

**Faculty of Engineering & Technology**

**Elective 1 \ Computer Applications for Architects 1**

**Information :**

**Course Code :** ARC E01

**Level :** Undergraduate

**Course Hours :** 3.00- Hours

**Department :** Department of Architectural Engineering

**Instructor Information :**

Title	Name	Office hours
Lecturer	Hala Ali Nabil Mohamed Ali	1
Assistant Lecturer	Sameh Ibrahiem Abdul Samie Ahmed Emam	1
Teaching Assistant	Kamal Abdeleziz Ali Selim	1

**Area Of Study :**

- 1-Train students to perform using simple computer drafting software to visualize architecture projects in 2D digital forms, by the aid of programs such as "AutoCAD".
- 2-Prepare students to use computer rendering programs to produce raster graphics by the aid of programs such as "Photoshop".
- 3-Train students to use computer modeling software to visualize architecture projects in 3D digital forms, make 3D & 2D rendered graphics by the aid of programs such as "Revit".

**Description :**

Computer as a tool designed for change: Computer aided drafting, Creation and editing of primitives – Accuracy – Organization – 2D and 3D drawing.  
Computer aided Design: Modeling, and Visualization. Architectural rendering: Scenes, Materials and mapping. Using Photo editing applications in Architectural rendering.

**Course outcomes :**

**a.Knowledge and Understanding: :**

1 -	Identify different architectural computer drafting, modeling, rendering, and presentation techniques.
2 -	Define Characteristics of raster & vector graphics.
3 -	Identify different types of textures and materials.
4 -	Identify the different uses of 2D & 3D computer interfaces.

**b.Intellectual Skills: :**

1 -	Visualize graphical forms in two and three dimensions
2 -	Differentiate between raster and vector graphics.
3 -	Choose proper tools for modeling, rendering, and presenting architectural projects.

**c. Professional and Practical Skills: :**

1 -	Prepare 2D, 3D, and rendered drawings and presentations.
2 -	Use Photoshop software in assigning materials and furniture layers into architectural plans & Elevations.
3 -	Build architectural digital models using Revit software.

**d. General and Transferable Skills: :**

1 -	Do simple Search for information.
2 -	Manage time to meet deadlines.

**Course Topic And Contents :**

Topic	No. of hours	Lecture	Tutorial / Practical
Introduction to Computer applications in Architecture.	4	2	2
Introduction to AutoCAD	4	2	2
Drawing & Editing Commands in AutoCad	16	8	8
Photoshop 2D Architectural Presentations.	8	4	4
Introduction to BIM, & Revit	4	2	2
3D Drawing & Editing Commands in Revit Software	16	8	8
3D Modelling for a Building (Final Project)	8	4	4

**Teaching And Learning Methodologies :**

Interactive Lectures.
Lab Work

**Course Assessment :**

Methods of assessment	Relative weight %	Week No	Assess What
Assignments/Lab Work	20.00		
Final examination	40.00		
Mid-term examination(s)	30.00		
Participation.	10.00		

**Course Notes :**

1. Students Lecture Notes
2. Handouts

**Recommended books :**

Manual of AutoCAD 2014, PhotoShop, & Revit Software 2017.  
Help Menu of AutoCAD 2014, PhotoShop, & Revit Software 2017

**Periodicals :**

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**Web Sites :**

[www.ASCAAD.com](http://www.ASCAAD.com)