TISHK INTERNATIONAL UNIVERSITY
FACULTY OF ENGINEERING
Department of ARCHITECTURE,
2021-2022 Fall
Course Information for ARCH 216 COMPUTER APPLICATION IN ARCHITECTURE II

Course Name:	COMPUTER APPLICATION IN ARCHITECTURE II

Code	Regular Semester	Theoretical	Practical	Credits	ECTS
ARCH 216	3	1	1	2	3

Name of Lecturer(s)-Academic Title:	Shallaw Hamza - Assistant Lecturer
Teaching Assistant:	Ms. Tara & Ms. Hema
Course Language:	English
Course Type:	Main
Office Hours	3
Contact Email:	shallaw.hamza@tiu.edu.iq Tel:07507616126
Teacher's academic profile:	MSc in Architectural Engineering
Course Objectives:	Familiarize students with the fundamentals of the 3Ds Max 2021. • Create the 3D models accurately. • Adding materials and controlling material properties. • Adding and controlling lights actively. • Familiarizes students with the fundamentals of rendering and animation. • Preparing and producing appropriate renderings
Course Description (Course overview):	In this course, the students will learn the relation between art and architecture and the effects of them on each other, and how to analysis the architecture in the surrounding environment and taste the value of art in it, the design elements and the right way to design, and encourage students to work in creative and artistic way.

COURSE CONTENT

Week	Hour	Date	Topic
1	3	4-7/10/2021	Introducing the Interfaces of the 3Ds max program
2	3	10-14/10/2021	Identify the fundamental tools and commands
3	3	17-21/10/2021	Primitives, Transforms, and snapping
4	3	24-28/10/2021	Modeling process: modeling element and modify tools
5	3	31/10-4/11/2021	Creating the 3D object from the 2D drawings (using line and editable poly)
6	3	7-11/11/2021	Exterior 3D mass model for a house
7	3	14-18/11/2021	Midterm Exam
8	3	21-25/11/2021	Intermediate modelling skills with editable poly
9	3	28/11-2/12/2021	Material Settings and mapping
10	3	5-9/12/2021	Exterior 3D detailed model
11	3	12-16/12/2021	Exterior 3D detailed model
12	3	19-23/12/2021	Exterior lighting, adding sunlight and artificial lighting settings
13	3	26-30/12/2021	Camera setting and 3d perspective Views
14	3	2-5/1/2022	Importing blocks and environment scenes
15	3	9-13/1/2022	Final Exam
16	3	16-20/1/2022	Final Exam

COURSE/STUDENT LEARNING OUTCOMES

1	the students will reach an Intermediate level of the 3Ds max program modeling
2	Become familiar with the Modeling process

3	creating 3D model based on a 2D drawing
4	students will be able to select, add, and modify suitable materials to models properly
5	Putting appropriate light for space, and taking attractive view for rendering

COURSE'S CONTRIBUTION TO PROGRAM OUTCOMES

(Blank : no contribution, I: Introduction, P: Profecient, A: Advanced)

	Program Learning Outcomes	**Cont.**
1	Apply problem-solving skills in the architectural context.	P
2	Demonstrate knowledge of architectural history, theory, and practice in solving architectural design problems.	P
3	Utilize freehand drawing, architectural graphics, and model building skills in solving architectural design problems.	A
4	Utilize the computer as a tool in a wide range of documentation and presentation applications, using CAD, 3-D visualization and rendering, electronic image composition and editing software.	A
5	Apply knowledge of mathematics, science, engineering and technology in solving architectural design problems.	A
6	Develop designs that meet desired needs within realistic economic, social, political, and cultural constraints.	P
7	Develop designs that fulfill the environmental, health & safety, and sustainability considerations.	A
8	Demonstrate team-working skills and show the ability to work collaboratively with various design teams involved in the building industry, and collaborate and negotiate with clients.	P
9	Demonstrate the necessary knowledge for applying laws, codes, regulations, standards and practices in relation to building construction systems.	
10	Show their ideas through high quality drawing skills and artistic sense.	
11	Utilize their skills to address professional and ethical responsibilities, diversity and commitment to the work field.	
12	Suggest solutions and techniques for engaging in life-long learning and knowledge about contemporary issues.	

Prerequisites (Course Reading List and References):	Murdock, K. (2020). Kelly L. Murdock\\\\\\\\\\\\\\\\'s Autodesk 3ds Max 2021 Complete Reference Guide: Taylor & Francis Group.
Student's obligation (Special Requirements):	- Attend in all the lectures -Using the computer during the lectures - Do the all the classwork and homework - Work on his or her individual projects

Weekly Laboratory/Practice Plan:

Week	**Hour**	**Date**	**Topics**
1	1	4-7/10/2021	Introducing the Interfaces of the 3Ds max program
2	1	10-14/10/2021	Identify the fundamental tool and commands
3	1	17-21/10/2021	using and applying primitives shapes, transforms and snapping of the objects creating an architectural composition using 20 cubes with the dimension of (20x20x20) cm
4	1	24-28/10/2021	starting modeling process: modeling element and modify tools (creating one room as a classwork)
5	1	31/10-4/11/2021	Creating the 3D object from the 2D drawings
6	1	7-11/11/2021	Exterior architectural modeling (modeling a Mass model for a given DWG house plan)
7	1	14-18/11/2021	Midterm Exam
8	1	21-25/11/2021	applying Intermediate modelling skills with editable poly on a 3D model
9	1	28/11-2/12/2021	Material Settings and mapping
10	1	5-9/12/2021	Exterior detailed 3D modeling 2
11	1	12-16/12/2021	creating a 3D model for a room contains a staircase
12	1	19-23/12/2021	Exterior lighting, adding sunlight and artificial lighting settings
13	1	26-30/12/2021	Camera settings and views
14	1	2-5/1/2022	Importing blocks and environment scenes

	15	1	9-13/1/2022	Final Exam
	16	1	16-20/1/2022	Final Exam

Course Book/Textbook:	Murdock, K. (2020). Kelly L. Murdock's Autodesk 3ds Max 2021 Complete Reference Guide: Taylor & Francis Group.
Other Course Materials/References:	Ascent. (2021). Autodesk 3ds Max 2021 Fundamentals: SDC Publications. Autodesk 3ds Max 2021 Fundamentals. (2020). SDC Publications. Autodesk. (2021). 3ds Max Learning Channel Tutorials. Retrieved from https://knowledge.autodesk.com/support/3ds-max/getting-started/caas/CloudHelp/cloudhelp/2021/ENU/3DSMax-Tutorial/files/GUID-18D6BA49-6270-43B8-BD7E-196752A4840C-htm.html Cusson R., Cardoso J. , 2007, Realistic Architectural Visualization with 3ds Max and mental ray. Elsevier Inc: Oxford *Magazines and review (internet): http://www.autodesk.com https://www.youtube.com/watch?v=tSnHDQSz4Tg
Teaching Methods (Forms of Teaching):	Lectures, Practical sessions, Exercises, Assignments, Tutorials, ,

COURSE EVALUATION CRITERIA

Method	Quantity	Percentage (%)
Attendance	1	3
Quiz	2	3.5
Homework	6	2
Midterm Exam	1	20
classwork	9	2
Final Exam	1	40
Total		**100**

Examinations: Practical exam, creating 3D model, exterior building modeling

Extra Notes:

ECTS (ALLOCATED BASED ON STUDENT) WORKLOAD

Activities	Quantity	Workload Hours for 1 quantity*	Total Workload
Theoretical Hours	16	1	16
Practical Hours	16	1	8
Final Exam	1	8	8
Attendance	1	3	3
Quiz	2	3	6
Homework	6	5	30
Midterm Exam	1	3	3
classwork	9		0
Total Workload			**74**
ECTS Credit (Total workload/25)			**2.96**

Peer review

Signature:	Signature:	Signature:
Name:	Name:	Name:
Lecturer	Head of Department	Dean