Title	Pen & Paper Al: Creating a Game Master Al for a Smartphone											
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	25.10.23 14:00-16:00			17/23				NN				
kind of room if not	online				Seminarraum			Labor				
indicated above Belegung über OBS 02.10 9.10.2023 14:00												
Course Data	credit points				5 credit point	S						
	workload/semest presence/week o				125-150 h 4 SWS							
	Group size accor		4 300									
	Min. size											
					WED +FR							
	frequency of course-events			weekly		bi-weekly		blocked				
	prospective timet (Block = 90 min)	**	Block 1 <b>8:30</b>		Block 2 10:15		Block 3 12:00					
				Block 4 <b>14:15</b>		Block 5 16:00		Block 6 <b>17:45</b>				
	course language			English	Х	German						
	suitable for students of course/focus					DM		AG	Χ			
						IMD		MP				
		SMP		ER	Χ							
	_							KMI	Χ			
Content(s): (check one or more)	Design		Informatics / Technology			Economy / Business		Culture				
Time frame in case of blocked event	weekly WED 14:00 - 16:00 onsite weekly FR 11:00 - 12:00 online											
	12.00 Offilia											
Course Portrait	_											
Lecturer(s) Name(s)	Stephan Jacob											
Lecturer(s) email	Stephan.Jacob@h-da.de											
Contact Prof. @ fbmd	Tilmann.kohlhaase@h-da.de											
Teaching Method	lecture		seminar project									
Course Contents	In this immersive elective, students will delve into the intricate world of Dungeons and Dragons, where they will learn to create an AI that replicates the role of a Game Master on a smartphone interface. The AI will take command of a group of new players, guiding them through epic quests, ingenious puzzles, and captivating narratives, just like a human Dungeon Master would. The course is structured in such a way that we form teams for the individual tasks and meet every week, primarily to											

discuss progress. So there is a strong focus on project based learning rather than a lecture explaining the AI and App concepts.

Course Description: Step into the realm of imaginative storytelling and cutting-edge technology in a collaboration with "Ulisses", the German publisher of Dungeons and Dragons, Warhammer and the Inventor of The Dark Eye (DSA). This course offers a unique opportunity to explore the fusion of artificial intelligence and classic tabletop role-playing games. We will get the complete lore of the role-playing games directly from the manufacturer and will try to integrate it into a large language model like GPT. One of the research questions is, which prompts have to be generated then to get meaningful output? As further goals the conversion of speech to text and text to speech are examined.

## **Course Objectives:**

- Understand the fundamentals of Pen & Paper gameplay, rules, and lore.
- Explore the principles of AI development and natural language processing.
- Develop an AI system capable of emulating a skilled Dungeon Master's decision-making, improvisation, and storytelling abilities.
- Collaborate with Ulisses Games to integrate authentic P&P lore and elements into the AI's responses.
- Design a user-friendly smartphone interface for players to interact seamlessly with AI.

## **Course Highlights:**

- Access to exclusive P&P lore and support from Ullises Games.
- Hands-on coding and AI development.
- Group projects that encourage teamwork and creativity.
- Different Teams for each Task: LLM Training, Text2Speech/Speech2Text, Prompt Engeneering.
- Playtesting sessions to refine and enhance the AI system's performance.

**Required Skills and Prerequisites:** This elective is designed for students with a passion for both AI technology and Pen & Paper. Prerequisite skills and knowledge include:

- Proficiency in programming
- Familiarity with AI concepts, including machine learning and natural language processing.
- Basic understanding of Pen & paper gameplay mechanics and storytelling dynamics.
- Strong problem-solving abilities and creativity in devising Albased solutions.
- Excellent communication skills for effective collaboration with team members and Ulisses Games representatives.

**Enrollment Warning:** This elective is NOT for Artists! We will NOT

	<del>,</del>		-					
	create a game!							
Type of Exam	homework	work	+presentation		paper			
Milestones if known								
		Examination						
	l	Examination / Presentation						
End of Elective								
Suitability	beginner course							
	intermediate course							
	advanced course							
Preconditions								
Info about lecturer								
(especially if guest)								
Other information								

<sup>\*</sup> 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

\*\*\* Courses and focal points: er = Expanded Realities , oj = Online Journalismus; wj = Wissenschaftsjournalismus, blank field = please insert appropriate course. *(check as many as apply)* 

Elective Start: 16.10.2023

Chrismas 23.12.-7.1.24 (due to the short semester there might be some flexibel lecturing during this period.,)

Electives End 16.2.2024 (Examinations could be scheduled after this date if necessary)

<sup>\*\*</sup> 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.

<sup>\*\*\*\*</sup> 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

<sup>\*\*\*\*\*\*</sup> 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