

Module title		Abbreviation
Computer Vision 1		10-AI=CV1-242-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)
5	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	graduate	--
Contents		
<p>The lecture provides knowledge about current methods and algorithms in the field of computer vision. Important basics as well as the most recent approaches to image representation, image processing and image analysis are taught.</p> <p>Topics include data representation, image acquisition, restoration and enhancement, features, object modeling, image and video understanding, deep learning and generative methods and applications.</p> <p>Actual models and methods of machine learning as well as their technical backgrounds are presented and their respective applications in Computer Vision are shown.</p>		
Intended learning outcomes		
<p>Students have fundamental knowledge of problems and techniques in the field of computer vision and are able to independently identify and apply suitable methods for concrete problems.</p> <ul style="list-style-type: none"> • Overview of the most important concepts of image representation, image analysis, machine learning and algorithms from Computer Vision • Gaining experience through home assignments, practical computer and programming exercises • Providing a sound solid background knowledge for the advanced Computer Vision 2 course 		
Courses (type, number of weekly contact hours, language – if other than German)		
V (2) + Ü (2) 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)		
<p>Written examination (approx. 60 to 120 minutes)</p> <p>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).</p> <p>Language of assessment: English</p> <p>Creditable for bonus</p>		
Allocation of places		
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Additional information		
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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		
<p>Master's degree (1 major) Artificial Intelligence & Extended Reality (2024)</p> <p>Master's degree (1 major) Artificial Intelligence (2024)</p>		

Master's degree (1 major) Management (2024)
Master's degree (1 major) Information Systems (2024)
Master's degree (1 major) Econometrics (2024)