MARMARA UNIVERSITY SCHOOL OF ARCHITECTURE
2021-2022 / SPRING Semester

Course Title	Code	Semester	Hour (T+P)	Credit	ECTS
Reality Technologies in Design Re/presentation	MUNI 906	6 – 7 – 8	3+0	3	5
Prerequisites					
Language of Instruction	English				
Course Type (Required / elective)	Elective				
Course Coordinator	Dr. Ahmet HAMURCU				
Instructors /e-mail	Dr. Ahmet HAMURCU / ahmet.hamurcu@marmara.edu.tr				

Goals	This course aims to provide students with basic knowledge and experience about using reality technologies in representing and presenting designs by making simple applications.	
Learning Outcomes	1. To understand the basic concepts of reality technologies 2. To learn the features of and the differences between Virtual reality (VR), Augmented Reality (AR), and Mixed Reality (MR) technologies 3. To understand how these technologies can be used for representing and presenting designs 4. To learn how to make simple reality applications for design representations and presentations	
Course Content	This course presents an introduction to virtual and augmented reality technologies as design representation and presentation tools.	
Assessment Criteria	**Assessment Components**	**No component may have more than 50% weight.**
	Mid -term exam	**% 40**
	Final Exam	**% 60**
	TOTAL	**% 100**

WEEKLY TOPICS AND PREPARATIONS			
WEEKS	**DATE**	**TOPICS**	**PREPARATIONS**
1. Week		Introduction: An overview of reality technologies and their applications in design processes	
2. Week		The current virtual reality (VR) systems and their working principles	
3. Week		General information about available platforms and software to make a simple VR application	
4. Week		How to create and run a basic VR scene – Part I	
5. Week		How to create and run a basic VR scene – Part II	
6. Week		How to create and run a basic VR scene – Part III	
7. Week		Announcing and Discussing Mid-Term Project	
8. Week		**MIDTERM WEEK**	
9. Week		The current augmented reality (AR) and mixed reality (MR) systems and their working principles	
10. Week		General information about available platforms and software to make a simple augmented reality (AR) application	
11. Week		How to create and run a basic AR scene – Part I	
12. Week		How to create and run a basic AR scene – Part II	
13. Week		How to create and run a basic AR scene – Part III	
14. Week		How to create and run a basic AR scene – Part IV	
15. Week		Announcing and Discussing Final Project	
		FINAL WEEK	

REFERENCES

- Jason Jerald. 2015. The VR Book: Human-Centered Design for Virtual Reality. Association for Computing Machinery and Morgan & Claypool, New York, NY, USA.
- Haller, M., Billinghurst, M., & Thomas, B. (2007). Emerging Technologies of Augmented Reality: Interfaces and Design (pp. 1-414). Hershey, PA: IGI Global.

ECTS / WORKING HOUR TABLE

Activities	Number of Weeks	Duration (Hour)	Working Hours
Duration of the Course (Including Exams: 14 x Total Weekly Course Hour)	14	3	42
Extracurricular Working Hour (Preparatory Work, Review)	7	3	21
Assignments, Presentations, Internet Studies, etc.	7	3	21
Mid-term Exam	1	3	3
Final Exam	1	3	3
Working Hours in Total			90
Working Hours in Total / 30			3
ECTS Credit of the Course			5