

COURSE SYLLABUS						
Course Title	Course Code	Semester	Course Hour/Week		Credit	ECTS
3D Modeling, Texturing & Lighting - II	GAME 302	6	<b>Theory</b> 1	<b>Practice</b> 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					
Course Instructor(s)	Danish Craig		E-mail: danish.craig@arucad.edu.tr Office : <b>TI OFF 7</b>			
Course Objectives	This course introduces students to advanced 3D modelling practices. Students will learn to prepare clean models, create good topology, utilize good UV and texturing practices, build bone systems, apply skinning, and animate characters using key principles and motion capture data. By the end of the course, they will be able to create and present professional-quality meshes for games, film, and other digital media.					
Course Learning Outcomes	<b>Students will able to:</b>		<b>Teaching Methods</b>		<b>Evaluation Methods</b>	
	<b>Plan</b> and organize the workflow for 3D modelling, texturing, character rigging and animation based on established modeling practices.		Project-Based Learning		Mid-Term Submission	
	<b>Develop</b> skills in navigating 3D software interfaces, managing		Project-Based Learning		Mid-Term Submission	

<b>Course Content</b>	timelines, UVing, texturing and preparing frames for animation.		
	<b>Establish</b> clean 3D models by applying proper polygon management and basic rigging techniques.	Project-Based Learning	Mid-Term Submission
	<b>Integrate</b> bone systems (IK/FK setups and controllers) into human character rigs for animation-ready models.	Project-Based Learning	Mid-Term Submission
	<b>Produce</b> quality, ready-to-use 3D models for game, media and other uses.	Project-Based Learning	Final Submission
	<ul style="list-style-type: none"> <li>● 3D modeling review and preparation for animation</li> <li>● Cleaning up models, edge flow and topology</li> <li>● Texturing techniques: attaching materials and textures to meshes</li> <li>● Principles of lighting scenes</li> <li>● Camera usage and rendering</li> <li>● Adding, mixing, refining, and blending rigs and animations</li> <li>● Final project presentation and portfolio preparation</li> </ul>		

**COURSE OUTLINE/SCHEDULE**

Week	Topic	Implementation (theory/practice)	Required Reading, Preliminary preparation
1	Introduction to the course. Overview of 3D modeling that has been learned previously.	T	
2	Navigation and UI, Timeline, and Frames Preparation work for future sections	T/P	No reading is required.
3	3D Modelling Rules and Polygon Cleaning	T/P	<b>Blender Documentation</b> - The official documentation for Blender. It includes tutorials, user manuals, and technical information about Blender: <a href="https://docs.blender.org/manual/en/latest/">https://docs.blender.org/manual/en/latest/</a>

4	Practicing proper edge flow and re-topology	T/P	<b>Blender Documentation</b> - The official documentation for Blender. It includes tutorials, user manuals, and technical information about Blender: <a href="https://docs.blender.org/manual/en/latest/">https://docs.blender.org/manual/en/latest/</a>
5	Advanced modelling techniques (modifiers, sculpting, simulation)	T/P	<b>Blender Documentation</b> - The official documentation for Blender. It includes tutorials, user manuals, and technical information about Blender: <a href="https://docs.blender.org/manual/en/latest/">https://docs.blender.org/manual/en/latest/</a>
6	Introduction to basic texturing through Blender and Substance Painter	T/P	<b>Blender Documentation</b> - The official documentation for Blender. It includes tutorials, user manuals, and technical information about Blender: <a href="https://docs.blender.org/manual/en/latest/">https://docs.blender.org/manual/en/latest/</a>
7	Prep Work for mid term	T/P	No reading is required
8	Midterm Exam + Intro to Texture II	Midterm	No reading is required
9	Advanced Texturing and Multi-textured meshes	T/P	<b>Blender Documentation</b> - The official documentation for Blender. It includes tutorials, user manuals, and technical information about Blender: <a href="https://docs.blender.org/manual/en/latest/">https://docs.blender.org/manual/en/latest/</a>
10	Lighting Basics	T/P	<b>Blender Documentation</b> - The official documentation for Blender. It includes tutorials, user manuals, and technical information about

			Blender: <a href="https://docs.blender.org/manual/en/latest/">https://docs.blender.org/manual/en/latest/</a>
11	Rendering and Camera Basics	T/P	<b>Blender Documentation</b> - The official documentation for Blender. It includes tutorials, user manuals, and technical information about Blender: <a href="https://docs.blender.org/manual/en/latest/">https://docs.blender.org/manual/en/latest/</a>
12	Basic Rigging Principles	T/P	<b>Blender Documentation</b> - The official documentation for Blender. It includes tutorials, user manuals, and technical information about Blender: <a href="https://docs.blender.org/manual/en/latest/">https://docs.blender.org/manual/en/latest/</a>
13	Adding animations to rigged meshes	T/P	<b>Blender Documentation</b> - The official documentation for Blender. It includes tutorials, user manuals, and technical information about Blender: <a href="https://docs.blender.org/manual/en/latest/">https://docs.blender.org/manual/en/latest/</a>
14	Prep Work for Final Exam	T/P	
15	FINAL EXAM	Final	No reading is required

<b>Required Course Material(s) / Reading(s)/ Text Book(s)</b>	<b>Blender Documentation</b> - The official documentation for Blender. It includes tutorials, user manuals, and technical information about Blender: <a href="https://docs.blender.org/manual/en/latest/">https://docs.blender.org/manual/en/latest/</a>
<b>Recommended Course Material(s)/ Reading(s) /Other</b>	<b>"Animation Survival Kit"</b> by Richard Williams (Library of Congress Catalog Number (LCCN): 2001052895, ISBN-13: 978-0571202287)

	<p><b>"Game Character Creation with Blender and Unity"</b> by Chris Totten (Library of Congress Catalog Number (LCCN): 2013046745, ISBN-13: 978-1118817425)</p> <p><b>"Digital Character Animation 3"</b> by George Maestri (Library of Congress Catalog Number (LCCN): 2002014119, ISBN-13: 978-0735712944)</p> <p><b>Blender Documentation</b> - The official documentation for Blender. It includes tutorials, user manuals, and technical information about Blender: <a href="https://docs.blender.org/manual/en/latest/">https://docs.blender.org/manual/en/latest/</a></p> <p><b>Blender Guru</b> - A popular online resource for Blender tutorials, tips, and tricks: <a href="https://www.blenderguru.com/">https://www.blenderguru.com/</a></p> <p><b>CG Cookie</b> - A website that offers a range of Blender courses and tutorials for both beginners and advanced users: <a href="https://cgcookie.com/">https://cgcookie.com/</a></p> <p><b>Blender Artists</b> - A community of Blender users who share their work, tutorials, and resources: <a href="https://blenderartists.org/">https://blenderartists.org/</a></p> <p><b>Blender Nation</b> - A news website that covers the latest Blender-related news, tutorials, and resources: <a href="https://www.blendernation.com/">https://www.blendernation.com/</a></p> <p><b>Blender Cloud</b> - A subscription-based platform that provides access to Blender training, assets, and tools: <a href="https://cloud.blender.org/">https://cloud.blender.org/</a></p>
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<b>ASSESSMENT</b>		
<b>Learning Activities</b>	<b>NUMBER</b>	<b>WEIGHT in %</b>
Mid-Term	1	40
Quiz		
Assignment		
Project		
Field Study		
Presentation / Seminar		
Studio Practice		
Other		

<b>Contribution of Final Examination/Final Project/ Dissertation to the Final Grade</b>	1	60
<b>TOTAL</b>		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 analyse analogue 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 take part and responsibility in game development teams.				X	

14	Has the competence to collect, analyse and interpret analytical data about games and players.	X				
15	Has the competence to develop and present a digital game project by using game design practices effectively.					X
16	Evaluates artificial intelligence applications in their studies with a critical approach in terms of aesthetics and originality, and uses them in accordance with ethical rules.				X	

















<b>ECTS / STUDENT WORKLOAD</b>				
<b>ACTIVITIES</b>	<b>NUMBER</b>	<b>UNIT</b>	<b>HOUR</b>	<b>TOTAL (WORKLOAD)</b>
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	-		-	-
<b>TOTAL WORKLOAD</b>				125
<b>TOTAL WORKLOAD / 25</b>				5
<b>ECTS</b>				<b>5</b>

**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	
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**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.

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.

<b>PREPARED BY</b>	Danish Craig
<b>UPDATED</b>	20/02/2026
<b>APPROVED</b>	Assist. Prof. Dr. Yunus Luckinger