

Module title		Abbreviation
Computability Theory		10-I=BER-161-m01
Module coordinator		Module offered by
Dean of Studies Informatik (Computer Science)		Institute of Computer Science
ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	graduate	--
Contents		
Gödel numbering, computable functions, decidable and countable sets, halting problem, m-reducibility, creative and productive sets, relative computability, Turing reduction, countable degrees, arithmetic hierarchy.		
Intended learning outcomes		
The students possess a fundamental and applicable knowledge in the areas of Gödel numbers, countable functions, decidable and countable sets, halting problem, m-reducibility, creative and productive sets, relative computability, Turing reduction, countable degrees, arithmetic hierarchy.		
Courses (type, number of weekly contact hours, language – if other than German)		
V (2) + Ü (2)		
Method of assessment (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		
Allocation of places		
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Additional information		
Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT,SE,IT,IS,GE		
Workload		
150 h		
Teaching cycle		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module appears in		
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) Master's degree (1 major) Computational Mathematics (2019) Master's degree (1 major) Mathematics (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)