

COURSE SYLLABUS

Course Title	Course Code	Semester	Course Hour/Week		Credit	ECTS
3D Modelling, Texturing & Lighting – I	GAME 301	V	Theory 1	Practice 4	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
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Course Instructor(s)	Assist.Prof.Dr. Yunus Luckinger	E-mail : yunus.luckinger@arucad.edu.tr Office : 1064	
Course Objectives	This course is an introduction to 3D modeling using industry-standard software. Students will learn the basics of modeling, including creating 3D objects, textures, lighting, and rendering. The course will cover fundamental concepts in 3D modeling and provide students with the skills and knowledge to create 3D models for use in games, animations, and other applications.		
Course Learning Outcomes	Students will able to:	Teaching Methods	Evaluation Methods
	1.Students will be able to define 3D Modelling terminologies.	Direct instruction technique	Midterm: Project Submission
	2.Students will be able to explain the general terminology used in 3D modelling and animation being able to discuss the differences of terminologies in both industries.	Direct instruction technique	Midterm: Project Submission

Course Content	3. Students will demonstrate and apply 3D modelling techniques to create basic shape models	Direct instruction technique	Midterm: Project Submission
	4. Students will criticize and examine 3D projects and identify correctly done works from wrongly done works	Direct instruction technique & Demonstration method	Midterm: Project Submission Final: Project Submission
	5. Students will produce 3D models in different format suitable for video game production pipeline and/or Animation pipelines	Direct instruction technique	Midterm: Project Submission Final: Project Submission
	<p>At the end of this term, students will have the knowledge and understanding of the virtual 3D space and will be able to create different shapes and models using the related software.</p> <p>Thus, students will be able to;</p> <p>Make volumetric objects like vertices, splines, polygons and etc. Using these, then they will be able to create more complex objects and learn all the basic techniques for textures, light types, image mapping, camera settings in 3D environment as well as some rendering options.</p> <ul style="list-style-type: none"> - The main elements of the interface. - Basics of two-dimensional forms modeling; - Basic methods of 3D modeling; - Modeling based on 3D primitives; Shapes; Primitives, polygons, and primary modeling - Adding color, glow. - Texture, and other materials. - Basic lighting concepts and using lights. - Camera's installation and setup. - Rendering options. - Understanding mental ray and HDRI. 		

COURSE OUTLINE/SCHEDULE			
Week	Topic	Implementation (theory/practice)	Required Reading, Preliminary preparation
1	Introduction to the course. Overview of 3D modeling Types of 3D models Introduction to industry-standard software	T	Teacher Notes
2	Navigation and viewpoints, Basic geometric shapes Extruding and beveling Modeling using polygons	T/P	3D Modeling For Beginners: Learn everything you need to know about 3D Modeling!

3	Basic transforms, Pivot points, Coordinate systems, Duplicating objects,	T/P	3D Modeling For Beginners: Learn everything you need to know about 3D Modeling!
4	Modifiers, Modeling tools, Polygon modelling part I	T/P	3D Modeling For Beginners: Learn everything you need to know about 3D Modeling!
5	Polygon Modeling part II	T/P	Teacher Notes
6	Materials and creating texture. Applying textures to 3D objects Creating and editing materials UV mapping	T/P	
7	Prep Work & Asset Creation	T/P	Teacher Notes
8	MIDTERM SUBMISSION		
9	Maps; Bump Maps, Unwrapping and Maps,	T/P	Teacher Notes
10	Introduction to rendering. Lights	T/P	Teacher Notes
11	Rendering Understanding render settings Creating different render types Optimizing render times	T/P	Teacher Notes
12	Environment Creation Creating terrain	T/P	Teacher Notes
13	Different types of modelling I	T/P	Teacher Notes
14	Different types of modelling II	T/P	Teacher Notes
15	Project and Practice Session 1;	T/P	
16	Project and Practice Session 2;	T/P	
17	FINAL SUBMISSION		

Required Course Material(s) / Reading(s)/ Text Book(s)	Blender Documentation - The official documentation for Blender. It includes tutorials, user manuals, and technical information about Blender: https://docs.blender.org/manual/en/latest/
Recommended Course Material(s)/ Reading(s) /Other	<p>Blender Documentation - The official documentation for Blender. It includes tutorials, user manuals, and technical information about Blender: https://docs.blender.org/manual/en/latest/</p> <p>Blender Guru - A popular online resource for Blender tutorials, tips, and tricks: https://www.blenderguru.com/</p> <p>CG Cookie - A website that offers a range of Blender courses and tutorials for both beginners and advanced users: https://cgcookie.com/</p> <p>Blender Artists - A community of Blender users who share their work, tutorials, and resources: https://blenderartists.org/</p> <p>BlenderNation - A news website that covers the latest Blender-related news, tutorials, and resources: https://www.blendernation.com/</p> <p>Blender Cloud - A subscription-based platform that provides access to Blender training, assets, and tools: https://cloud.blender.org/</p>

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	To know and explain the basic concepts, theories, institutional structures of communication.	X				
2	To know the history of the game industry and the foundational theories of game design, thus, to be able to explain the terms of professions, professional ethical roles and responsibilities of the profession.		X			
3	The ability to follow the technological and socio-cultural developments and understand the impact of these development on the game industry and observe the changes.			X		
4	The ability to take part in international working environments and be able to analyse the international game industry’s needs.			X		
5	Knowledge of count design, pattern manipulation and terminology for game and production tools.				X	
6	Being able to produce, designs, create and program application works in the production processes related to this profession.					X
7	Knowledge of the basic principles and processes related to the narrative, aesthetics, technical elements of audio-visual animated and interactive content, and distinguishing successful or unsuccessful works with these aspects.				X	
8	The awareness that each design involves social contexts and in some cases, ethical choices, being able to analyse and evaluate these situations.			X		
9	Ability to solve problems using resources to find the best solutions to game development challenges.		X			
10	Ability to create, develop and manage professional workflows,				X	
11	Ability to communicate effectively with colleagues, customers, and colleagues in the industry, in a professional context, using written, oral, and up-to-date communication technology.			X		

ECTS / STUDENT WORKLOAD				
ACTIVITIES	NUMBER	UNIT	HOUR	TOTAL (WORKLOAD)
Course Teaching Hour (X weeks * total course hours)	15	-	5	75

Preliminary Preparation and self- study	15	-	1	15
Mid-Term	1	-	15	15
Quiz	-	-	-	-
Assignment	-	-	-	-
Project	-	-	-	-
Field Study	-	-	-	-
Presentation / Seminar	-	-	-	-
Studio Practice	-	-	-	-
Final Examination/ Final Project/ Dissertation	1	-	20	20
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.

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.

Please beware that the class uses teams. Thus, submissions have to be made Printed and digitally.

Late work can only receive full credit in extreme circumstances and will be penalized otherwise as follows:

- Over a day but less than two days late: **10% deducted**
- Over two days but less than a week late: **20% deducted**
- A week or more late: **Not accepted: 0%**

PREPARED BY	Assist.Prof.Dr. Yunus Luckinger
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APPROVED	