Elective Course Description Summer Term 2022

Title	Exploring Realtime Engine Tools and Workflows					
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.						
Date of first course event / first organizational meeting with students***/ Room**	27.4.22 14:15 F17/23		NN		NN	
kind of room if not indicated above	**Hörsaal**		**Seminarraum**		**Labor**	**x**

Belegung über OBS
5.4.22-11.4.22

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	
	09.04. – 23.06.20							
					weekday of course		Wednesday	
	frequency of course-events		weekly		bi-weekly		blocked	
	prospective timeframe**** (Block = 90 min)		Block 1 **8:30**		Block 2 10:15		Block 3 12:00	
			Block 4 **14:15**	**X**	Block 5 16:00	X	Block 6 **17:45**	
	course language				English	x	German	
	suitable for students of course/focus				**DM**		**AG**	x
					IMD	**x**	**MP**	
					SMP	**x**	**IW (BA)**	
					OJ/WJ/OK		**I**	X
Content(s): (check one or more)	Design	x	Informatics / Technology	x	Economy / Business		Culture	
Time frame in case of blocked event								

Course Portrait							
Lecturer(s) Name(s)	Prof. Dr.-Ing. Martin Leissler						
Lecturer(s) email	martin.leissler@h-da.de						
Contact Prof. @ fbmd							
Teaching Method	lecture		lecture + seminar		seminar	x	project	
Course Contents	While the basic courses at university usually cover the classic asset production pipelines and integration into game engines (3d modeling, rigging, texturing, import, etc.), the picture is a bit different when it comes to real-world game studios. Game developers, from indie to AAA, have all built their internal toolchains and libraries, resulting in internally established, efficient production workflows, typically with tools built right into their game engines, saving them a cumbersome back and forth between the engine and external tools like Blender.						

	Furthermore, such studios have built up massive libraries of generic-purpose content (from materials to algorithms) that can be combined when prototyping or starting the development of new projects, giving such studios a valuable head-start by leveraging their existing developments. Unity, as the leading game engine across all platforms and genres, is used throughout the h_da Animaton&Game program to teach students game development and enable them to create game projects under the fierce time constraints of a single semester. In the area of animation short-films, recent developments also show that using game engines for real-time rendering of student projects has more benefits than drawbacks. Unity's approach is clear: the engine itself only provides the functionality that is extremely common across all possible genres (not bloating the builds), while 1st or 3rd party extensions (Unity Assets) are distributed through the Unity Asset Store, making it the single largest global marketplace for all kinds of extensions, ranging from 3D environments through animation libraries to tools and complex AI systems. During a span of more that 4 years, the A&G program has accumulated **more than 600 such Unity assets** used by many student teams to save valuable development time, while allowing them to focus on their personal areas of interest. This effectively simulates the environment of a professional studio with their established asset libraries.
	However, with the **large size of the library** it has become increasingly hard to keep an overview which assets are useful in which situation and often students are not aware of them, costing them unnecessary time they could spend on more productive tasks. The **goal of the course** is therefore to explore this huge asset library and make it more accessible to present and future students. Each student in the course can choose from several assets, which they consequently install, test, use (realistic situation), evaluate, document, and present them to the others in a systematical way. The documentation is preserved in a **Wiki**, which is accessible to all h_da students and which is planned to update and extend with more student projects using the corresponding assets.

Type of Exam	homework		work+presentation	x	paper			
Milestones <u>if known</u>								
		Examination						
		Examination / Presentation						
End of Elective								
Suitability	Intermediate student course							
Preconditions	Some understanding of eithtech-art or programming principles, as well as proficiency with Unity game engine.							
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
** 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: dm = Digital Media , oj = Online Journalismus; wj = 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 - 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 6.10.2014 there has to be a first organisational meeting to finalize the application process

Elective Start: 19.4.22
Holy Days: 26.5., 6.6., 16.6.2022

Please upload in Moodle Course!