



**SALAHADDIN UNIVERSITY**  
**COLLEGE OF ENGINEERING**  
**DEPARTMENT OF ARCHITECTURE**

**Architectural Design 1<sup>st</sup> stage**

**CONTENTS:**

- 1. General Information**
- 2. Course Description**
- 3. Course Objective**
- 4. Learning Outcomes**
- 5. Course Content**
- 6. ECTS**
- 7. Course Assessment Tools**
- 8. Text books & references**
- 9. Course Policy**

## 1. General Information

### Architectural Design

|                            |  |
|----------------------------|--|
| Course Title               | Architectural Design I   |
| Course Code                | 4101   |
| College                    | Engineering  |
| Department                 | Architectural Engineering  |
| No. of Credits             | 8  |
| Pre-requisites Course      |  |
| Pre-requisites Course Code |  |
| Course Coordinator(s)      | m.Suhaib Jala  |
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| Teaching staff             | Fenk D. Miran<br>Hawar Himdad<br>Zeanb K. Majed<br>.lane Muhammed<br>Awat Latif Qader<br>Fatin Yasin<br>Ahmad Nawzad .<br>Laree Shawqi .   |
| Class Hours                | 10   |
| Course Type                | Compulsory   |
| Offer in Academic Year     | 2020-2021  |

## **2. Course Description**

The typical route to qualify as an architect in our department in Architecture Design is a combination of academic studies and practical exercises and experience. Initially, a system is required to fulfill certain requirements. Hence, a natural way to begin thinking about architecture as a system is to start from the essential requirement of the system. As Architectural Graphics is an introduction to the techniques, methodologies and graphic tools used in conveying architectural ideas. Graphic skills are considered one of the main elements of presentation, which in turn leads to a better self-explanation and ideas description.

During the semester, students first begin with simple drawings involving basic techniques, as the semester progresses, the complexity of assignments does as well. Drawings will be discussed and demonstrated in lecture and applied in as practical exercises at studio. Thus, at the end of the year, students will have a package of their studio and homework as well as a clear idea of different techniques in graphics.

## **3. Course Objectives**

The course will cover elementary Architecture design practical exercises and texts of selective topics from books, Architecture periodicals and Internet publications. Reading these texts will help to develop student's ability to cope with architecture primary principles, in addition to establishing academic reading skills for the students, and the foundation of basic knowledge and understanding of Design in Architecture by practical exercise and readings. The course will give the students basic understanding of the subjects of primary elements, forms and shapes in architecture, basic rules of ordering, grouping and composition, basic rules of harmony, scale and transformation of forms and at the end of the year the student will have an exercise that is less abstract and more realistic to be in touch with the basic knowledge of function, circulation and building construction.

## **4. Learning Outcomes**

At the end of the semester, students would be able to understand the primary elements characteristics, the primary shapes and forms, demonstrate material representation by hatch and finally will be able to create physical architectural composition.

## 5. Course Content

### Workload/ Lectures Hours

Salahuddin University - College of Engineering – Department of Architecture

Fall Semester

21 October 2019 – 26 December 2019

#### Architectural Design I

| Weeks  | Content Description |  | Work Load/<br>Lectures (hrs.) |
|--|---------------------|--|-------------------------------|
| Week 1   | Theoretical         | - Course book introduction<br>- Introduction to Architectural design<br>- Introduction to architectural drawing tools and materials and their application  | 1                             |
|  | Practical           | -Introducing the tools necessary for inscribing lines and the instruments available for guiding the eye and hand while drawing.<br>- Drawing exercises (practicing simple line patterns)             | 9                             |
| Week 2   | Theoretical         | Primary elements characteristics<br>Primary elements: Point, Line<br>Architectural drafting:<br>Drawing techniques + drawing lines   | 1                             |
|  | Practical           | Drawing exercises (practicing simple line patterns)<br>- Primary elements/ point and line<br>- Line pattern exercise   | 9                             |
| Week 3   | Theoretical         | Primary elements characteristics<br>Primary elements: Plane, Volume<br>Basics of architectural drawing & abstraction   | 1                             |
|  | Practical           | Drawing exercises<br>- Primary elements/ plane and Volume<br>-Drawing lines, angles and shapes Exercise  | 9                             |
| Week 4<br>11 <sup>th</sup> Nov.<br>14 <sup>th</sup> Nov. | Theoretical         | Forms and properties of forms<br>Basics of architectural drawing & abstraction   | 1                             |
|  | Practical           | Forms and properties of forms<br>Basics of architectural drawing & abstraction<br>Drawing exercises (practicing properties of forms and primary shapes)<br>Line types, weights and quality Exercise  | 9                             |
| Week 5   | Theoretical         | Primary shapes and surfaces<br>- Representing materials  | 1                             |
|  | Practical           | Drawing exercises (practicing properties of forms and primary shapes)<br>Material representation<br>Drawing exercises (practicing properties of forms and primary shapes)<br>Material representation | 9                             |

|         |             |  |   |
|---------|-------------|--|---|
| Week 6  | Theoretical | Primary solids<br>- Rendering tonal values:<br>-Hatching, crosshatching, scribbling and stippling<br>-Value scale  | 1 |
|         | Practical   | Physical modeling: using card and paper works to create the primary solids -Individual work.<br>Rendering exercises  | 9 |
| Week 7  | Theoretical | Regular and irregular forms.<br>Architectural drawing systems:<br>-Multi view Drawings (top, front and side)   | 1 |
|         | Practical   | -Drawing exercises (practicing properties of forms and primary Shapes).<br>-Orthographic projection  | 9 |
| Week 8  | Theoretical | Transformation of form<br>-Subtractive and additive forms<br>-Centralized, linear, radial, clustered form<br>-Multi view Drawings (top, front and side)  | 1 |
|         | Practical   | Physical composition using cubical units: The students are requested to create different cubical forms and spaces through applying theoretical concepts (individual work).<br>-Orthographic projection | 9 |
| Week 9  | Theoretical | Form and space<br>Multi view Drawings  | 1 |
|         | Practical   | -Cubical composition: Ambiguity state<br>-Cubical composition: Subtraction<br>-Orthographic projection exercises   | 9 |
| Week 10 | Theoretical | Form and space<br>Multi view Drawings  | 1 |
|         | Practical   | Cubical composition: Addition<br>-Cubical composition: Space creation (Final submission).<br>-Orthographic projection exercises  | 9 |
| Week 11 | Theoretical | -Opening in space: defining elements<br>-Degree of enclosure<br><br>-Architectural multi view Drawings:<br>Drawing a floor plan  | 1 |
|         | Practical   | -Physical modeling: The students are asked to design and create enclosure or sheltered space by cubes<br>-Drawing exercises  | 9 |
| Week 12 | Theoretical | Architectural multiview Drawings:<br>-Doors and windows<br>-Stairs   | 1 |
|         | Practical   | Physical modelling: 3D Screen pattern design which focuses on the idea of visual connection between inside and outside of a  | 9 |

|                                   |             |  |     |
|-----------------------------------|-------------|--|-----|
|                                   |             | space/room as well as light penetration into space – using cubes<br>-Drawing exercises   |     |
| Week 13                           | Theoretical | Organization of form and space<br>Spatial organizations: centralized, linear, radial, cluster and grid organizations<br><br>Architectural multiview Drawings: -Stairs                                  | 1   |
|                                   | Practical   | -Physical modeling: practicing different types of spatial organization by using cubes<br>Individual works<br>-Drawing exercises  | 9   |
| Week 14                           | Theoretical | -Circulation: movement through space<br>Forms of circulation space.<br><br>Architectural multiview Drawings:<br>-Scale and orientation   | 1   |
|                                   | Practical   | Drawing exercises for movement and circulation types<br>3D modeling of cubes<br>Drawing exercises for section and elevation  | 9   |
| Week 15                           | Theoretical | -Proportions and scale: material, structured and manufactured.<br><br>Architectural multiview Drawings:<br>-Site plans drawings  | 1   |
|                                   | Practical   | Ergonomic studies in relation to human scale and furniture<br>dimensions in particular space- (drawing/ rendering/ collage /physical model) using cubes<br>Drawing exercises for section and elevation | 9   |
| Total Hours of Work Load Lectures |             |  | 150 |

## 6. ECTS

| Subject                | Education Activity | No.                         | Description                 |    | Activity Type | No. Weeks |
|------------------------|--------------------|-----------------------------|-----------------------------|----|---------------|-----------|
| Semester               | 1                  | Theory                      | face to face                | 15 | 1             | 15        |
|                        | 2                  | Preparation (0.5 theory)    | out of class                | 15 | 0.5           | 7.5       |
|                        | 3                  | Practical                   | face to face                | 15 | 9             | 135       |
|                        | 4                  | Preparation (1.5 practical) | out of class                | 15 | 1.5           | 22.5      |
| Assignment             | 5                  | Report                      | out of class                | 1  | 2             | 2         |
|                        | 6                  | weekly presentations        | out of class                | 10 | 2             | 20        |
|                        | 7                  | Submission/prelim           | out of class                | 1  | 8             | 8         |
|                        | 8                  | Submission/pre-final        | out of class                | 1  | 10            | 10        |
|                        | 9                  | Submission/Final            | out of class                | 1  | 13            | 13        |
| Assessment             | 10                 | Quiz                        | out of class                | 2  | 2             | 4         |
|                        | 11                 | Day sketch                  | out of class                | 1  | 3             | 3         |
|                        |                    |                             | Face to face hours/15 weeks |    |               | 150       |
|                        |                    |                             | Out of class hours/15 weeks |    |               | 90        |
|                        |                    |                             | Total hours                 |    |               | 240       |
| ECTS (Total hours/ 30) |                    |                             |                             |    |               | 8         |
|                        |                    |                             |                             |    |               |           |
|                        |                    |                             |                             |    |               |           |

## 7. Course Assessment Tools

Final grade for this module will be calculated as following:

First semester:100% for semester balance

- Assignments (including all studio-works, home-works , group activities ,day sketch and daily quizzes , Class discussion and participation) 65%

- Weekly final presentation 15%

-Prelim, Pre-final and Final project presentation 15%

-Attendance 5%

Student's attendance is required in all classes.

## 8. Text books & references:

Reading is vital and fundamental for students, both as part of the course fulfillment and personal development as a designer or an architect. There are many architectural books, magazines and journals that are worth reading.

Textbooks required for Design communication module are :

1. Architecture: Form, Space and Order, Francis Ching, Forth Edition
2. Neufert Architects Data Fourth Edition - By Wiley Blackwell
3. "Time Saver Standards for Architectural Design Data" by John Hanock
4. Architectural Graphics, 4 th Edition by Francis D.K. Ching (Required)
5. Graphics for Architecture, by Kevin Forseth
- 6. Architectural Drawing: A Visual Compendium of Types and Methods

## 9. Course policy

- Regular attendance is required according to the university rules.
- Daily participation and conducting assignments are required.
- Reading the materials & teachers notes daily.
- The participation of the student will be taken in consideration and it will be evaluated by the lecturer.
- As for the practical part of the material there will be daily degrees for the assignments given and they will have a considerable effect on the final degree.