2, K3, K4, K5
(2) They understand the basic concepts of the programming language C, including the available data types, expressions, the most important functions of the C library, decisions, loops, as well as defining and calling functions. They are able to use this knowledge to design, implement, and test simple programs. They can do this by using an integrated development environment or by working on the command line interface.	F, M	K1, K2, K3, K4, K5

Performance Assessment

End-of-module exam	Assessment	Length (min.)	Weighting	Form
written exam	Grade	90	80	acc. to module agreement

Performance assessment during the semester	Assessment	Length (min.)	Weighting	Form
written *Graded tests and submission of lab. Info see module organization at the beginning of the semester*	Grade		20	acc. to module agreement

Classroom Attendance Requirement

None

Learning material

- slides

Comments