Introduction to Computer Graphics

Winter

(in German: Introduction to Computer Graphics)

Module-ID: FIN-INF-999808

Abbreviation	Credit Points	Semester	Term	Duration	Language	Level
	5	Winter	starting at 1.	1 Semester	english	Master

Link:	LSF
Limited accessability:	
Responsibility:	Holger Theisel
Lecturer:	Holger Theisel
Classes:	Lecture *Introduction to Computer Graphics* Exercise *Introduction to Computer Graphics*
Applicability in curriculum:	- M.Sc. VC: Visual Computing

Intended learning outcomes:
The students

- understand the basic concepts of computer graphics
- can apply their knowledge to create a rendering program
- work in groups on exercises and programming tasks
- learn both the theoretical basics and applications of computer graphics
- are able to acquire in-depth knowledge of computer graphics after the course

Content:

- Introduction, history, areas of application of computer graphics
- Modeling and acquisition of graphical data
- Graphical application programming
- Transformations
- Clipping
- Rasterization and anti-aliasing
- Lighting
- Texturing
- Visibility
- Ray tracing
- Modern concepts of computer graphics at a glance

Workload:
56h contact time + 94h self study

Pre-examination requirements:	**Type of examination:**	**Teaching method / lecture hours per week (SWS):**
	oral examination	• 2 SWS Lecture • 2 SWS Exercise

Prerequisites according to examination regulations:	**Recommended prerequisites:**
none	Einführung in die Informatik (Introduction to Computer Science)

Media:	**Literature:**
	• J.D. Foley, A. van Dam, S.K. Feiner, J.F. Hughes: Computer Graphics – Principles and Practice (second Edition). AddisonWesley Publishing Company, Inc., 1996 • J. Encarnacao, W. Straßer, R. Klein: Gerätetechnik, Programmierung und Anwendung graphischer Systeme, Teil I und II. Oldenbourg, München, Wien, 1966, 1997 • D. Salomon: Computer Graphics Geometric Modeling, Sprin-ger, 1999 • A. Watt: 3D Computer Graphics. Addison-Wesley Publishing Company, Inc., 2000

Comments:
It is not allowed to take this module and *Computer Graphics - an Introduction* as well.

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