



Module title					Abbreviation
Interactive Computer Graphics 10-I=ICG-161-m01					
Module	coord	inator		Module offered by	
holder of the Chair of Computer Scienc			e IX Institute of Computer Science		
ECTS Method of grading		Only after succ. compl. of module(s)			
5	nume	rical grade			
Duration		Module level	Other prerequisites		
1 semester		graduate			
Contents					
Computer graphics studies methods for digitally synthesising and manipulating visual content. This course specifically concentrates on interactive graphics with an additional focus on 3D graphics as a requirement for many contemporary as well as for novel human-computer interfaces and computer games. The course will cover topics about light and images, lighting models, data representations, mathematical formulations of movements, projection as well as texturing methods. Theoretical aspects of the steps involved in ray-tracing and the raster pipeline will be complemented by algorithmical approaches for interactive image syntheses using computer systems. Accompanying software solutions will utilise modern graphics packages and languages like OpenGL, GLSL and/ or DirectX.  Intended learning outcomes  At the end of the course, the students will have a broad understanding of the underlying theoretical models of computer graphics. They will be able to implement a prominent variety of these models, to build their own interactive graphics applications and to choose the right software tool for this task.  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. 6o 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). Separate written examination for Master's students.					
Language of assessment: German and/or English creditable for bonus					
Allocation of places					
Additional information					
Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): HCI.					
Workload					
150 h					
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
Master's degree (1 major) Computer Science (2016) Master's degree (1 major) Computer Science (2017) Master's degree (1 major) Computer Science (2018) Master's degree (1 major) eXtended Artificial Intelligence (xtAl) (2020)					

8 83

## Julius-Maximilians-UNIVERSITÄT WÜRZBURG

## Module description

Master's degree (1 major) Computer Science (2021) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Mathematics (2023)

JMU Würzburg • generated 18.04.2025 • Module data record 123943