

Module Handbook

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Course INF-16-33-K-6

Scientific Visualization (2V+2U, 5.0 LP)

Course Type

SWS	Type	Course Form	CP (Effort)	Presence-Time / Self-Study
-	K	Lecture with exercise classes (V/U)	5.0 CP	94 h
2	V	Lecture		28 h
2	U	Exercise class (in small groups)		28 h
(2V+2U)			5.0 CP	56 h 94 h

Basedata

SWS	2V+2U
CP, Effort	5.0 CP = 150 h
Position of the semester	1 Sem. in SuSe
Level	[6] Master (General)
Language	[EN] English
Lecturers	Garth, Christoph, Prof. Dr. (PROF DEPT: INF)
Area of study	[INF-VIS] Visualisation and Scientific Computing
Lifecycle-State	[NORM] Active

Possible Study achievement

- Verification of study performance: **proof of successful participation in the exercise classes (ungraded)**
- Details of the examination (type, duration, criteria) will be announced at the beginning of the course.

Contents

- fundamentals and definitions of scientific visualization
- data representation
- feature-based visualization
- volume visualization
- vector- and tensor fields
- non-photorealistic rendering
- visualization systems

Literature

- C. Hanson, C. Johnson: The Visualization Handbook, Elsevier, 2005.
- R. Fernando: GPU Gems, NVidia Corp., 2004.
- LaMothe: Tricks of the 3D Game Programming Gurus Advanced 3D Graphics and Rasterization, Sams Publications, 2003.
- current publications.

Requirements for attendance (informal)

None

Requirements for attendance (formal)

None

References to Course [INF-16-33-K-6]

Module	Name	Context	
[INF-16-33-M-6]	Scientific Visualization	P: Obligatory	2V+2U, 5.0 LP
Course-Pool	Name		
[INF-VIS_V-KPOOL-6]	Lectures of the teaching area Visualization and Scientific Computing		