

Faculty of Engineering & Technology

Architectural Design 2

Information :

Course Code : ARC 212

Level : Undergraduate

Course Hours : 3.00- Hours

Department : Department of Architectural Engineering

Instructor Information :

| Title | Name | Office hours |
|--------------------|---|--------------|
| Professor | Samir Sadek Hosny | 5 |
| Lecturer | Haitham Mohamed Abdellatif El Sayed | |
| Lecturer | Dina Maarouf Ahmed Mohamed Dief Allah | 1 |
| Assistant Lecturer | Mohamed Said Hussen Ahmed Hussen | |
| Teaching Assistant | Kamal Abdeleziz Ali Selim | |
| Teaching Assistant | Aya Tarek Ibrahim Abdelhadi Ahmed | |
| Teaching Assistant | Aya Tarek Ibrahim Abdelhadi Ahmed | |
| Teaching Assistant | Ahmed Mohamed Gamal Eldin Hassan Abdallah Ashmawy | |
| Teaching Assistant | Zeinab Soliman Mohamed Galal Soliman | |

Area Of Study :

The main aims of this course are to:

1. Enhance student's awareness of creative design process within a set of moderate functional limitations.
2. Train student to defend and criticize ideas verbally and graphically.
3. Train student to think critically.

Description :

The main concern and focus of this course will be about the "Problem Solving" design process. The design process will be approached as a method of finding solutions for functional, environmental, and structural needs and problems. This will be as important as the need for generating creative and innovative ideas as the creative thinking methods should be well rooted in the prerequisite "Architectural Design (1)" course. The student will address various issues such as functional relations, circulation patterns, qualitative and quantitative study of architectural spaces, relationships between spaces and required openings, the effect of openings upon facades, human / environmental / functional relations, simple structures for small scale buildings, and similar issues. The course projects may be such as: a Celebrity Residence, Chalet, Youth Hostel, an Exploration Center, a Kindergarten, Kids' Arts Center, Children's' Library/Museum and similar projects.

Course outcomes :

a. Knowledge and Understanding: :

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| 1 - | Define the theoretical bases upon which a private residence is designed. |
| 2 - | Define different site constrains. |
| 3 - | Explain what is meant by design problem. |

b. Intellectual Skills: :

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|-----|---|
| 1 - | Apply analytical thinking methods to define design problems. |
| 2 - | Apply creative thinking methods to propose different design alternatives. |
| 3 - | Analyze site constrains and limitations. |
| 4 - | Appraise spatial forms and their aesthetic values. |

c. Professional and Practical Skills: :

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| 1 - | Design architectural projects in light of spatial, aesthetic, and functional requirements |
| 2 - | Apply creative concepts and methods to develop his/her design. |
| 3 - | Create 2D & 3D sketches to express and develop his/her design. |
| 4 - | Use proper presentation techniques to represent his/her design proposal. |

d. General and Transferable Skills: :

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| 1 - | Express his/her ideas by visual, graphic, written and verbal means |
| 2 - | Discuss and defending his/her ideas. |
| 3 - | Manage time and meet deadlines |
| 4 - | Search for relevant information. |
| 5 - | |
| 6 - | |

Course Topic And Contents :

| Topic | No. of hours | Lecture | Tutorial / Practical |
|---|--------------|---------|----------------------|
| Research Data Review (Group Work) ,AND One day sketch "Guest Zone Space Design" | 3 | 2 | 1 |
| Final Research Submission and Group Discussion (Group Work) | 3 | 3 | 0 |
| Residential Design Project: Start and Orientation AND One day sketch "Sleeping Zone Space Design" | 3 | 2 | 1 |
| Individual work: Concept with keywords, Detailed Program, Relationship Matrix, Bubble Diagram, Site analysis, and Site Zoning | 3 | 0 | 3 |
| Pin-up and Group Discussion: Volumetric Zoning, Schematic Plans, Concept with keywords, Detailed Program, Relationship Matrix, Bubble Diagram, Site analysis, and Site Zoning | 4 | 4 | 0 |
| Individual work: Project Development | 5 | 0 | 5 |
| 1st Sketch Design: Work at Studio then submittal Volumetric Zoning, Schematic Plans, Concept with keywords, Detailed Program, Relationship Matrix, Bubble Diagram, Site analysis, and Site Zoning | 3 | 0 | 3 |

Course Topic And Contents :

| Topic | No. of hours | Lecture | Tutorial / Practical |
|--|--------------|---------|----------------------|
| General Criticism + Project Development | 3 | 3 | 0 |
| Individual work: Schematic Elevations, Schematic Sections, Layout, Plans, Concept with keywords, Detailed Program, Relationship Matrix, Bubble Diagram, Site analysis, and Site Zoning | 3 | 0 | 3 |
| Pin-up and Group Discussion: Elevations, Sections, Layout, Concept with keywords, Site analysis, and Site Zoning | 4 | 4 | 0 |
| Individual work: Project Development | 5 | 0 | 5 |
| 2 nd Sketch Design: Work at Studio then submittal Elevations, Sections, Layout, Concept with keywords, Detailed Program, Relationship Site analysis, and Site Zoning | 3 | 0 | 3 |
| General Criticism + Project Development | 3 | 0 | 3 |
| Individual work: Project Development | 3 | 0 | 3 |
| Pin-up and Group Discussion | 3 | 3 | 0 |
| 3rd Sketch Design: Work at Studio then submittal + Orientation | 3 | 0 | 3 |
| Individual work: Project Development | 6 | 0 | 6 |
| One day sketch design: External Design Project | 3 | 0 | 3 |
| General Criticism | 3 | 3 | 0 |
| Project developing | 6 | 0 | 6 |
| General Criticism | 3 | 3 | 0 |
| Project Finishing | 12 | 0 | 12 |
| Project Submittal | 3 | 0 | 3 |

Teaching And Learning Methodologies :

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| Lectures. |
| Design studios. |
| Research assignments. |
| Information collection from different sources. |
| Site Visits and field trips. |
| Class discussions, sessions and design critiques. |

Course Assessment :

| Methods of assessment | Relative weight % | Week No | Assess What |
|---------------------------------|-------------------|---------|-------------|
| 1st , 2nd and 3rd sketch design | 15.00 | | – |
| Final exam | 40.00 | | – |
| Group Research | 5.00 | | – |

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|---|-------|--|---|
| One day External Sketch Design | 10.00 | | – |
| Participation | 10.00 | | |
| Preliminary Submission of Final Project | 5.00 | | – |
| Submission of Final Project | 15.00 | | |

Books :

| Book | Author | Publisher |
|---|-------------|-----------|
| Twenty-Five Buildings Every Architect Should Understand | Simon Unwin | Routledge |

Course Notes :

No course notes are required

Recommended books :

- Neufert, E., Architects' Data; The Handbook of Building Types, Third Edition, Blackwell Publishing, 2002, The Alden Group Ltd., Oxford & Northampton, metric edition.
- Ramsey, C.; Ray, J. & Hoke, Jr.: Architectural Graphic Standards, Tenth Edition - metric, AIA. John Wiley & Sons Inc., 2000, NJ. USA
 - 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
 - Chiara, J. & Time Saver Standards for Architectural Design
 - Architectural Magazines and Projects
 - Architecture: Form – Space and Order. By Francis D.K. Ching

Periodicals :

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

Web Sites :

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