Elective Course Description Winter Term 2022/2023

Title	Shader Programming									
Cluster Title PO 07 To be filed by focus managers										
s.u.										
Cluster Title PO 2012 To be filed by focus managers s.u.										
	Game Development									
Date of first course	24.10.22 10:15		17/23			NN				
event / first										
organizational										
meeting with students*****/ Room										
kind of room if not	online		Seminarra	aum			Labor			
indicated above										
Belegung über OBS 05.10 10.10.2022 14:00		•								
Course Data	credit points						5 credit point	<u></u>		
	workload/semester						125-150 h			
	presence/week on a	verage**					4 SWS			
	Group size according to cnw									
	Min. size						8 students			
	6.4.20- 3.7.20									
		ırse	Monday							
	frequency of course	-events	weekly	Χ	bi-weekly		blocked			
	prospective timefran	ne****	Block 1	-	Block 2	x	Block 3			
	(Block = 90 min)		8:30		10:15		12:00	Х		
			Block 5		Block 6					
				16:00		17:45				
	course language		English	Х	German					
	suitable for students of course/focus				DM			Х		
					IMD		MP			
					SMP		ER	Х		
				OJ/WJ/OK		KMI	Х			
Content(s):	Design	lr	nformatics /	Economy /		Culture				
(check one or more)			Technology		Business					
Time frame in case of blocked event										
biocked event										
Course Portrait										
Lecturer(s) Name(s)	Paul Nasdalack									
Lecturer(s) email	Paul.Nasdalack@h-da.de									
Contact Prof. @ fbmd	Tilmann.kohlhaase@h-da.de									
Teaching Method	lecture lecture + seminar seminar project									
	Shaders are cool and shiny, but sadly only few people actually know how they work, even though they are not too hard to understand. In this elective we'll cover Shader development from the ground up. After a short introduction to GPUs and what makes them different to regular CPUs, we'll dive into the world of Shader programming and the Graphics Pipeline. We will be using Unity3D as a graphics engine to run our Shader code written in HLSL. We will not use Node Graphs. That being said, it should be fairly simple to apply the learned knowledge to the Node Graph Systems of Unity3D and Unreal Engine.									

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Type of Exam	homework		work+prese	ntation		paper				
Milestones if known										
		_								
		Examination								
		Exa	mination / Pres	entation						
End of Elective										
Suitability	beginner course									
	intermediate course									
	advanced course									
Preconditions										
Info about lecturer										
(especially if guest)										
Other information										

^{*} According to our examination law, the course titles have to be matched to a given catalogue with common course titles. This title will appear in the Transcript of Record and the Bachelor Certificate. Field has to be filed by Focus Managers, all clusters can be found below

Wissenschaftsjournalismus, blank field = please insert appropriate course. *(check as many as apply)***** Block 1 = 8.30 - 10.00 Uhr, Block 2 = 10.15 - 11:45 Uhr, Block 3 = 12.00 - 13.30 Uhr, Block 4 = 14.15 -

Elective Start: 17.10.2022

Chrismas 24.12.-8.1.23 (due to the short semester there might be some flexibel lecturing during this period.,) Electives End 10.2.2023 (Examinations could be scheduled after this date if necessary)

Please upload in Moodle Course!

to be filed by lecturer

to be filed by focus manager

An die Schwerpunktleiter: Bitte auch die Folgeseite beachten.

^{**} The official presence-time is 3 SWS for the whole semester. As the elective period is condensed to 12 weeks instead of 16 weeks, the presence time for the electives is 4 SWS.

^{***} Courses and focal points: er = Expanded Realities , oj = Online Journalismus; wj =

^{15.45} Uhr, Block 5 = 16.00 - 17.30 Uhr, Block 6 = 17.45 - 19.15 Uhr
***** In case that the course does not start in the first week 15.10.2018 there has to be a first organisational meeting to finalize the application process