

**Faculty of Engineering & Technology**

**Architectural Design 5**

**Information :**

**Course Code :** ARC 411

**Level :** Undergraduate

**Course Hours :** 4.00- Hours

**Department :** Department of Architectural Engineering

**Instructor Information :**

Title	Name	Office hours
Lecturer	Maha Baher Ibrahim Fouad	3
Lecturer	Maha Baher Ibrahim Fouad	3
Assistant Lecturer	Amany Medhat Hussien Khalil Mohamed	1
Assistant Lecturer	Amany Medhat Hussien Khalil Mohamed	1
Assistant Lecturer	MOHAMED MAHMOUD SAYED MAHMOUD SALEH	1

**Area Of Study :**

The main aims of this course are to:

- Enhance student's awareness of creative design process within a set of moderate "Environmental Design" concepts and principals.
- Train student to apply architectural strategies for enhancing the environmental performance of internal and external spaces.

**Description :**

The course aims to give focus at "Environmental Design" principles. Students will experience how these principles guide and control the design process. The emphasis will be on the different manipulations of architectural and urban design that help to reduce energy consumption of both internal and urban spaces. The course projects may be such as: Research Center, Technical School, Museum, Echo Tourism, and other similar ones.

**Course outcomes :**

**a.Knowledge and Understanding: :**

1 -	Identify principles of design of multi-functional architectural projects in accordance with relevant technical disciplines.
2 -	Outline principles of preparation and presentation of complex design projects in a variety of contexts and scales.
3 -	Identify different architectural functions and circulation patterns.
4 -	Identify appropriate forms and structure systems for different architectural functions.
5 -	Identify different site boundaries and all environmental contexts (natural, man-made and human)

**b.Intellectual Skills: :**

1 -	Integrate relationships of structure systems, construction elements and building materials into design process
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2 -	Breakdown multipurpose complex design projects into manageable inter-relatable partial components
3 -	Compare different design objectives and sort them in terms of priorities in the design process.
4 -	Analyze circulation patterns in accordance with architectural projects' elements.
5 -	Analyze site and environmental contexts and features.
6 -	Relate three-dimensional design with images of real sites and places
<b>c. Professional and Practical Skills: :</b>	
1 -	Compose architectural design programs for multifunctional projects
2 -	Convert complex projects' programs into appropriate architectural forms using proper structure systems.
3 -	Apply site analysis findings to proper design with respect of all environmental contexts (natural, man-made and human) in a positive contribution to them
4 -	Produce and present architectural design projects using an appropriate range of media and design-based software.
5 -	Review and criticize similar and existing projects.
<b>d. General and Transferable Skills: :</b>	
1 -	Develop team work co-operative skills
2 -	Communicate effectively
3 -	Manage tasks and resources within constrained time

<b>Course Topic And Contents :</b>			
<b>Topic</b>	<b>No. of hours</b>	<b>Lecture</b>	<b>Tutorial / Practical</b>
Research work for the related topic. Introduction to project and site analysis and detailed program.	12	8	4
Alternative of layout, Solid vs. Void	19	6	13
Layout and Study Model	12	8	4
Master Plan	10	2	8
Master Plan (Design Development)	13	0	13
Typical Floor Plans	14	4	10
Elevations & Sections	15	2	13
Sketch design	5	1	4
Perspective and interiors	8	1	7
Design Finishing	6	2	4
Final Submission of the Project	6	0	6

<b>Teaching And Learning Methodologies :</b>
Studio Design (Practical)
Research

**Course Assessment :**

Methods of assessment	Relative weight %	Week No	Assess What
Assignments(research +sketch designs)	35.00		
Final exam.	40.00		
Final project	15.00		
Participation	10.00		

**Course Notes :**

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**Recommended books :**

(Data Books - Books of Architectural Theories - Selected references for famous buildings and Architects, Periodicals, Web sites, etc)

- Time Saver Standards for Building Types, McGraw-Hill, USA. Chiara, J., Callender , J. (1983).
- Nefeurt, E.& P., (1990), Architect's Data, Blackwell Science, USA.
- Fawcett, A. Peter, (2003), Architecture: Design Notebook, Architectural Press, USA
- Adler, D., (1999), Metric Handbook: Planning and Design Data, Architectural Press, UK
- Pickard, Q., (2005), The Architect's Handbook, Blackwell Publishing, UK

**Periodicals :**

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**Web Sites :**

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