Technology
Arts Sciences
TH Köln

Course Manual IA

Project Interactive Systems

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General information

Long name	Project Interactive Systems
Approving CModule	IA_BaMT
Responsible	Prof. Dr. Stefan Grünvogel Professor Fakultät IME
Valid from	summer semester 2023
Level	Bachelor
Semester in the year	summer semester
Duration	Semester
Hours in self-study	144
ECTS	6
Professors	Prof. Dr. Stefan Grünvogel Professor Fakultät IME Prof. Dr.-Ing. Arnulph Fuhrmann Professor Fakultät IME
Requirements	Computer graphics Computer animation Informatic 1 and 2 Mathematics 1 nd 2
Language	English
Separate final exam	Yes

Literature

Ralf Dörner, Wolfgang Broll, Paul Grimm, Bernhard Jung: Virtual und Augmented Reality (VR/AR), 2019

T. Akenine-Möller, E. Haines, N. Hoffman: Real-Time Rendering, AK Peters, 2008

Jason Gregory, Game Engine Architecture, AK Peters, 2009

Alan Dix et al., Human Computer Interaction, Prentice Hall, 2003

Final exam

Details	Working on a task from the area of interactive systems in a group of 3-5 people. Documentation of the project results and presentation. Mutual review of the individual teams.

Minimum standard	Definition of project objective and project planning meet minimum standards. Project management process and corresponding decisions are comprehensible and justified. Project documentation and project presentation meet specified quality standards. Project result and live demo show sufficient complexity in development.
Exam Type	EN schriftlicher Ergebnisbericht

− Lecture / Exercises

Learning goals

Goal type	Description
Skills	Applying practical basic knowledge of programming in the context of an interactive system Using input and output devices in your own programs Use of APIs and application software to graphically display or process data Capturing and understanding scientific texts in English\nPresentation of project results in English Designing and modeling an interactive system Solving a problem by applying knowledge and skills from computer graphics and computer animation Determination of the basic interface, hardware and software requirements for a specific problem Research in scientific publications on computer graphics and computer animation - Analysis of the suitability of known methods for the solution of problems from the problem definition - Conversion of procedures into own programs - Combination of procedures in own programs Weighting up the opportunities and risks offered by different problem-solving approaches Enforcement of the implementation in the team\nManaging project tasks in a team - Planning and controlling projects - Keeping agreements and deadlines - Planning and carrying out reviews

Special requirements

none

Accompanying material	task definition (specifications) development tools for programming an interactive system applications for generating and displaying graphical elements
Separate exam	No

Expenditure classroom teaching

Type	Attendance (h/Wk.)
Project	2
Tutorial (voluntary)	0