COURSE SYLLABUS						
Course Title	**Course Code**	**Semester**	**Course Hour/Week**		**Credit**	**ECTS**
Visual Effects in Game Engine	GAME 410	VIII	**Theory 2**	**Practice 2**	3	5
Course Type	Compulsory Course	Department Elective	Faculty Elective	University Elective	CoHE (YÖK) Elective	Other
	-	YES	-	-	-	-
Level of Course	Associate Degree (Short Cycle)		Undergraduate (First Cycle)		Graduate/ Doctoral (Second /Third Cycle)	
	-		YES		-	

Language of Instruction	English

Course Instructor(s)	Prof. Dr. Murat Yakin	E-mail : murat.yakin@arucad.edu.tr Office : ES OFF05
Course Objectives	To instill proficiency in use of Unity's Particle System and C# language, with an introduction to shader programing.	
Course Learning Outcomes	**Students will able to:**	**Teaching Methods** / **Evalutation Methods**
	Describe how to apply basic visual effect design concepts in their term projects	Direct instruction techniques / Midterm: project submission Final: project submission

	Explain how they implemented basic visual effect design concepts	Direct instruction techniques	Midterm: project submission Final: project submission
	Design visual effects for games by using a game engine	Direct instruction techniques, project development	Midterm: project submission Final: project submission
Course Content	The course is initially intending to introduce basic understanding of use of Particle System in Unity game engine.		

COURSE OUTLINE/SCHEDULE			
Week	**Topic**	**Implementation (theory/practice)**	**Required Reading, Preliminary preparation**
1	Curriculum Overview.	T/P	*Instructor course notes.*
2	Introduction to Unity interface. Basic tabs, layouts, navigation, how to create objects in scene.	T/P	*Gibson Bond, Jeremy. Introduction to game design, prototyping, and development : from concept to playable game with Unity and C#, 3rd edition, Boston: Addison-Wesley, 2023. ISBN: 9780136619949 (Library Catalogue Number: QA76.76.C672)*
3	Introduction to Unity's Particle System. How to make a simple laser effect.	T/P	*Gibson Bond, Jeremy. Introduction to game design, prototyping, and development : from concept to playable game with Unity and C#, 3rd edition, Boston: Addison-Wesley, 2023. ISBN: 9780136619949 (Library Catalogue Number: QA76.76.C672)*

4	Use of materials and textures with Particle System. A simple dust storm effect.	T/P	*Gibson Bond, Jeremy. Introduction to game design, prototyping, and development : from concept to playable game with Unity and C#, 3rd edition, Boston: Addison-Wesley, 2023. ISBN: 9780136619949 (Library Catalogue Number: QA76.76.C672)*
5	Introduction to coding with C# in Unity.	T/P	*Gibson Bond, Jeremy. Introduction to game design, prototyping, and development : from concept to playable game with Unity and C#, 3rd edition, Boston: Addison-Wesley, 2023. ISBN: 9780136619949 (Library Catalogue Number: QA76.76.C672)*
6	How to control particle system by code.	T/P	*Gibson Bond, Jeremy. Introduction to game design, prototyping, and development : from concept to playable game with Unity and C#, 3rd edition, Boston: Addison-Wesley, 2023. ISBN: 9780136619949 (Library Catalogue Number: QA76.76.C672)*
7	How to control particle system by code.	T/P	*Gibson Bond, Jeremy. Introduction to game design, prototyping, and development : from concept to playable game with Unity and C#, 3rd edition, Boston: Addison-Wesley, 2023. ISBN: 9780136619949 (Library Catalogue Number: QA76.76.C672)*
8	**Mid-Term**	-	/
9	Sun effect.	T/P	*Gibson Bond, Jeremy. Introduction to game design, prototyping, and development : from concept to playable game with Unity and C#, 3rd edition, Boston: Addison-Wesley, 2023. ISBN: 9780136619949 (Library Catalogue Number: QA76.76.C672)*
10	Introduction to shader programing. Hologram effect by a simple shader program.	T/P	*Gibson Bond, Jeremy. Introduction to game design, prototyping, and development : from concept to playable game with Unity and C#, 3rd edition, Boston: Addison-Wesley, 2023. ISBN: 9780136619949 (Library Catalogue Number: QA76.76.C672)*
11	A simple camp fire effect by particle system.	T/P	*Gibson Bond, Jeremy. Introduction to game design, prototyping, and development : from concept to playable game with Unity and C#, 3rd edition, Boston: Addison-Wesley, 2023. ISBN: 9780136619949 (Library Catalogue Number: QA76.76.C672)*

12	Using effects in a game environment.	T/P	*Gibson Bond, Jeremy. Introduction to game design, prototyping, and development : from concept to playable game with Unity and C#, 3rd edition, Boston: Addison-Wesley, 2023. ISBN: 9780136619949 (Library Catalogue Number: QA76.76.C672)*
13	Basic optimization techniques for a game environment.	T/P	*Gibson Bond, Jeremy. Introduction to game design, prototyping, and development : from concept to playable game with Unity and C#, 3rd edition, Boston: Addison-Wesley, 2023. ISBN: 9780136619949 (Library Catalogue Number: QA76.76.C672)*
14	Basic optimization techniques for a game environment.	T/P	*Gibson Bond, Jeremy. Introduction to game design, prototyping, and development : from concept to playable game with Unity and C#, 3rd edition, Boston: Addison-Wesley, 2023. ISBN: 9780136619949 (Library Catalogue Number: QA76.76.C672)*
15	Finishing the project.	T/P	*Gibson Bond, Jeremy. Introduction to game design, prototyping, and development : from concept to playable game with Unity and C#, 3rd edition, Boston: Addison-Wesley, 2023. ISBN: 9780136619949 (Library Catalogue Number: QA76.76.C672)*
16	Review of student projects	T/P	*Instructor course notes.*
17	**Final Project**	-	/

Required Course Material(s) / Reading(s)/ Text Book(s)	*Gibson Bond, Jeremy. Introduction to game design, prototyping, and development : from concept to playable game with Unity and C#, 3rd edition, Boston: Addison-Wesley, 2023. ISBN: 9780136619949 (Library Catalogue Number: QA76.76.C672)*
Recommended Course Material(s)/ Reading(s) /Other	Students should bring their storage devices. i.e.: USB Flash Drive

ASSESSMENT		
Learning Activities	**NUMBER**	**WEIGHT in %**
Mid-Term	1	40
Quiz	-	-
Assignment	-	-
Project	-	-
Field Study	-	-
Presentation / Seminar	-	-
Studio Practice	-	-
Other	-	-
Contribution of Final Examination/Final Project/ Dissertation to the Final Grade	1	60
TOTAL		100

CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME LEARNING OUTCOMES							
No	PROGRAMME LEARNING OUTCOMES	Level of Contribution (1-lowest/ 5-highest)				
		1	2	3	4	5
1	Knows the historical development of the field of communication, basic concepts, theories.				x	
2	Knows the basic concepts and terminology related to the field of game design.			x		
3	Has knowledge about the history of computer and video games and developments in this field.	x				
4	Knows game design processes and related applications.			x		
5	Has the ability to utilize various disciplines such as communication, art, music, psychology, mythology, cinema, etc. in the game design process.					x
6	Has the ability to analyze analog and digital game genres.		x			
7	Has the ability to use contemporary game engines and problem solving skills.	x				

8	Has the knowledge of questioning the game designs with an analytic and critical perspective.				x	
9	Has knowledge about media literacy.					x
10	Has the competence to prepare projects based on ethical principles in game development processes.				x	
11	Has the competence to evaluate games as an art form.			x		
12	Has the competence to use game design concepts and methods in related fields such as design, software development and media.				x	
13	Has the competence to prepare projects based on ethical principles in game development processes.				x	
14	Has the competence to take part and responsibility in game development teams.			x		
15	Has the competence to collect, analyze and interpret analytical data about games and players.		x			
16	Has the competence to develop and present a digital game project by using game design practices effectively.			x		

ECTS / STUDENT WORKLOAD				
ACTIVITIES	**NUMBER**	**UNIT**	**HOUR**	**TOTAL (WORKLOAD)**
Course Teaching Hour (X weeks * total course hours)	15		4	60
Preliminary Preparation and self- study	15		3	45
Mid-Term	1		10	10
Quiz	-		-	-
Assignment	-		-	-
Project	-		-	-
Field Study	-		-	-
Presentation / Seminar	-		-	-
Studio Practice	-		-	-
Final Examination/ Final Project/ Dissertation	1		10	10
Other	-		-	-
TOTAL WORKLOAD	-		-	125

TOTAL WORKLOAD / 25				5
ECTS				**5**

ETHICAL RULES WITH REGARD TO THE COURSE
Plagiarism Disclaimer Detected and undetected plagiarism is a serious offence at any time and it could have devastating effects on your degree result and future professional life. Plagiarism is easy to avoid if you make sure you thoroughly identify and recognize your sources and do not copy from visual examples, designs or notes taken directly from your sources word for word. The maximum citation limit cannot exceed 20%. Artificial intelligence citations are also considered within this scope. If proven otherwise, the student will fail the course.

	SDG 1: No Poverty	
	SDG 2: Zero Hunger	
	SDG 3: Good Health and Well-Being	
	SDG 4: Quality Education	
	SDG 5: Gender Equality	
	SDG 6: Clean Water and Sanitation	
	SDG 7: Affordable and Clean Energy	
	SDG 8: Decent Work and Economic Growth	X
	SDG 9: Industry, Innovation and Infrastructure	X
	SDG 10: Reduced Inequalities	
	SDG 11: Sustainable Cities and Communities	
	SDG 12: Responsible Consumption and Production	
	SDG 13: Climate Action	

		SDG 14: Life Below Water	
		SDG 15: Life on Land	
		SDG 16:Peace, Justice and Strong Institutions	
		SDG 17:Partnership for the Goals	

ASSESSMENT DETAILS AND EVALUATION CRITERIA:	
Final Grades will be determined according to the Course Learning Activities and Final Examination/ Project/ Dissertation Assessment Details as below, and comply with the Education and Examination Regulation set forth by the University. Throughout the course, students will learn the theoretical base of the topic and they will be able to equip themselves with the practical know-how skills of Advertisement production. Also, students are expected to design a creative advertisement piece with the knowledge they have gained in the course. During the class sessions, participation is a very important input for the learning process for the students. It is also vital to understand the effect of creativity input on the production process of advertisement. 70% attendance to courses is compulsory. Health reports belong to 30% absenteeism right.	
PREPARED BY	Prof. Dr. Murat Yakin
UPDATED	23/09/2023
APPROVED	