



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Three Dimensional Modelling							
Course Code		BPR155		Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	2	Workload	50 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		The aim of this course is to teach how to design and design 3D computer models and animations and to develop 3D educational content using 3Ds Max program.							
Course Content		3D modeling is the process of developing a three-dimensional mathematical model of a living or inanimate object with special programs for 3D modeling in general using computer graphics. The 3D models prepared with the 3D modeling process are often used simultaneously with the tools that provide a realistic look to the 3D rendering model. In the process of 3D modeling, the data of the computer graphics are usually obtained by the user by step by step processing like sculpture and plastic arts. In most cases, manual 3D modeling can be performed automatically by the user. Automated 3D modeling can be done by entering certain values ??into previously made algorithms or by various scanning devices such as a 3D scanner. For example, MRIs used in hospitals serve as a kind of 3D scanner. Turkey and areas in the world, which is quite extensive 3D modeling, manufacturing as it used to make three-dimensional model of a structure to be constructed model is also used for the preparation of a product to be made. Today, the history of 3D models, which become an indispensable part of the gaming and animation world, is even older than personal computers. At the beginning, we apply for interactive presentations such as films, video games, 3D models used in interior design and architecture, and anatomy in the medical sector. In this context, examining the sample applications and developing new 3D model designs suitable for the content form the content of the course.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study, Problem Solving					
Name of Lecturer(s)		Ins. Mehmet Can HANAYLI							

### Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

### Recommended or Required Reading

1	3D Studio Max (Kodlab)
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Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction to 3D model and animation in education
2	Theoretical	3D modeling and animation programs, basics of 3Ds Max program, menus of 3Ds Max program, usage of 3Ds Max tees,
3	Theoretical	3D modeling bases, explaining the properties of different modeling methods, working with sub-objects
4	Theoretical	Curve modeling, working with sub-objects of 2D objects
5	Theoretical	Expansion and collapse, use of Loft command, polygon edges softening
6	Theoretical	Modeling for motion graphics, using some 2D editors
7	Theoretical	Modeling for motion graphics, using some 2D editors
8	Theoretical	Polygon modeling technique, modeling lines, use of regulators, subsections of surface modeling
9	Intermediate Exam	Midterm
10	Theoretical	Polygon modeling with modeling strip, Introduction to Nurbs modeling, editing of curves and surfaces
11	Theoretical	Using material bases and usage, adjusting opacity, using transactional overlay and bitmaps
12	Theoretical	Camera creation and viewing angle adjustment, Lighting bases and stage light settings
13	Theoretical	Key frame animations, transition animation preparation, repetitive animation creation.
14	Theoretical	Hierarchies, linking objects and playing a hierarchy and optimizing animation
15	Theoretical	Animation controls, gripping controllers and using the motion panel
16	Final Exam	Final Exam



**Workload Calculation**

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Assignment	10	0	1	10
Midterm Examination	1	5	1	6
Final Examination	1	5	1	6
Total Workload (Hours)				50
[Total Workload (Hours) / 25*] = <b>ECTS</b>				2

\*25 hour workload is accepted as 1 ECTS

**Learning Outcomes**

1	They will have the ability to design 2-D character and multi-angle design planning required for 3-D modeling.
2	They will have concept design knowledge that can meet their animation production needs.
3	Will be able to transfer 2D designs to 3D space
4	They will have the ability to conceptualize a design idea.
5	Have an idea about the aesthetic dimension of design
6	To have the necessary drawing techniques and skills during the animation design process
7	To be able to define 3D animation software and materials

**Programme Outcomes (Computer Programming)**

1	Having knowledge and skills in web project preparation and publishing
2	Having the knowledge and skills necessary for proper use management of database applications
3	Having knowledge and skills for software development, testing and installation
4	Be able to use the hardware necessary for computer programming and solve the basic problems they have with hardware
5	To be able to use information and communication technologies at the level required by computer programming
6	To be able to produce solutions to problems encountered in the field
7	Having the competencies to make job planning in the profession
8	Communicating with colleagues and clients based on knowledge and skills
9	Be able to take responsibility as an individual or as a team member and to fulfill the responsibility
10	To be able to express written and oral expressions related to the study topic
11	Be able to adapt the winning information to new situations

**Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High**

	L1	L2	L3	L4	L5	L6	L7
P1	3	2	3	3	3	3	3
P2	3	2	2	3	2	4	2
P3	3	2	2	3	3	3	2
P4	3	2	2	3	2	3	3
P5	4	2	2	2	3	4	3
P6	4	2	3	2	2	4	2
P7	2	2	3	1	3	3	2
P8	2	2	2	1	2	3	2
P9	2	2	3	2	3	3	3
P10	2	2	1	2	3	3	3
P11	2	2	1	3	3	3	3

