

<b>Module description: Computer Science Programming 2</b>			
<b>Module Code</b>	t.BA.XXI.PROG2.19HS		
<b>ECTS Credits</b>	4		
<b>Language of Instruction/Examination</b>	German		
<b>Organizational Unit</b>	InIT		
<b>Module Coordinator</b>	Josef Spillner		
<b>Legal Framework</b>	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.		
<b>Module Characteristic</b>	Type 3a  2 lecture lessons per semester week and class+ 2 lab bi-weekly lessons per semester and half-class		
<b>Module Description</b>	Students' existing programming skills are enhanced and applied on a practical level. The module conveys the competences for developing robust software applications in ubiquitous environments. Modelling approaches, failure sources and optimisation opportunities are understood at a code level.		
<b>Module Content</b>	<p><b>Engineer and algorithmic thinking (EAT)</b></p> <p><b>Object-oriented programming (OOP)</b></p> <p><b>Data management and mapping in software (DMM)</b></p> <p><b>Structured input and output formats for data</b></p> <p><b>Data service interaction</b></p> <p><b>Optimisation of the design of algorithms and data structures</b></p> <p><b>Consistency</b></p> <p><b>Case studies and application scenarios on complex software applications</b></p>		
<b>Prerequisite Knowledge</b>	Competences from Computer Science Programming 1		
<b>Learning Objectives (Competences)</b>	<b>Students...</b>	<b>Competencies</b>	<b>Taxonomies</b>
	You produce high-quality source code utilising the language and module facilities of Python	F	K4
	You understand the handling of digital data from different sources and can aggregate and process it	F	K4
	You can engineer Python applications with a complexity which matches the problem	SE	K3

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<b>Performance Assessment</b>	<b>End-of-module exam</b>	<b>Assessment</b>	<b>Length (min.)</b>	<b>Weighting</b>	<b>Form</b>	
	written exam	Grade	90	80	acc. to module agreement	
	<b>Performance assessment during the semester</b>		<b>Assessment</b>	<b>Length (min.)</b>	<b>Weighting</b>	<b>Form</b>
	Graded assignments during teaching semester <i>Individual discussion at the end of each task</i>				20	acc. to module agreement
<b>Classroom Attendance Requirement</b>	None					
<b>Learning material</b>						
<b>Comments</b>						