

Module description: Computer Science 2			
Module Code	t.BA.XXI.INF2.19HS		
ECTS Credits	4		
Language of Instruction/Examination	German		
Organizational Unit	InIT		
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	The students expand their programming knowledge from Computer Science 1 and acquire another programming language (Java) and another programming paradigm (object-oriented programming).		
Module Content	<p>(1) More on C programming</p> <p>File I/O</p> <p>Module Concept and Preprocessor</p> <p>Dynamic memory management</p> <p>(2) From C to C++</p> <p>Similarities and differences</p> <p>(3) Object oriented programming</p> <p>Objects and classes, instance- and class variables</p> <p>Methods, constructors, overloading</p> <p>Inheritance and polymorphism</p>		
Prerequisite Knowledge			
Learning Objectives (Competences)	Students...	Competencies	Taxonomies
	(1) The students understand more advanced concepts of programming in C like reading and writing files, preprocessor directives, the module concept of C, as well as dynamic memory management.	F, M	K1, K2, K3
	(2) The students know how the programming concepts of C translate to Java and know the extensions of C++.	F, M	K1, K2, K3
	(3) They know the basics of object oriented programming, e.g., the differences between objects and classes, instance and class variables, also methods and constructors, inheritance, polymorphism. They can make use of this knowledge when designing and implementing programs. They know how to find class descriptions and make use of the documentation.	M, F	K1, K2, K3, K4, K5

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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 <i>Graded tests and submission of lab. Relevant components are subject of detailed module organization at the beginning of the semester</i>		Grade		20	acc. to module agreement
Classroom Attendance Requirement	None Graded tests and submission of lab. Relevant components are subject of detailed module information at semester begin					
Learning material	<ul style="list-style-type: none"> slides 					
Comments						