Module title			Abbreviation
Theory of Artificial Intelligence 1			10-xtAI=TAI1-202-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

The course provides a theoretical overview of algorithms and mathematical methods used in the area of Artificial Intelligence. Implementation of efficient algorithms as well as theoretical basis of approximate algorithms in AI are covered. Advanced data structures for data representation to improve the performance of AI methods are taught.

Intended learning outcomes

Students have a theoretical understanding of the mathematical background of algorithms applied in AI. They are capable of applying theoretical optimizations on algorithms and understand the appropriate use of data structures.

Courses (type, number of weekly contact hours, language — if other than German)

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Module taught in: English

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: English
Creditable for bonus

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) eXtended Artificial Intelligence (xtAI) (2020)