

COURSE PLAN

FIRST: BASIC INFORMATION

College					
College	Irbid University College				
Department	Applied Sciences				
Course					
Course Title	3D Design				
Course Code	020902225				
Credit Hours	2 (0 Theoretical, 2 Practical)				
Prerequisite					
Instructor					
Name					
Office No.					
Tel (Ext)					
E-mail					
Office Hours					
Class Times	Building Name	Day of Week	Start time	End time	Hall number
Text Book					
Title	:				

References

- 1) <http://docs.autodesk.com/3DSMAX/16/ENU/3ds-Max-Tutorials/index.html>
- 2) Autodesk 3ds Max 2020: A Detailed Guide to Modeling, Texturing, Lighting, and Rendering, 2nd Edition, by Pradeep Mangain, 2019, (28 \$)
- 3) Kelly L. Murdock's Autodesk 3ds Max 2020 Complete Reference Guide, 1st Edition, Kelly L. Murdock, 2019 (30 \$)
- 4) سعد البيهسي واخرون، مكتبة المجتمع العربي، 2012 max 3D (\$ 30) "الرسم الثلاثي الابعاد الرقمي" الجزء الثاني ،
- 5) ترجمة وإعداد المهندس عبد الرحمن شبيب ط/1 2006 دار شعاع للنشر والتوزيع / max 3D دليلك التعليمي الشامل لل (\$30)

SECOND: PROFESSIONAL INFORMATION

COURSE DESCRIPTION

This course specifies the skills and knowledge required to produce a 3D image that conforms to users' requirements for 3D animations, models, games and artwork projects using 3D graphic editor (3DS MAX). It includes the concept of 3D design, 3D project, identification of interface, object manipulation, 3D transformation, rendering and animation techniques.

COURSE OBJECTIVES

The objectives of this course are to enable the student to do the following:

- Explain the concept and application of 3D design modeling
- Develop a working competence in 3D design modeling production using 3D graphic editor
- Develop a working competence in 3D design project management

COURSE LEARNING OUTCOMES

By the end of the course, the students will be able to:

- **CLO1.** Explain concepts of 3D images, 3D projects and basic usage of 3D graphic editor
- **CLO2.** Employ user interfaces in 3D Max
- **CLO3.** Manipulate built-in types of objects
- **CLO4.** Manipulate built-in types of materials
- **CLO5.** Apply various types of light and camera to design artwork
- **CLO6.** Apply rendering techniques to design artwork
- **CLO7.** Manipulate animated objects

COURSE SYLLABUS

Week	Unit	Content	Related LO (chapter)	Proposed assignments
1	Introduction to 3D design and 3D max	<ul style="list-style-type: none"> • Components of the opening window of 3D Max • Viewports 	CLO1	
2	User Interface /Tools 1	<ul style="list-style-type: none"> • Main toolbar • Select Object • Rectangle Selection Region • Window/Crossing • Select and Move • Select and Rotate • Select and Uniform Scale • Use Pivot Point Center 	CLO2	
3	User Interface /Tools 2	<ul style="list-style-type: none"> • Keyboard Shortcut Override Toggle • Snap Toggle • Angle Snap Toggle • Percent Snap Toggle • Spinner Snap Toggle • Mirror 	CLO2	



		<ul style="list-style-type: none"> Align Manage Layers 		
4	User Interface /Menus 1	<ul style="list-style-type: none"> File Edit Tools Group View Create 	CLO2	
5	User Interface /Menus 2	<ul style="list-style-type: none"> Modifier Animation Graph Editor Rendering Light Analysis Customize 	CLO2	
6	Creating Objects 1	<ul style="list-style-type: none"> Objects Standard primitives Objects Parameters Shapes Expanded primitives Objects Parameters 	CLO3	
7	Creating Objects 2	<ul style="list-style-type: none"> Compound objects Molecular systems Editable poly Patch grids 	CLO3	
8		Mid exam		
9	Creating Objects 3	<ul style="list-style-type: none"> Bezier Curves Stairs, Door, Windows Modifier List and objects Modification commands Building the Handle Lathing Extruding Beveling 	CLO3	
10	Materials	<ul style="list-style-type: none"> Materials Navigating the Slate Material Editor Identifying the Standard Material Standard Materials Multiple Materials Material editor Material settings Adding a Bitmap 	CLO4	



		<ul style="list-style-type: none"> • Making materials • External materials 		
11	Lights	<ul style="list-style-type: none"> • Lighting • Standard Lights • Target Spotlight • Target Direct Light • Free Spot or Free Direct Light • Omni Light • Adding Shadows • Light properties 	CLO5	
12	Cameras	<ul style="list-style-type: none"> • Camera • Working with Cameras • Creating a Camera • Animating the Camera • Using camera in the scene 	CLO5	
13	Rendering	<ul style="list-style-type: none"> • Rendering • Navigating the Render Setup Dialog • Choosing a Filename • Rendered Frame Window • Render Processing • Rendering a Scene 	CLO6	
14	Animation, Sound	<ul style="list-style-type: none"> • Animation • Time line • Keyframes Setting • Add, Delete, Move keyframe • Using sounds 	CLO6	
15	Final projects	<ul style="list-style-type: none"> • Applying a final project to use all 3D max skills 	CLO1	
16		Final Exam		

COURSE LEARNING RESOURCES

The effectiveness of teaching in this course depends on making students familiar with the processes of creating objects and how to deal with them, using materials, modifying and manufacturing them, producing graphic projects related to the field, and creating advertising campaigns using 3D Max to produce three-dimensional advertisements with technical specifications that depend on the use of all 3Ds Max program techniques.

Teaching methods:

- Problem solving skills: This is done by solving problems related to different designs through 3ds Max technologies.

- Exercise and practice: by training students to create, modify and transform models of different types, and produce scenes with all their elements.
- Online research skills on topics related to the course objectives and recent developments in the field of 3D design.
- Learning skills and adaptability: developed by transferring students and reconfiguring work teams in order to enable them to adapt to other individuals from time to time.

ONLINE RESOURCES

- <http://docs.autodesk.com/3DSMAX/16/ENU/3ds-Max-Tutorials/index.html>

ASSESSMENT TOOLS

Assessment Tools	%
Homework	5%
Report	5%
Quiz	10%
MID Exam	20%
Experience/Attendance/Participation	10%
Final Exam	50%
Total Marks	100%

THIRD: COURSE RULES

ATTENDANCE RULES

Attendance and participation are extremely important, and the usual University rules will apply. Attendance will be recorded for each class. Absence of 10% will result in a first written warning. Absence of 15% of the course will result in a second warning. Absence of 20% or more will result in forfeiting the course and the student will not be permitted to attend the final examination. Should a student encounter any special circumstances (i.e. medical or personal), he/she is encouraged to discuss this with the instructor and written proof will be required to delete any absences from his/her attendance records.

GRADING SYSTEM

Example:

	Course Marks Average		
	Average	Maximum	Minimum
Excellent	100%	90%	
Very Good	89%	80%	
Good	79%	70%	
Satisfactory	69%	60%	
Weak	59%	50%	



Failed	49%	35%
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REMARKS

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COURSE COORDINATOR

Course Coordinator		Department Head	
Signature		Signature	
Date		Date	