

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.						
Cluster Title PO 2014 To be filed by focus managers S.U.	Game Development					
Date of first course event / first organizational meeting with students****/ Room	24.10.22	10:15	17/23		NN	
kind of room if not indicated above	online		Seminarraum		Labor	
Belegung über OBS 05.10. - 10.10.2022 14:00						

Course Data	credit points	5 credit points				
	workload/semester	125-150 h				
	presence/week on average**	4 SWS				
	Group size according to cnw					
	Min. size	8 students				
	6.4.20– 3.7.20					
		weekday of course			Monday	
	frequency of course-events	weekly	<input checked="" type="checkbox"/>	bi-weekly	<input type="checkbox"/>	blocked
	prospective timeframe**** (Block = 90 min)	Block 1 8:30	<input type="checkbox"/>	Block 2 10:15	<input checked="" type="checkbox"/>	Block 3 12:00
		Block 4 14:15	<input type="checkbox"/>	Block 5 16:00	<input type="checkbox"/>	Block 6 17:45
	course language	English	<input checked="" type="checkbox"/>	German	<input type="checkbox"/>	
	suitable for students of course/focus	DM	<input type="checkbox"/>	AG	<input checked="" type="checkbox"/>	
		IMD	<input type="checkbox"/>	MP	<input type="checkbox"/>	
		SMP	<input type="checkbox"/>	ER	<input checked="" type="checkbox"/>	
		OJ/WJ/OK	<input type="checkbox"/>	KMI	<input checked="" type="checkbox"/>	
Content(s): (check one or more)	Design	<input type="checkbox"/>	Informatics / Technology	<input checked="" type="checkbox"/>	Economy / Business	<input type="checkbox"/>
		<input type="checkbox"/>		<input type="checkbox"/>	Culture	<input type="checkbox"/>
Time frame in case of blocked event						

Course Portrait						
Lecturer(s) Name(s)	Paul Nasdalack					
Lecturer(s) email	Paul.Nasdalack@h-da.de					
Contact Prof. @ fbmd	Tilman.kohlhaase@h-da.de					
Teaching Method	lecture	<input type="checkbox"/>	lecture + seminar	<input type="checkbox"/>	seminar	<input type="checkbox"/>
		<input type="checkbox"/>		<input type="checkbox"/>	project	<input type="checkbox"/>
Course Contents	<p>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.</p> <p>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.</p>					

