

<b>Module title</b>		<b>Abbreviation</b>
Software Architecture		10-I=SAR-161-m01
<b>Module coordinator</b>		<b>Module offered by</b>
holder of the Chair of Computer Science II		Institute of Computer Science
<b>ECTS</b>	<b>Method of grading</b>	<b>Only after succ. compl. of module(s)</b>
5	numerical grade	--
<b>Duration</b>	<b>Module level</b>	<b>Other prerequisites</b>
1 semester	graduate	--
<b>Contents</b>		
Introduction to software architecture, architectural styles and patterns, software metrics, evaluation of architectural styles, software components, interface models and design guidelines, design-by-contract, component-based software engineering, service-oriented architectures, microservice architectures, scalability of databases, cloud-native and serverless computing, continuous integration, continuous delivery, continuous deployment, model-driven architecture		
<b>Intended learning outcomes</b>		
The students possess a fundamental and applicable knowledge about advanced topics in software engineering with a focus on modern software architectures and fundamental approaches to model-driven software engineering.		
<b>Courses</b> (type, number of weekly contact hours, language – if other than German)		
V (2) + Ü (2)		
<b>Method of assessment</b> (type, scope, language – if other than German, examination offered – if not every semester, information on whether module is creditable for bonus)		
written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus		
<b>Allocation of places</b>		
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<b>Additional information</b>		
Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): SE,IT,ES		
<b>Workload</b>		
150 h		
<b>Teaching cycle</b>		
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<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)		
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<b>Module appears in</b>		
Master's degree (1 major) Computer Science (2016) Master's degree (1 major) Mathematics (2016) Master's degree (1 major) Computational Mathematics (2016) Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016) Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016) Master's degree (1 major) Computer Science (2017) Master's degree (1 major) Computer Science (2018)		

Module studies (Master) Computer Science (2019)  
Master's degree (1 major) Computational Mathematics (2019)  
Master's degree (1 major) Mathematics (2019)  
Master's degree (1 major) Information Systems (2019)  
Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020)  
Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020)  
Master's degree (1 major) Computer Science (2021)  
Master's degree (1 major) Computational Mathematics (2022)  
Master's degree (1 major) Information Systems (2022)  
Master's degree (1 major) Mathematics (2022)  
Master's degree (1 major) Computer Science (2023)  
Master's degree (1 major) Computational Mathematics (2024)  
Master's degree (1 major) Management (2024)  
Master's degree (1 major) Mathematics (2024)  
Master's degree (1 major) Information Systems (2024)  
Master's degree (1 major) Economathematics (2024)