

Faculty of Engineering & Technology

Architectural Design 4

Information :

Course Code : ARC 312

Level : Undergraduate

Course Hours : 4.00- Hours

Department : Department of Architectural Engineering

Instructor Information :

Title	Name	Office hours
Professor	Gamal Mohamed Attia Elkholy	3
Professor	Gamal Mohamed Attia Elkholy	3
Lecturer	Rana Mostafa Ahmed Hammam	
Assistant Lecturer	Nouran Ashraf Ali Abdeltawab	1
Assistant Lecturer	BASMA MOHAMED NAGIB IBRAHIM KHALIFA	
Assistant Lecturer	Aya Osama Ahmed Kamal Aly	
Assistant Lecturer	Nouran Ashraf Ali Abdeltawab	1

Area Of Study :

Upon successful completion of the course, the student should be able to:

1. Develop design process awareness (including data gathering and analysis) Share ideas and work in a team or a group
2. Develop drawing and representation techniques
3. Develop awareness of circulation systems, structures, lighting and form as applied to medium scale buildings.
4. Organize and articulate form and space that satisfy both functional and aesthetic requirements
5. Establish design and evaluation criteria
6. Test different design alternatives

Description :

The main concern and focus of this course will be about the different methods of "Form Generation". The priority will be for using advanced structure systems as the main tool to generate advanced and sophisticated forms. The course concerns the development of the students' sense of structure to generate architectural concepts and forms. The course projects may be such as: Design Center, Club House, Religious Complex, Rest House, Bus/railway Station, Indoor Sports Hall, and other similar ones.

Course outcomes :

a. Knowledge and Understanding :

1 -	Defining the theoretical bases upon which moderate scale structures and recreational accommodation buildings are designed.
2 -	Explain the relations between design problem variables and inputs in the case of moderate scale structures and recreational accommodation buildings.
3 -	Defining the principles of building technologies, including the application of structures, construction methods, and materials in relation to human needs related to moderate scale structures and recreational buildings.
4 -	Explaining the environmental aspects that affect the project quality in the case of moderate scale structures and recreational buildings.

b. Intellectual Skills: :

1 -	Using analytical thinking methods to define complex design problems.
2 -	Using creative thinking methods to propose different matured and enhanced design alternatives.
3 -	Evaluating design alternatives professionally.
4 -	Deducing the detailed requirements and architectural project program in the case of public buildings, according to the user behavior, site limitations, availabilities and function needs.
5 -	Generate design concepts based on the structure system as a form generator.

c. Professional and Practical Skills: :

1 -	Express creative and innovative solutions of the design problem
2 -	Designing wide span buildings with forms inspired by its structures in light of the social, aesthetic and technical requirements.
3 -	Using proper presentation techniques to represent his/her final design proposal.

d. General and Transferable Skills: :

1 -	Expressing his/her ideas by visual, graphic, written and verbal means
2 -	Search for relevant information.
3 -	Managing time and meet deadlines

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Data collection and data review	8	2	6
Data Analysis	8	2	6
Site analysis and Concept	8	2	6
Research submission	8	2	6
Conceptual design follow up	8	2	6
Form and Composition	8	2	6
Master plan	8	2	6
First submission	8	2	6
Follow up	8	2	6
Detailed architectural drawings	8	2	6
Second submission	8	2	6
Detailed architectural drawings	8	2	6
Semi final submission	8	2	6
Project finishing	8	2	6
final submission	8	2	6

Teaching And Learning Methodologies :

Lectures.
Research
Sketch Designs
Group Discussion

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Assignments/Studio work	30.00		
Final exam	40.00		
In Class Quizzes	20.00		
Participation	10.00		

Course Notes :

No course notes are required.

Recommended books :

Ramsey, C.; Ray, J. & Hoke, Jr.
Architectural Graphic Standards/Tenth Edition, AIA. John Wiley & Sons Inc., 2000, NJ. USA
/AIA. John Wiley & Sons Inc.
Chiara, J.:
Time Saver Standards for Architectural Design, Most recent metric version
Francis D.K. Ching:
Architecture: Form, Space and Order.
Architectural Magazines and Projects

Periodicals :

- Architecture
- Architectural Record
- Architectural Review
- Architecture d'aujourd'hui

Web Sites :

- www.architecturalrecord.com
- www.greatbuildings.com