

Module title		Abbreviation
Automata Theory and Formal Languages		10-I=AFS-102-m01
Module coordinator		Module offered by
holder of the Chair of Computer Science IV		Institute of Computer Science
ECTS	Method of grading	Only after succ. compl. of module(s)
8	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	graduate	Where applicable, prerequisites as specified by the lecturer at the beginning of the course (e. g. completion of exercises).
Contents		
Chomsky's theories of grammar and language classes, grammar normal forms, finite automata, pushdown automata, linear bound automaton, closure properties of language classes, decidability questions, minimisation of finite automata, regular sets, star-free languages, language acceptance by monoids, logic description of regular languages.		
Intended learning outcomes		
The students have a fundamental and applicable knowledge in the areas of Chomsky's grammar and language classes, of grammar normal forms, finite automata, push-down automata, linear bound automata, closure properties of language classes, decidability questions, minimising of finite automata, regular sets, star-free languages, language acceptance by monoids and logic descriptions of regular languages.		
Courses (type, number of weekly contact hours, language – if other than German)		
V + Ü (no information on SWS (weekly contact hours) and course language available)		
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. 80 to 90 minutes). If announced by the lecturer by four weeks prior to the examination date, the written examination can be replaced by an oral examination of one candidate each or an oral examination in groups. A 80 to 90 minute written examination is equivalent to a 20 minute (approx.) oral examination of one candidate each, a 30 minute (approx.) oral examination in groups of 2 and a 40 minute (approx.) oral examination in groups of 3. Language of assessment: German, English if agreed upon with the examiner		
Allocation of places		
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Additional information		
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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 (2010) Master's degree (1 major) Mathematics (2010)		