Module title			Abbreviation
Interactive Computer Graphics Exercise			10-MCS-ICGT-152-m01
Module coordinator		**Module offered by**	
holder of the Chair of Computer Science IX		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	undergraduate	--	

Contents

The module provides fundamental knowledge of the development process of a rendering framework for digital synthesis and manipulation of visual content in the context of interactive 3D computer graphics. This includes light-matter interaction, illumination models, image formats, data representation, mathematical formulations of motion and projections, and texturing techniques. The required activities are performed independently in groups of 3 students. Accompanying exercises, software assignments, and discussions assist students in using typical graphics software packages and languages such as WebGL, OpenGL, GLSL, and/or DirectX, as well as organizing the project as a whole.

Intended learning outcomes

After participating in the module courses, students will be able to independently develop key components for digital synthesis and manipulation of visual content in the context of interactive 3D computer graphics. Students will have a sound understanding of the operation of modern software packages for digital synthesis and manipulation of visual content.

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

Ü (1) + T (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)

presentation of project results (approx. 20 minutes)
Language of assessment: German and/or English
creditable for bonus

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

Teaching cycle: every year, summer semester

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor's degree (1 major) Human-Computer Systems (2015)
Bachelor's degree (1 major) Human-Computer Systems (2016)
Bachelor's degree (1 major) Human-Computer Systems (2018)
Bachelor's degree (1 major) Human-Computer Systems (2022)