FUTURE UNIVERSITY IN EGYPT جامعة المستقبل

Faculty of Engineering & Technology

Execution Designs 2

Information :

Course Code :	ARC 472	**Level :**	Undergraduate	**Course Hours :**	4.00- Hours

Department : Department of Architectural Engineering

Instructor Information :

Title	Name	Office hours
Professor	Gamal Mohamed Attia Elkholy	5

Area Of Study :

Upon successful completion of the course, the student should be able to:
Make detailed design for architectural spaces.
Writing the technical specifications of various elements, finishes, furniture, installations and other similar things that is used in the designed space.
Merging architectural design with fixation systems, tools and equipment that are supplied from manufactures.
Utilize the latest technology of CNC into building construction.

Description :

The main concern of this course will be on detailing the execution and construction issues. Sketches and diagrams needed to clarify in all main stages of design and execution, the way in which building industry is becoming a main tool in building construction. The research and understanding of the function of material in design, the ability to design with material, and the techniques of manipulating representations of material structures through digital tectonics that has become a burgeoning part of the architectural knowledge. In addition, the student will know how to follow rules while writing the technical specifications of building/construction items. Their practice will be on a moderate scale project.

Course outcomes :

a.Knowledge and Understanding: :	
1 -	a1. Identify the objectives of the detailing and blowups construction drawings.
2 -	a2. Outline the characteristics of finishing materials and fixation systems and techniques in relation to the function of buildings.
3 -	a3. List the advantages and the disadvantages of utilizing CNC technology into building construction industry.
4 -	a4. Distinguish the rules of writing technical specifications of building/construction items.
b.Intellectual Skills: :	
1 -	b1. Analyze solution problems related to building constructions.
2 -	b2. Derive different solutions in solving architectural problems related to building constructions with emphasis on working details.
3 -	b3. Appraise alternative architectural and structural systems with reference to building constructions.
4 -	b4. Design assembly details of multi construction components of multi manufacturers.

c.Professional and Practical Skills: :	
1 -	c1. Draw construction detailing drawings.
2 -	c2. Write detailed and professional item specifications.
3 -	c3. Apply CAD standards in construction drawings.
4 -	c4. Utilize new techniques used in materials and working details.
d.General and Transferable Skills: :	
1 -	d1. Managing time to meet deadlines.
2 -	d2. Work within constraints of time.
3 -	d3. Refer to data sources.

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Preparation of working drawings of a pre-designed project	6	2	4
Integration between Architectural, Civil, & Electromechanical drawings.	12	4	8
Introduction to technical specifications	6	2	4
Detailing the execution and construction drawings	12	4	8
Midterm Exam, Revision	6	2	4
Introduction to Detailing concepts	6	2	4
Introduction to function of materials in design	6	2	4
Rules of writing the technical specifications	12	4	8
Integration between Architectural, Civil, & Electromechanical technical specifications.	6	2	4
Coordination Skills & techniques to manage Architectural, Civil, & Electromechanical drawings.	6	2	4
Final project	12	4	8
Introduction to Preparation of integrated execution drawings for projects	6	2	4

Teaching And Learning Methodologies :

Lectures.
One to One Discussion
Project based teaching
Research

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Assignments/Lab work	20.00		
Final examination.	40.00		
Midterm 1	15.00		
Midterm 2	15.00		

Participation	10.00		

Course Notes :
Presentations Handouts (Moodle)