

**Ministry of Higher Education and Scientific Research  
Scientific Supervision and Scientific Evaluation Apparatus  
Directorate of Quality Assurance and Academic Accreditation  
Department**



# **Academic Program and Course Description Guide**

**2026**

## **Introduction:**

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

## **Concepts and terminology:**

**Academic Program Description:** The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

**Course Description:** Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

**Program Vision:** An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

**Program Mission:** Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

**Program Objectives:** They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

**Curriculum Structure:** All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

**Learning Outcomes:** A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

**Teaching and learning strategies:** They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

## Academic Program Description Form

University Name: Al Muthanna University

Faculty / Institute: Collage of Engineering Scientific

Department: Department of Architectural Engineering

Academic or Professional Program Name:

Bachelor's degree (B.SC.) – Architectural Engineering

Final Certificate Name:

Bachelor's degree (B.SC.) in Architectural Engineering

Academic System: .....

Description Preparation Date: 15/9/2025

Completion Date: 15/1/2026

Signature:

Head of Department

Dr. Ahmed A. Rashid Kbah

Date: . . .2026

Signature:

Scientific Associate:

Asst. Prof. Dr. Forat Yasir AlJaberi

Date: . . .2026

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date:

Signature:

Approval of the Dean

## **1. Program Vision**

Our vision is to support the community with an educated and educated architectural generation capable of giving our students employment opportunities in various architectural fields in multiple projects that will develop human life and move it to a better future by developing the vocabulary of our architectural program to keep pace with the latest developments in the developed countries of the world.

## **2. Program Mission**

The architecture engineering program (AE) was established at Muthanna University to give its students a broad education in the basics of architecture, applications, and branches so that they can practice architecture at the professional level. The program's mission is to provide them with the necessary confidence and expertise to meet the technical and social challenges in the future. Graduates will be able in the future to put themselves at the level of basic and active participation in the positions of architect as the management of engineering sites and supervise and implement the designs.

### 3. Program Objectives

Our program is devoted to prepare students within three to five years after graduation to:

1. The ability to distinguish, identify, define, formulate, and solve engineering problems by applying the principles of engineering, science, and mathematics.
2. The ability to produce engineering designs that meet the requirements within certain constraints by applying both analysis and installation in the design process.
3. The ability to create and implement appropriate measurements and tests with quality assurance, analysis, and interpretation of results, and take advantage of engineering judgment to work conclusions.
4. The ability to communicate skillfully orally with a group of people and to write at different administrative levels.
5. The ability to recognize ethical and professional responsibilities in engineering issues and make outstanding judgments considering the consequences of financial, environmental and community considerations around the world.
6. The ability to recognize the continuing necessity of growing professional knowledge and how to find, evaluate, compile, and apply it correctly.
7. The ability to work appropriately within teams, prepare goals, plan activities, meet maturities and manage risks and uncertainty.
8. The ability to meet the requirements of technological progress and to recognize the shared responsibility towards the environment and society in terms of recycling vocabulary, environmental sustainability, and its positive impact.

#### 4. Program Accreditation

--

#### 5. Other external influences

--

#### 6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	9	21	7.5 %	Supportive
College Requirements	3	10	3.5 %	Basic
Department Requirements	53	249	88.9 %	Core
Summer Training	1 month	N.A.	N.A.	
Other				

\* This can include notes whether the course is basic or optional

## 7. Program Description

Level/Year	Course code	Course name	Theory	Applied	Tutorial	ECTS
First year - First semester	UNI 004	Computer I	1	2		3
	ARC 111	Freehand Sketching		4		6
	ARC 112	Graphic & Basic Design		10		9
	ENG 001	Mathematics I	3		1	5
	ENG 002	Engineering Statistics	2			2
	ARC 115	Building Materials	2			5
First year - Second semester	ARC 121	Physics	2			4
	ARC 122	Principles of Art and Architecture	4			6
	ARC 123	Architectural Design I		10		9
	ENG 005	Mathematics II	3		1	5
	UNI 001	English language I	2			2
	UNI 006	Human Rights and Democracy	2			2
	UNI 006	Arabic language I	2			2
Second year - First semester	ARC 211	Architectural Design II		10		8
	ARC 212	Architectural Graphics I		3		6
	ARC 213	Chemistry	2			4
	UNI 0010	The Crimes of the Baath regime	2			2
	UNI 002	English Language II	2			2
	ARC 214	Building Construction I	2	3		5
	UNI 005	Computer II	1	2		3
Second year-Second semester	ARC 221	Architectural Design III		10		9
	ARC 222	Architectural Graphics II		3		6
	ARC 223	History of Architecture I	2			4
	ARC 224	Building Construction II	2	3		5
	UNI 011	Arabic Language II	1	2		2
	ARC 225	Structure I	2			4
Third year - First semester	ARC 311	Architectural Design IV		10		8
	ARC 312	Structure II	2			4
	ARC 313	Computer Applications I	1	2		5
	ARC 314	Building Construction III	2	3		5
	ARC 315	History of Architecture II	2			4
	ARC 316	Principles of planning	2			4
Third year - Second semester	ARC 321	Architectural Design V		10		8
	ARC 322	Lighting services	2			4
	ARC 323	Structure III	2			4
	ARC 324	Computer Applications II	1	2		5
	ARC 325	Architecture and Environment	2			4
	ARC 326	Interior Design	1	2		5
Fourth year - First semester	ARC 401	Architectural Design IV		10		8
	ARC 402	Interior Design	1	5		2
	ARC 403	Advanced Building Technology	2			2
	ARC 404	Housing Planning	2			2
	ARC 405	Architectural Theories I	2			2
	ARC 406	Islamic Arab Architecture I	2			2

	ARC 407	Architecture and Climate	2		2
	ARC 408	Surveying I	2		2
	UNI 006	English Language II	2		2
Fourth year - second semester	ARC 409	Architectural Design IV	2	10	14
	ARC 410	Landscape Design	1	4	2
	ARC 411	Architectural Theories II	2		4
	ARC 412	Architectural acoustics	2		2
	ARC 413	Housing	2		2
	ARC 414	Islamic Arab Architecture II	2		4
	ARC 415	Urban design theories	2		2
	ARC 416	Technical construction	2		2
	Fifth year - First semester	ARC 501	Architectural Design V	3	9
ARC 502		Thesis	2	6	
ARC 503		Specifications and Estimation	2		2
ARC 504		Architectural design theories	2		2
ARC 505		Contemporary Iraqi Architecture	2		2
Fifth year - second semester	ARC 506	Theories of architectural criticism	2		2
	ARC 502	Thesis	3	15	15
	ARC 507	Professional Practice	2		2
	ARC 508	Contemporary Arab Architecture	2		2
	ARC 509	Philosophy Of Architecture	2		2

**Note:-** (From First year - First semester to Third year - second semester is on Polonia system while from Fourth year - First semester to Fifth year - second semester is on Regular old system).

## 8. Expected learning outcomes of the program

Knowledge	
Learning Outcomes 1	To apply principles of architectural history, theory, and criticism: Graduates should have a strong understanding of the historical and theoretical foundations of architecture, as well as the ability to analyze and critique architectural works.
Skills	
Learning Outcomes 2	To be able to develop and communicate design concepts, as well as produce detailed architectural drawings and models.
Learning Outcomes 3	To have a comprehensive understanding of building systems and materials, as well as the ability to integrate technical considerations into their design work. Graduates should be able to effectively communicate their ideas through written, verbal, and visual means.

**Ethics**

Learning Outcomes 4	Identify, formulate, and solve engineering problems related to architectural engineering.
Learning Outcomes 5	demonstrate ethical and professional behavior, including a commitment to sustainability, social responsibility, and lifelong learning.

## 9. Teaching and Learning Strategies

### 1. Collaborative Studio Approach

Emphasize interactive and professional communication through a studio-based environment. Students engage in peer-to-peer reviews and interdisciplinary group discussions to simulate a real-world firm environment. This fosters the ability to function effectively on a team and enhances professional oral communication.

### 2. Scaffolded Technical Instruction

Provide structured support by gradually increasing the complexity of architectural and engineering systems. Instruction begins with fundamental structural mechanics and spatial principles, progressing toward the integration of complex building systems (HVAC, electrical, and plumbing) within a singular design. This helps students master the ability to solve complicated engineering problems.

### 3. Contextual & Site-Specific Learning

Present engineering concepts within the context of real-world constraints, such as site topography, climate data, and urban fabric. By using authentic case studies and site visits, students learn to apply theoretical knowledge to practical situations, ensuring their designs are grounded in reality and meet ethical and professional standards.

### 4. Active & Problem-Based Learning (PBL)

Students are active participants in the design process through the PBL method. By tackling open-ended "engineering problems" independently and in groups, students develop the autonomy to research, iterate, and refine design solutions. This includes hands-on physical modeling and prototyping to bridge the gap between theory and execution.

### 5. Multi-Sensory & Integrated Visualization

Utilize a variety of tools to cater to different learning styles and enhance spatial perception. This includes the use of **Building Information Modeling (BIM)** and Virtual Reality (VR) to visualize complex data, alongside tactile material libraries and acoustic simulations. This holistic approach ensures a deep understanding of the fundamental physics and aesthetics of the built environment.

### 6. Continuous Formative Assessment & Jury Review

Regularly assess progress through a "Critique" (Jury) culture. Instead of traditional testing alone, feedback is provided via desk crits, technical pin-ups, and formal seminars. Various methods—including software-based performance simulations, structural calculations, and technical reports—are used to gauge understanding and provide the constructive feedback necessary for iterative design improvement.

## 10. Evaluation methods

## 11. Faculty

### Faculty Members

1	<b>Ahmed A. Rashid Kbah</b>	PhD – Architecture Engineering – Architecture Sustainability	Prof.
	Email:	ahmed.architect@mu.edu.iq	
	Mobile No.:	+9647824441717	
2	<b>Hussein Kareem Sultan</b>	PhD – Civil Engineering – Construction	Prof.
	Email:	hussein.ksz@mu.edu.iq	
	Mobile No.:	+9647801421484	
3	<b>Hadel Saad Al-Mur'ib's</b>	PhD – Architectural Engineering	Assistant Prof.
	Email:	hadel.arch@mu.edu.iq	
	Mobile No.:	+9647901188074	
4	<b>Shayma Halim Naji</b>	PhD – Fine Arts – Philosophy of Art	Assistant Prof.
	Email:	Shayma@um.edu.iq	
	Mobile No.:	+9647728215111	
5	<b>Mohammed Bally Mahdi</b>	PhD – Civil Engineering – Traffic and Transportation Engineering	Assistant Prof.
	Email:	engmohbaly@mu.edu.iq	
	Mobile No.:	+9647818803347	
6	<b>Sudad abd al ghni shyea</b>	PhD – Fine Arts – Free hand	Assistant Prof.
	Email:	Sudad.alsaady@mu.edu.iq	
	Mobile No.:	+9647903872731	
7	<b>Firas Fouad Abdullah</b>	PhD - Materials Engineering	Assistant Prof.
	Email:	Firas.fuad@mu.edu.iq	
	Mobile No.:	+9647821489683	
8	<b>Amjad M. F. Hussein</b>	PhD – Civil Engineering - Health	Assistant Prof.
	Email:	amjad.muhamad@mu.edu.iq	
	Mobile No.:	+964783 401 6600	

9	<b>Alaa Taha Mohammed</b>	MS.C - Civil Engineering - Structure	Assistant Prof.
	Email:	Atmalaa@mu.edu.iq	
	Mobile No.:	+964771 815 7149	
10	<b>Ali Saad Al-Rubaye</b>	MS.C - Architecture Engineering – Architectural Renovation & Urban design	Lecturer
	Email:	alisaad@mu.edu.iq	
	Mobile No.:	+9647702613108	
11	<b>Zahraa Tawfiq Naeem</b>	MS.C - Civil Engineering – Geotechnical Engineering	Lecturer
	Email:	Zahraa.tn@mu.edu.iq	
	Mobile No.:	+9647811011148	
12	<b>Ahmed Raad Radif</b>	PhD - Civil Engineering – Geotechnical Engineering	Lecturer
	Email:	ahmad_al_iraqi2000@mu.edu.iq	
	Mobile No.:	+9647807193974	
13	<b>Saad Hussein Alwan</b>	MS.C - Fine Arts	Lecturer
	Email:	Saad@mu.edu.iq	
	Mobile No.:	+9647811107554	
14	<b>Hisham Muhammad Sahib</b>	MS.C – Civil Engineering - Roads and Transportation Engineering	Lecturer
	Email:	Husham.mohammed@mu.edu.iq	
	Mobile No.:	+9647827452509	
15	<b>Mustafa Hussain Abualwez</b>	PhD - Electrical Engineering - Electrical Power Engineering	Lecturer
	Email:	mustafa.hussein@mu.edu.iq	
	Mobile No.:	+9647741242395	
16	<b>Ali Muhammad Ali Naji</b>	MS.C – Civil Engineering – Project Management	Lecturer
	Email:	alimnaji@mu.edu.iq	
	Mobile No.:	+9647829316054	
17	<b>Nadia Qasim Muhammad</b>	MS.C – Geography - Hydrology	Assistant Lecturer
	Email:	nadia.qasim@mu.edu.iq	
	Mobile No.:	+9647711032919	
18	<b>Ahmed Qasim Mohammed</b>	MS.C - - Hydrology	

	<b>Email:</b>	ahmed.kasim@mu.edu.iq	
	<b>Mobile No.:</b>		
<b>19</b>	<b>Zainab Mohammed Hassan</b>	MS.C - Urban and Regional Planning	Assistant Lecturer
	<b>Email:</b>	zainb.mohammed@mu.edu.iq	
	<b>Mobile No.:</b>	+9647836960879	

<b>Professional Development</b>
<b>Mentoring new faculty members</b>
<b>Professional development of faculty members</b>

<b>12. Acceptance Criterion</b>
<b>Central admission</b>

<b>13. The most important sources of information about the program</b>

<b>14. Program Development Plan</b>

## Program Skills Outline

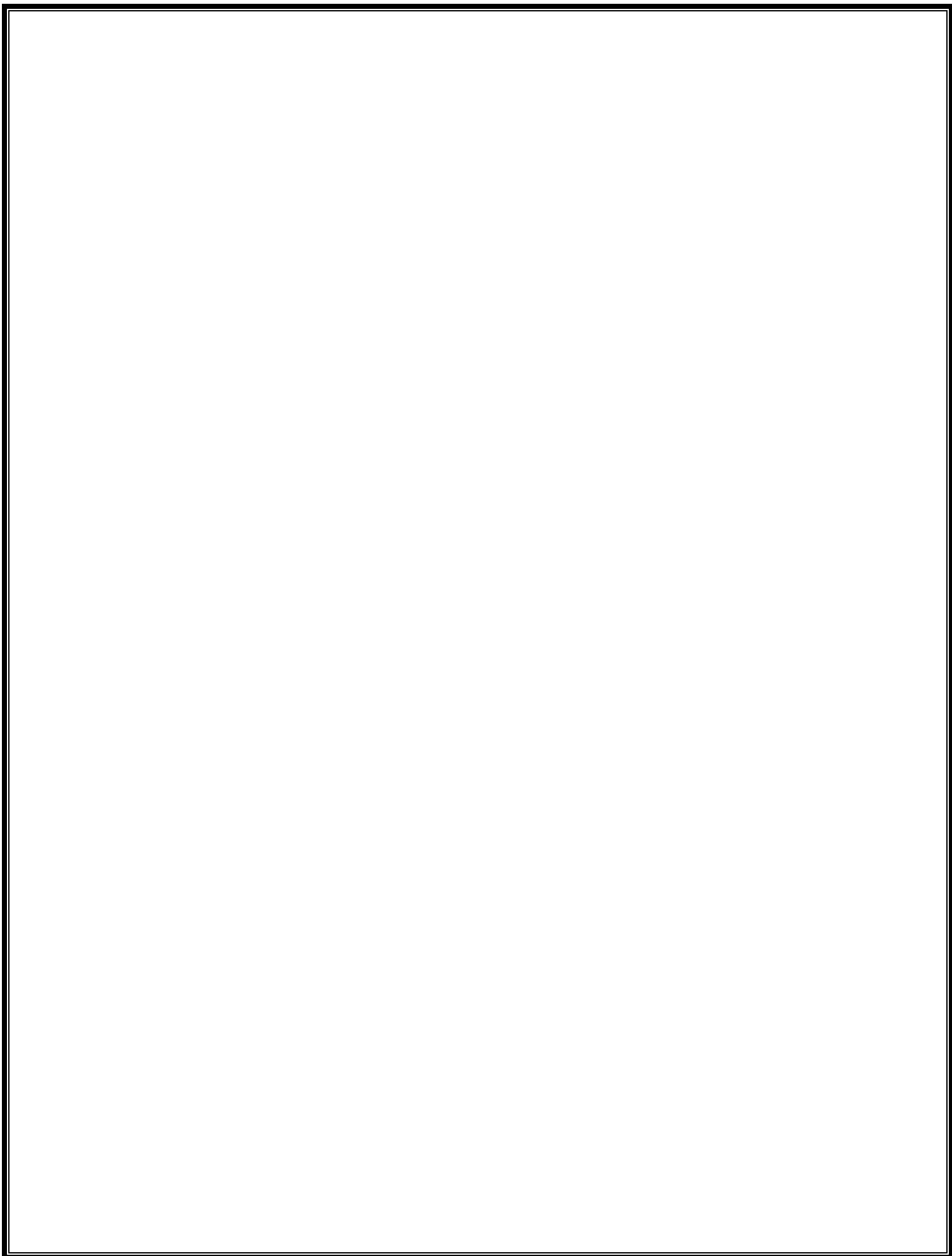
Curriculum Skills Map															
Please tick the boxes corresponding to the individual learning outcomes of the program being assessed.															
			Required learning outcomes of the program												
Course code	Course name	Optional or essential	knowledge and understanding				Subject-specific skills					thinking skills		General and transferable skills (or other skills related to employability and personal development)	
			A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	D1	D2
UNI 004	Computer I	essential	✓	✓	✓	✓	✓			✓		✓	✓		
ARC 111	Freehand Sketching	essential	✓	✓	✓			✓	✓		✓	✓		✓	
ARC 112	Graphic & Basic Design	essential	✓	✓		✓	✓		✓		✓		✓		✓
ENG 001	Mathematics I	essential	✓	✓	✓			✓	✓		✓	✓		✓	
ENG 002	Engineering Statistics	essential	✓	✓	✓	✓		✓		✓		✓			
ARC 115	Building Materials	essential	✓	✓	✓	✓			✓			✓		✓	
ARC 121	Physics	essential	✓	✓		✓	✓			✓	✓		✓		✓
ARC 122	Principles of Art and Architecture	essential	✓	✓	✓	✓	✓		✓		✓			✓	
ARC 123	Architectural Design I	essential	✓	✓	✓			✓		✓	✓		✓		
ENG 005	Mathematics II	essential	✓	✓		✓	✓		✓			✓		✓	✓
UNI 001	English language I	essential	✓		✓	✓		✓		✓	✓		✓	✓	
UNI 006	Human Rights and Democracy	essential	✓	✓			✓		✓	✓				✓	
UNI 006	Arabic language I	essential	✓	✓	✓	✓		✓		✓		✓	✓		
ARC 211	Architectural Design II	essential	✓	✓	✓			✓		✓	✓				✓

ARC 212	Architectural Graphics I	essential	✓	✓		✓	✓		✓		✓	✓	✓		
ARC 213	Chemistry	essential	✓	✓	✓			✓		✓	✓			✓	
UNI 0010	The Crimes of the Baath regime	essential	✓		✓	✓		✓		✓		✓	✓		
UNI 002	English Language II	essential	✓	✓			✓		✓	✓					
ARC 214	Building Construction I	essential	✓	✓	✓	✓		✓		✓		✓		✓	
UNI 005	Computer II	essential	✓	✓	✓	✓	✓		✓		✓		✓		
ARC 221	Architectural Design III	essential	✓	✓		✓	✓		✓		✓	✓		✓	✓
ARC 222	Architectural Graphics II	essential	✓	✓	✓	✓		✓		✓					
ARC 223	History of Architecture I	essential	✓	✓	✓		✓	✓		✓		✓	✓		
ARC 224	Building Construction II	essential	✓	✓	✓	✓		✓	✓	✓		✓		✓	
UNI 011	Arabic Language II	essential	✓	✓	✓	✓		✓		✓	✓				
ARC 225	Structure I	essential	✓	✓	✓		✓	✓	✓	✓		✓	✓		
ARC 311	Architectural Design IV	essential	✓	✓	✓	✓		✓		✓	✓			✓	
ARC 312	Structure II	essential	✓	✓	✓	✓		✓		✓		✓	✓		
ARC 313	Computer Applications I	essential	✓	✓		✓	✓		✓		✓			✓	
ARC 314	Building Construction III	essential	✓	✓	✓	✓	✓		✓		✓	✓			
ARC 315	History of Architecture II	essential	✓	✓		✓	✓		✓		✓				✓
ARC 316	Principles of planning	essential	✓	✓	✓	✓		✓			✓				
ARC 321	Architectural Design V	essential	✓	✓	✓	✓		✓							
ARC 322	Lighting services	essential	✓	✓		✓	✓		✓		✓		✓		
ARC 323	Structure III	essential	✓	✓		✓	✓		✓		✓		✓		
ARC 324	Computer Applications II	essential	✓	✓	✓	✓		✓		✓		✓	✓		
ARC 325	Architecture and	essential	✓	✓	✓	✓		✓		✓		✓	✓		

	Environment														
ARC 326	Interior Design	essential	✓	✓		✓		✓		✓					
ARC 401	Architectural Design IV	essential	✓	✓	✓	✓		✓		✓					✓
ARC 402	Interior Design	essential	✓	✓		✓		✓			✓	✓			
ARC 403	Advanced Building Technology	essential	✓	✓	✓	✓		✓		✓	✓				
ARC 404	Housing Planning	essential	✓	✓		✓		✓		✓			✓	✓	
ARC 405	Architectural Theories I	essential	✓	✓	✓	✓		✓		✓			✓	✓	
ARC 406	Islamic Arab Architecture I	essential	✓	✓	✓		✓	✓		✓		✓	✓		
ARC 407	Architecture and Climate	essential	✓	✓		✓		✓			✓	✓	✓	✓	✓
ARC 408	Surveying I	essential	✓	✓		✓		✓			✓	✓			
UNI 006	English Language II	essential	✓	✓	✓	✓		✓		✓	✓				
ARC 409	Architectural Design IV	essential	✓	✓		✓		✓			✓	✓			
ARC 410	Landscape Design	essential	✓	✓		✓		✓			✓	✓	✓		
ARC 411	Architectural Theories II	essential	✓	✓		✓		✓			✓	✓	✓		
ARC 412	Architectural acoustics	essential	✓	✓	✓	✓		✓		✓	✓				
ARC 413	Housing	essential	✓	✓	✓		✓			✓	✓	✓	✓		
ARC 414	Islamic Arab Architecture II	essential	✓	✓	✓		✓			✓	✓	✓	✓		✓
ARC 415	Urban design theories	essential	✓	✓	✓		✓		✓	✓		✓	✓		
ARC 416	Technical construction	essential	✓	✓	✓		✓			✓	✓				✓
ARC 501	Architectural Design V	essential	✓	✓	✓	✓		✓			✓	✓	✓		
ARC 502	Thesis	essential	✓	✓		✓		✓			✓	✓	✓		
ARC 503	Specifications and Estimation	essential	✓	✓	✓	✓		✓		✓	✓				✓
ARC 504	Architectural design theories	essential	✓	✓	✓		✓			✓	✓	✓	✓		

ARC 505	Contemporary Iraqi Architecture	essential	✓	✓	✓		✓		✓			✓	✓	✓	
ARC 506	Theories of architectural criticism	essential	✓	✓	✓		✓		✓			✓	✓	✓	✓
ARC 502	Thesis	essential	✓	✓		✓	✓		✓		✓	✓			
ARC 507	Professional Practice	essential	✓	✓	✓	✓		✓			✓		✓	✓	
ARC 508	Contemporary Arab Architecture	essential	✓	✓		✓		✓			✓	✓	✓	✓	
ARC 509	Philosophy Of Architecture	essential	✓	✓	✓	✓		✓			✓	✓	✓	✓	✓

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**



1st stage

## Course Description Form

1. Course Name:	
Computer I	
2. Course Code:	
UNI 004	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
75 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: MS.C - Ali Muhammad Ali Naji Email: <a href="mailto:alimnaji@mu.edu.iq">alimnaji@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Master Digital Interface Literacy:</b> Navigate architectural software environments (e.g., AutoCAD or similar industry standards) with proficiency, understanding workspaces, toolbars, and coordinate systems.</li> <li>• <b>Develop Precision Drafting Skills:</b> Translate architectural sketches and measurements into accurate 2D digital drawings, maintaining strict adherence to scale and professional drafting standards.</li> <li>• <b>Understand Layering and File Organization:</b> Implement effective file management and layering strategies to ensure efficiency, interoperability, and professional-standard document organization.</li> <li>• <b>Apply Orthographic Conventions Digitally:</b> Use digital tools to produce professional floor plans, sections, and elevations, utilizing variable line weights and hatches to communicate spatial intent.</li> <li>• <b>Master Coordinate Systems:</b> Demonstrate the ability to work within Absolute, Relative, and Polar coordinate systems to ensure absolute geometric accuracy in design.</li> <li>• <b>Utilize Blocks and Libraries:</b> Learn to create, insert, and manage reusable "Blocks" for standard architectural components (doors, windows, furniture), streamlining the drafting process.</li> <li>• <b>Optimize Output and Plotting:</b> Understand the workflow of "Paper Space" vs. "Model Space," mastering the art of setting scales, viewports, and layout configurations for professional printing.</li> </ul>	<p>Course Objectives</p>

- **Integrate Digital and Physical Design:** Develop the ability to import hand-drawings into the digital environment to serve as a base for precise technical drafting.
- **Cultivate Digital Ethics and Data Security:** Understand the importance of version control, backup strategies, and file formats, ensuring that design intellectual property is managed securely and ethically.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.</p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	3	A1 A2 A3 A4 B2 B4 C1	Navigate Digital Environments	<i>Attendance</i>	Daily test
<i>Week-2</i>	3	A1 A2 A3 A4 B2 B4 C1	Apply Coordinate Systems	<i>Attendance</i>	Daily test
<i>Week-3</i>	3	A1 A2 A3 A4 B2 B4 C1	Implement Layering Logic	<i>Attendance</i>	Daily test
<i>Week-4</i>	3	A1 A2 A3 A4 B2 B4 C1	Execute Orthographic Projections	<i>Attendance</i>	Daily test
<i>Week-5</i>	3	A1 A2 A3 A4 B2 B4 C1	Utilize Drawing Aids	<i>Attendance</i>	Daily test
<i>Week-6</i>	3	A1 A2 A3 A4 B2 B4 C1	Manage Blocks and Libraries	<i>Attendance</i>	Daily test
<i>Week-7</i>	3	A1 A2 A3 A4 B2 B4 C1	Apply Graphic Annotations	<i>Attendance</i>	Daily test
<i>Week-8</i>	3	A1 A2 A3 A4 B2 B4 C1	Understand Model vs. Paper Space	<i>Attendance</i>	Daily test
<i>Week-9</i>	3	A1 A2 A3 A4 B2 B4 C1	Master Viewports and Scaling	<i>Attendance</i>	Daily test
<i>Week-10</i>	3	A1 A2 A3 A4 B2 B4 C1	Perform Digital Editing	<i>Attendance</i>	Daily test
<i>Week-11</i>	3	A1 A2 A3 A4 B2 B4 C1	Execute Complex Polyines	<i>Attendance</i>	Daily test

Week-12	3	A1 A2 A3 A <sup>4</sup> B2 B4 C1	Integrate Hybrid Workflows	Attendance	Daily test
Week-13	3	A1 A2 A3 A <sup>4</sup> B2 B4 C1	Optimize Printing/Plotting	Attendance	Daily test
Week-14	3	A1 A2 A3 A <sup>4</sup> B2 B4 C1	Maintain Data Integrity	Attendance	Daily test
Week-15	3	A1 A2 A3 A <sup>4</sup> B2 B4 C1	Produce Professional Portfolios	Attendance	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ul style="list-style-type: none"> <li>• <b>Omura, G., &amp; Benton, B. C. (2020).</b> <i>Mastering AutoCAD 2020 and AutoCAD LT 2020.</i> (The standard reference for mastering the software interface, coordinate systems, and precise drafting commands).</li> <li>• <b>Yarwood, A. (2014).</b> <i>Introduction to AutoCAD.</i> (Specifically designed for beginners, focusing on how to translate manual drafting concepts into digital workflows).</li> <li>• <b>Departmental Drafting Manual (Al-Muthanna University):</b> The internal faculty guide on architectural standard line weights, text styles, and title block requirements for the university.</li> </ul>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Ching, F. D. K. (2018).</b> <i>Architectural Graphics.</i> (Even in a digital course, this is the primary source for understanding what a professional plan, section, or elevation <i>should</i> look like).</li> <li>• <b>AutoCAD Help &amp; Documentation Center:</b> The official Autodesk library for technical troubleshooting and command-line reference—the most reliable source for software-specific logic.</li> <li>• <b>Neufert, E. (2020).</b> <i>Architects' Data.</i> (Used here to guide students on drawing components like doors, stairs, and furniture at the correct real-world dimensions within their digital files).</li> </ul>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <b>Journals/Reports:</b> <ul style="list-style-type: none"> <li>• <i>Journal of Information Technology in Construction (ITcon):</i> Provides insight into how digital drafting evolves into Building Information Modeling (BIM).</li> <li>• <i>AutoCAD Technical Case Studies:</i> Published reports on how digital drafting efficiency impacts large-scale construction project timelines.</li> </ul> </li> <li>• <b>Practice-Based References:</b> <ul style="list-style-type: none"> <li>• <i>Architectural Record - "Tech" Section:</i> Often features articles on how CAD/BIM integration is used in real-world professional offices, helping students see the relevance of their current software drills.</li> </ul> </li> </ul>
Electronic References, Websites	<ul style="list-style-type: none"> <li>• <b>Autodesk Knowledge Network (<a href="https://knowledge.autodesk.com">knowledge.autodesk.com</a>):</b> The official hub for video tutorials, product documentation, and community forums.</li> <li>• <b>CADTutor (<a href="https://cadtutor.net">cadtutor.net</a>):</b> Offers extensive, step-by-step tutorials ranging from "Introduction to CAD" to advanced plotting techniques.</li> <li>• <b>ArchDaily - Drawings (<a href="https://archdaily.com/drawings">archdaily.com/drawings</a>):</b> An essential visual database. Students should browse this to see how professional architects use CAD to produce clear, layered, and high-quality construction documents.</li> <li>• <b>First In Architecture (<a href="https://firstinarchitecture.co.uk">firstinarchitecture.co.uk</a>):</b> Excellent for beginners, offering specific advice on how to set up CAD files for architectural projects, including scale and print layout.</li> </ul>

## Course Description Form

1. Course Name:	
Freehand Sketching	
2. Course Code:	
ARC 111	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
150 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: MS.C - Saad Hussein Alwan Email: <a href="mailto:Saad@mu.edu.iq">Saad@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Develop Visual Literacy:</b> Master the ability to see and translate three-dimensional objects and spaces into accurate two-dimensional graphic representations.</li> <li>• <b>Master Linear Fundamentals:</b> Cultivate the ability to draw confident, precise lines—straight, curved, and contour—as the primary vocabulary for defining architectural form and space.</li> <li>• <b>Apply Perspective Principles:</b> Understand and apply the laws of linear perspective (one-point, two-point, and three-point) to create depth, scale, and spatial volume in architectural sketches.</li> <li>• <b>Analyze Proportions and Scale:</b> Develop the ability to accurately gauge and record the relative proportions of objects and building elements using measuring techniques such as pencil-arm calibration.</li> <li>• <b>Master Light, Shadow, and Tone:</b> Explore the use of value and shading to define mass, surface texture, and depth, allowing students to "sculpt" with light on a two-dimensional surface.</li> <li>• <b>Practice Observational Sketching:</b> Cultivate the habit of regular in-situ sketching, learning to capture the essence of natural and man-made environments quickly and effectively.</li> <li>• <b>Utilize Sketching for Ideation:</b> Use sketching as a dynamic tool for the creative process—generating, testing, and refining early-stage design concepts rapidly.</li> <li>• <b>Understand Spatial Relationships:</b> Critically explore how spaces connect, circulate, and interact through diagrammatic sketching and orthographic translation.</li> </ul>	<p>Course Objectives</p>

- **Develop a Personal Visual Language:** Foster individual creative expression, encouraging students to experiment with various dry media (pencils, ink, charcoal) to find a unique, professional graphic style.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.</p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Master Visual Perception	<i>Attendance</i>	Daily test
<i>Week-2</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Execute Precise Line Work	<i>Attendance</i>	Daily test
<i>Week-3</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Apply Perspective Systems	<i>Attendance</i>	Daily test
<i>Week-4</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Analyze Proportion and Scale	<i>Attendance</i>	Daily test
<i>Week-5</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Render Light and Shadow	<i>Attendance</i>	Daily test
<i>Week-6</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Practice Observational Sketching	<i>Attendance</i>	Daily test
<i>Week-7</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Conceptualize Designs	<i>Attendance</i>	Daily test
<i>Week-8</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Understand Spatial Relationships	<i>Attendance</i>	Daily test
<i>Week-9</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Develop Graphic Style	<i>Attendance</i>	Daily test
<i>Week-10</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Analyze Architectural Form	<i>Attendance</i>	Daily test
<i>Week-11</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Practice Iterative Refinement	<i>Attendance</i>	Daily test
<i>Week-12</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Document Site Data	<i>Attendance</i>	Daily test
<i>Week-13</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Participate in Critique	<i>Attendance</i>	Daily test
<i>Week-14</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Maintain an Analytic Sketchbook	<i>Attendance</i>	Daily test
<i>Week-15</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Integrate Technology	<i>Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

<p>Required textbooks (curricular books, if any)</p>	<ul style="list-style-type: none"> <li>• <b>Ching, F. D. K. (2015).</b> <i>Design Drawing</i>. (The core manual for understanding the mechanics of drawing—from line weight and tone to geometric construction and perspective).</li> <li>• <b>Ching, F. D. K. (2014).</b> <i>Architecture: Form, Space, and Order</i>. (Essential for learning how to identify and sketch the underlying "ordering principles" like axis, rhythm, and hierarchy in the buildings they draw).</li> <li>• <b>Laseau, P. (2004).</b> <i>Freehand Sketching: An Introduction</i>. (Specifically written to teach the student how to use sketching as a tool for thinking and design ideation, not just recording).</li> </ul>
<p>Main references (sources)</p>	<ul style="list-style-type: none"> <li>• <b>Ching, F. D. K. (2018).</b> <i>Architectural Graphics</i>. (The definitive guide to how architects communicate; teaches students the standard conventions for representing shadows, trees, people, and human scale in their sketches).</li> <li>• <b>Kliment, S. A. (2006).</b> <i>Architectural Sketching and Rendering</i>. (A great reference for using different media—pencil, ink, and markers—to capture textures and materials).</li> <li>• <b>Iraqi Academic Design Manuals:</b> Use local department guides on drafting standards to ensure students understand the regional expectations for orthographic and perspective submissions.</li> </ul>
<p>Recommended books and references (scientific journals, reports...)</p>	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <i>The Journal of Architecture</i>: Often features essays on the role of drawing in the design process.</li> <li>• <i>Sketching the Built Environment (Scientific Reports)</i>: Look for papers on "Cognitive Spatial Mapping"—how sketching helps architects understand site topography and urban flows.</li> </ul> </li> <li>• <b>Reports:</b> <ul style="list-style-type: none"> <li>• <b>UNESCO Heritage Conservation Reports:</b> Excellent for students to study the sketching techniques used by architects to document historic structures.</li> </ul> </li> </ul>
<p>Electronic References, Websites</p>	<ul style="list-style-type: none"> <li>• <b><a href="http://drawingmatter.org">Drawing Matter (drawingmatter.org)</a>:</b> A premier site dedicated to the role of drawing in architecture. It features historical and contemporary sketches that reveal the thought processes of world-renowned architects.</li> <li>• <b><a href="http://firstinarchitecture.co.uk">First In Architecture (firstinarchitecture.co.uk)</a>:</b> Provides excellent, student-friendly tutorials on perspective, how to draw shadows, and how to sketch quickly on-site.</li> <li>• <b><a href="#">ArchDaily - Drawing Section</a>:</b> An endless gallery of high-quality architectural drawings; students should use this to analyze how other architects represent details, facades, and sections.</li> <li>• <b><a href="http://drawabox.com">Drawabox (drawabox.com)</a>:</b> While general in nature, this is the best online resource for mastering the "mechanics" of a drawing hand—it is excellent for building the confidence and muscle memory needed for 1st-stage students.</li> </ul>

## Course Description Form

1. Course Name:	
Graphic & Basic Design	
2. Course Code:	
ARC 112	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
225 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: MS.C - Ali Muhammad Ali Naji Email: <a href="mailto:alimnaji@mu.edu.iq">alimnaji@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Master Visual Literacy:</b> Acquire the ability to identify and utilize the primary elements of design—point, line, plane, and volume—to create meaningful 2D and 3D compositions.</li> <li>• <b>Develop Manual Drafting Skills:</b> Cultivate proficiency in the use of traditional drafting instruments (pencils, scales, T-squares, and triangles) to produce precise, industry-standard architectural drawings.</li> <li>• <b>Understand Geometric Projections:</b> Gain a deep understanding of orthographic projections, including the correct representation of plans, sections, and elevations, to translate 3D space onto 2D media.</li> <li>• <b>Implement Design Ordering Principles:</b> Apply fundamental concepts such as axis, symmetry, hierarchy, rhythm, datum, and transformation to organize and structure design layouts.</li> <li>• <b>Master Anthropometrics and Scale:</b> Utilize human-scale data to ensure that all designed spaces, clearances, and volumes are functional, ergonomic, and responsive to the human body.</li> <li>• <b>Enhance Freehand Sketching:</b> Develop hand-eye coordination through rapid observational sketching and memory exercises, fostering the ability to "think on paper" during the initial creative phase.</li> <li>• <b>Explore Spatial Relationships:</b> Analyze and design fundamental spatial configurations, including interlocking,</li> </ul>	Course Objectives

adjacent, and nested spaces, to understand how architectural mass defines internal experiences.

- **Translate Concepts to Models:** Build manual dexterity and technical skill in physical model-making, using varied materials to test, refine, and communicate complex architectural volumes.
- **Cultivate Professional Studio Culture:** Learn to engage in the architectural critique process, articulate design decisions with clarity, and integrate constructive feedback into iterative design work.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Visual Language	<i>collective criticism + Attendance</i>	Daily test
<i>Week-2</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Visual Language	<i>collective criticism + Attendance</i>	Daily test
<i>Week-3</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Visual Language	<i>collective criticism + Attendance</i>	Daily test
<i>Week-4</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Geometric Ordering	<i>collective criticism + Attendance</i>	Daily test
<i>Week-5</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Geometric Ordering	<i>collective criticism + Attendance</i>	Daily test
<i>Week-6</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Geometric Ordering	<i>collective criticism + Attendance</i>	Daily test

<i>Week-7</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Technical Graphics	<i>collective criticism + Attendance</i>	Daily test
<i>Week-8</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Technical Graphics	<i>collective criticism + Attendance</i>	Daily test
<i>Week-9</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Technical Graphics	<i>collective criticism + Attendance</i>	Daily test
<i>Week-10</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Human-Centered Design	<i>collective criticism + Attendance</i>	Daily test
<i>Week-11</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Human-Centered Design	<i>collective criticism + Attendance</i>	Daily test
<i>Week-12</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Spatial Interaction	<i>collective criticism + Attendance</i>	Daily test
<i>Week-13</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Spatial Interaction	<i>collective criticism + Attendance</i>	Daily test
<i>Week-14</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Synthesis	<i>collective criticism + Attendance</i>	Daily test
<i>Week-15</i>	4	A1 A2 A3 B2 B3 B5 C1 D1	Synthesis	<i>collective criticism + Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ul style="list-style-type: none"> <li>• <b>Ching, F. D. K. (2015).</b> <i>Design Drawing</i>. (The definitive guide to learning how to draw what you see and how to represent architectural form through line, tone, and projection).</li> <li>• <b>Ching, F. D. K. (2014).</b> <i>Architecture: Form, Space, and Order</i>. (The foundational text for understanding how elements like axis, rhythm, and hierarchy structure a design).</li> <li>• <b>Iraqi Ministry of Higher Education &amp; Scientific Research.</b> <i>Basic Design Curriculum Guidelines</i>. (The official syllabus documentation that ensures consistency in teaching foundational design skills across Iraqi universities).</li> </ul>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Neufert, E. (2020).</b> <i>Architects' Data</i>. (Crucial for learning how to design based on human dimensions).</li> <li>• <b>Porter, T., &amp; Goodman, S. (2014).</b> <i>Manual of Graphic Techniques for Architects, Graphic Designers, and Artists</i>. (Provides excellent exercises for mastering freehand sketching and marker techniques).</li> <li>• <b>Frederick, M. (2007).</b> <i>101 Things I Learned in Architecture School</i>. (A practical resource for understanding the "why" behind studio assignments, from basic composition to formal logic).</li> </ul>

<p>Recommended books and references (scientific journals, reports...)</p>	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <i>Architectural Record</i>: Frequently publishes "Student Work" and "Technical" sections that showcase how professional designers represent complex ideas simply.</li> <li>• <i>Journal of Design Research</i>: For students to understand the methodology behind design experimentation.</li> </ul> </li> <li>• <b>Reports:</b> <ul style="list-style-type: none"> <li>• <b>UNESCO World Heritage Documentation (Iraq)</b>: Useful for studying the geometry and layout of traditional Mesopotamian architecture, helping students analyze existing built forms.</li> </ul> </li> </ul>
<p>Electronic References, Websites</p>	<ul style="list-style-type: none"> <li>• <b><a href="#">ArchDaily: Drawings Section</a></b>: An incredible database where students can filter by "Plans," "Sections," and "Axonometric" to see how professionals represent their work.</li> <li>• <b><a href="http://firstinarchitecture.co.uk">First In Architecture (firstinarchitecture.co.uk)</a></b>: Offers the best student-level tutorials on how to set up a drawing board, master line weights, and produce high-quality architectural sections.</li> <li>• <b><a href="http://drawingmatter.org">Drawing Matter (drawingmatter.org)</a></b>: A brilliant collection of architectural drawings that explores how drawing can be used to <i>think</i> and <i>test</i> ideas rather than just record them.</li> <li>• <b><a href="#">MIT OpenCourseWare - Architecture</a></b>: Access to syllabus materials, reading lists, and project descriptions from world-class architecture studios.</li> </ul>

## Course Description Form

1. Course Name:	
Mathematics I	
2. Course Code:	
ENG 001	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
125 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: Ph.D. - Mustafa Hussain Abualwez Email: <a href="mailto:mustafa.hussein@mu.edu.iq">mustafa.hussein@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Master Geometric Principles:</b> Develop a deep understanding of Euclidean geometry, including properties of lines, planes, and polygons, as the bedrock for architectural plan and elevation design.</li> <li>• <b>Apply Ratios and Proportions:</b> Implement systems of proportion—such as the Golden Ratio and modular systems—to create visual harmony and balance in architectural compositions.</li> <li>• <b>Utilize Trigonometric Functions:</b> Apply trigonometry (sine, cosine, tangent) to calculate precise building heights, site distances, and angles for complex roof structures and shading systems.</li> <li>• <b>Understand Coordinate Systems:</b> Master 2D and 3D coordinate systems (Cartesian, polar, cylindrical, and spherical) to accurately map space and define the positions of architectural elements.</li> <li>• <b>Analyze Spatial Transformations:</b> Apply principles of isometries (translation, rotation, reflection) and scaling to manipulate architectural forms and understand spatial symmetry.</li> <li>• <b>Develop Structural Intuition through Math:</b> Use algebraic and basic vector analysis to understand the distribution of forces, centroids, and moments of inertia in simple structural elements.</li> <li>• <b>Master Scaling and Measurement:</b> Demonstrate proficiency in converting between physical reality, scale drawings, and models, ensuring accuracy in all design documentation.</li> <li>• <b>Explore Analytical Modeling:</b> Use basic calculus concepts (rates of change, optimization) to solve practical design problems, such as maximizing floor area while minimizing material usage or optimizing daylighting.</li> </ul>	<p>Course Objectives</p>

- **Foster Computational Logic:** Cultivate a logical, step-by-step problem-solving mindset that aligns with the requirements of computer-aided design and parametric modeling software.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.</p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	A1 A2 A3 B3 C1 D1	Master Geometric Primitives	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	A1 A2 A3 B3 C1 D1	Apply Systems of Proportion	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	A1 A2 A3 B3 C1 D1	Execute Trigonometric Calculations	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	A1 A2 A3 B3 C1 D1	Manipulate Spatial Coordinates	<i>Attendance</i>	Daily test
<i>Week-5</i>	2	A1 A2 A3 B3 C1 D1	Understand Isometries	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	A1 A2 A3 B3 C1 D1	Calculate Mensuration	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	A1 A2 A3 B3 C1 D1	Apply Vector Analysis	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	A1 A2 A3 B3 C1 D1	Solve Optimization Problems	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	A1 A2 A3 B3 C1 D1	Relate Math to Light & Shadow	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	A1 A2 A3 B3 C1 D1	Perform Statistical Analysis	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	A1 A2 A3 B3 C1 D1	Understand Conic Sections	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	A1 A2 A3 B3 C1 D1	Analyze Structural Geometry	<i>Attendance</i>	Daily test

Week-13	2	A1 A2 A3 B3 C1 D1	Model Architectural Surfaces	Attendance	Daily test
Week-14	2	A1 A2 A3 B3 C1 D1	Bridge Math and Logic	Attendance	Daily test
Week-15	2	A1 A2 A3 B3 C1 D1	Contextualize History through Math	Attendance	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ul style="list-style-type: none"> <li>• <b>Ching, F. D. K. (2014).</b> <i>Architecture: Form, Space, and Order</i>. (While a design book, its deep analysis of geometric systems, proportions, and ordering principles serves as the primary "mathematical" text for architects).</li> <li>• <b>Srivastava, A. N. (2018).</b> <i>Engineering Mathematics for Architects</i>. (A standard text that focuses specifically on geometric construction, trigonometry, and coordinate systems as they apply to building design).</li> <li>• <b>Departmental Mathematical Handbook:</b> Any internal university syllabus that outlines the specific coordinate geometry and vector analysis required for the Iraqi architectural curriculum.</li> </ul>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Neufert, E. (2020).</b> <i>Architects' Data</i>. (Crucial for the study of modular systems, anthropometric proportions, and the mathematical constraints of human-centered spaces).</li> <li>• <b>Cook, P. (2014).</b> <i>Drawing: The Motive Force of Architecture</i>. (Excellent for understanding how geometry and lines translate into complex 3D forms).</li> <li>• <b>Docci, M., &amp; Maestri, D. (2011).</b> <i>Science of Drawing: Geometry, Projection, and Perspective</i>. (The essential reference for mastering the math behind 3D projections and spatial depth).</li> </ul>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <i>Nexus Network Journal: Architecture and Mathematics</i>: The leading scientific journal for research on the relationship between mathematical theories and architectural design.</li> <li>• <i>Journal of Geometry and Graphics</i>: Useful for students to see how mathematical equations translate into structural beauty.</li> </ul> </li> <li>• <b>Reports:</b> <ul style="list-style-type: none"> <li>• <b>Structural Engineering Reports on Islamic Geometry</b>: Specifically focusing on the tessellation and mathematical complexity of historical patterns, which is highly relevant to local Iraqi architectural heritage.</li> </ul> </li> </ul>
Electronic References, Websites	<ul style="list-style-type: none"> <li>• <b><a href="http://mathworld.wolfram.com">Wolfram MathWorld (mathworld.wolfram.com)</a></b>: The most comprehensive online mathematical dictionary for exploring the properties of curves, surfaces, and geometric shapes.</li> <li>• <b><a href="#">ArchDaily: Geometry &amp; Math</a></b>: An excellent source for seeing how contemporary architects use mathematical concepts (like Voronoi diagrams or fractals) in real-world designs.</li> <li>• <b><a href="http://geogebra.org">Geogebra (geogebra.org)</a></b>: A powerful, free tool for students to interactively graph functions, explore geometry, and visualize 3D shapes in real-time.</li> <li>• <b><a href="http://geometrycode.com">The Geometry Code (geometrycode.com)</a></b>: Provides accessible explanations of the Golden Ratio and other proportions found in nature and architecture.</li> </ul>

## Course Description Form

1. Course Name:	
Engineering Statistics	
2. Course Code:	
ENG 004	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
75 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: Ph.D. - Ahmed Raad Radif Email: <a href="mailto:ahmad_al_iraqi2000@mu.edu.iq">ahmad_al_iraqi2000@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Master Geometric Principles:</b> Develop a deep understanding of Euclidean geometry, including properties of lines, planes, and polygons, as the bedrock for architectural plan and elevation design.</li> <li>• <b>Apply Ratios and Proportions:</b> Implement systems of proportion—such as the Golden Ratio and modular systems—to create visual harmony and balance in architectural compositions.</li> <li>• <b>Utilize Trigonometric Functions:</b> Apply trigonometry (sine, cosine, tangent) to calculate precise building heights, site distances, and angles for complex roof structures and shading systems.</li> <li>• <b>Understand Coordinate Systems:</b> Master 2D and 3D coordinate systems (Cartesian, polar, cylindrical, and spherical) to accurately map space and define the positions of architectural elements.</li> <li>• <b>Analyze Spatial Transformations:</b> Apply principles of isometries (translation, rotation, reflection) and scaling to manipulate architectural forms and understand spatial symmetry.</li> <li>• <b>Develop Structural Intuition through Math:</b> Use algebraic and basic vector analysis to understand the distribution of forces, centroids, and moments of inertia in simple structural elements.</li> <li>• <b>Master Scaling and Measurement:</b> Demonstrate proficiency in converting between physical reality, scale drawings, and models, ensuring accuracy in all design documentation.</li> <li>• <b>Explore Analytical Modeling:</b> Use basic calculus concepts (rates of change, optimization) to solve practical design problems, such as maximizing floor area while minimizing material usage or optimizing daylighting.</li> </ul>	<p>Course Objectives</p>

- **Foster Computational Logic:** Cultivate a logical, step-by-step problem-solving mindset that aligns with the requirements of computer-aided design and parametric modeling software.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.</p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	A1 A2 A4 B4 B5 C2 D2	Define Statistical Variables	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	A1 A2 A4 B4 B5 C2 D2	Organize Data Frequency	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	A1 A2 A4 B4 B5 C2 D2	Calculate Measures of Central Tendency	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	A1 A2 A4 B4 B5 C2 D2	Determine Measures of Dispersion	<i>Attendance</i>	Daily test
<i>Week-5</i>	2	A1 A2 A4 B4 B5 C2 D2	Apply Probability Theory	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	A1 A2 A4 B4 B5 C2 D2	Perform Regression Analysis	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	A1 A2 A4 B4 B5 C2 D2	Conduct Hypothesis Testing	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	A1 A2 A4 B4 B5 C2 D2	Analyze Site Data	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	A1 A2 A4 B4 B5 C2 D2	Model Urban Phenomena	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	A1 A2 A4 B4 B5 C2 D2	Visualize Data for Juries	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	A1 A2 A4 B4 B5 C2 D2	Understand Sampling Techniques	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	A1 A2 A4 B4 B5 C2 D2	Master Descriptive Statistics	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	A1 A2 A4 B4 B5 C2 D2	Interpret Confidence Intervals	<i>Attendance</i>	Daily test
<i>Week-14</i>	2	A1 A2 A4 B4 B5 C2 D2	Apply Statistical Software	<i>Attendance</i>	Daily test
<i>Week-15</i>	2	A1 A2 A4 B4 B5 C2 D2	Critique Data Integrity	<i>Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc

## 12. Learning and Teaching Resources

<p>Required textbooks (curricular books, if any)</p>	<p><b>Devore, J. L. (2021).</b> <i>Probability and Statistics for Engineering and the Sciences</i>. (The primary manual for understanding statistical distributions, hypothesis testing, and regression analysis in engineering contexts).</p> <ul style="list-style-type: none"> <li>• <b>Montgomery, D. C., &amp; Runger, G. C. (2018).</b> <i>Applied Statistics and Probability for Engineers</i>. (Excellent for learning how to organize and interpret large datasets, such as environmental climate data or building usage patterns).</li> <li>• <b>Departmental Data Analysis Guide (Al-Muthanna University):</b> The internal faculty handbook detailing the specific statistical methods required for local site analysis and architectural research projects.</li> </ul>
<p>Main references (sources)</p>	<ul style="list-style-type: none"> <li>• <b>Zeisel, J. (2006).</b> <i>Inquiry by Design: Environment/Behavior/Neuroscience in Architecture, Interiors, Landscape, and Planning</i>. (The "bible" of Evidence-Based Design; teaches how to statistically analyze human behavior in space).</li> <li>• <b>Groat, L. N., &amp; Wang, D. (2013).</b> <i>Architectural Research Methods</i>. (Essential for students to learn how to frame a research question, collect data, and apply the correct statistical test to validate their findings).</li> <li>• <b>Iraqi Meteorological &amp; Environmental Statistical Data:</b> Official reports on local climate patterns (temperature, wind velocity, solar radiation) which serve as the primary dataset for student site analysis projects.</li> </ul>
<p>Recommended books and references (scientific journals, reports...)</p>	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <i>Journal of Environmental Psychology</i>: Features statistical studies on how the built environment affects human comfort and productivity.</li> <li>• <i>Building and Environment (Elsevier)</i>: Publishes rigorous statistical analysis on how building materials and design strategies impact indoor air quality and thermal performance.</li> </ul> </li> <li>• <b>Reports:</b> <ul style="list-style-type: none"> <li>• <b>Post-Occupancy Evaluation (POE) Reports:</b> Technical industry reports that use statistical methods to audit the success of existing buildings—an excellent template for 1st-stage students to emulate in their own research.</li> </ul> </li> </ul>
<p>Electronic References, Websites</p>	<ul style="list-style-type: none"> <li>• <b><a href="https://www.khanacademy.org">Khan Academy - Statistics &amp; Probability (khanacademy.org)</a>:</b> The gold standard for self-paced learning; highly recommended for students to master foundational concepts like mean, variance, and hypothesis testing.</li> <li>• <b><a href="https://www.statology.org">Statology (statology.org)</a>:</b> Offers clear, practical tutorials on how to interpret statistical results in an engineering context, with excellent examples using Excel/Google Sheets.</li> <li>• <b><a href="https://www.archdaily.com">ArchDaily: Data &amp; Metrics (archdaily.com)</a>:</b> Search for "Performance" or "Metrics" to see how contemporary architectural firms use quantitative data to justify design decisions.</li> <li>• <b><a href="https://www.gapminder.org">Gapminder (gapminder.org)</a>:</b> A fantastic visual tool for understanding how to manipulate and present complex global data sets—useful for students learning to present their project data to juries.</li> </ul>

## Course Description Form

1. Course Name:	
Building Materials	
2. Course Code:	
ARC 115	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
100 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: PhD - Firas Fouad Abdullah Email: <a href="mailto:Firas.fuad@mu.edu.iq">Firas.fuad@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Identify Material Properties:</b> Recognize and categorize common building materials (stone, brick, concrete, wood, steel) based on their physical, mechanical, and thermal properties.</li> <li>• <b>Understand Material Origins:</b> Trace the lifecycle of materials from raw source (natural or synthetic) to manufacturing and installation, emphasizing the environmental implications of production.</li> <li>• <b>Evaluate Performance Factors:</b> Analyze how materials respond to environmental stressors such as moisture, temperature fluctuations, and structural loads, ensuring durability and safety in construction.</li> <li>• <b>Master Material Classification:</b> Distinguish between different types and grades of materials (e.g., classes of bricks, types of cement, wood species) to make informed, specification-driven choices.</li> <li>• <b>Connect Materials to Construction:</b> Understand the basic logic of how different materials are joined and assembled to form building elements like walls, floors, and roofs.</li> <li>• <b>Integrate Sustainability Concepts:</b> Explore the role of material selection in achieving energy efficiency, recyclability, and the use of locally available, low-carbon building resources.</li> <li>• <b>Develop Technical Vocabulary:</b> Build a professional lexicon to communicate effectively with engineers, contractors, and manufacturers regarding material specifications and quality control.</li> <li>• <b>Conduct Material Analysis &amp; Testing:</b> Develop the skill to observe, document, and test materials through field visits to manufacturing sites, construction projects, and building material museums.</li> </ul>	Course Objectives

- **Bridge Design and Feasibility:** Foster the ability to evaluate a material's aesthetic qualities (texture, color, finish) in relation to its technical performance and cost-effectiveness in a project.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

### 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.</p>
-----------------	---

### 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	A1 A2 A4 B1 B3 B5 C2 D2	Foundations & Science	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	A1 A2 A4 B1 B3 B5 C2 D2	Masonry & Stone	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	A1 A2 A4 B1 B3 B5 C2 D2	Masonry & Stone	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	A1 A2 A4 B1 B3 B5 C2 D2	Binding Materials	<i>Attendance</i>	Daily test
<i>Week-5</i>	2	A1 A2 A4 B1 B3 B5 C2 D2	Binding Materials	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	A1 A2 A4 B1 B3 B5 C2 D2	Concrete Technology	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	A1 A2 A4 B1 B3 B5 C2 D2	Concrete Technology	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	A1 A2 A4 B1 B3 B5 C2 D2	Timber & Wood	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	A1 A2 A4 B1 B3 B5 C2 D2	Metals & Glass	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	A1 A2 A4 B1 B3 B5 C2 D2	Metals & Glass	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	A1 A2 A4 B1 B3 B5 C2 D2	Finishing Materials	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	A1 A2 A4 B1 B3 B5 C2 D2	Finishing Materials	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	A1 A2 A4 B1 B3 B5 C2 D2	Roofing & Waterproofing	<i>Attendance</i>	Daily test
<i>Week-14</i>	2	A1 A2 A4 B1 B3 B5 C2 D2	Roofing & Waterproofing	<i>Attendance</i>	Daily test
<i>Week-15</i>	2	A1 A2 A4 B1 B3 B5 C2 D2	Sustainability	<i>Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ul style="list-style-type: none"><li>• <b>Punmia, B. C., Jain, A. K., &amp; Jain, A. K. (2017).</b> <i>Building Construction</i>. (The definitive technical text for understanding how materials like brick, stone, and concrete are applied in construction).</li><li>• <b>Duggal, S. K. (2016).</b> <i>Building Materials</i>. (Provides a clear, structured breakdown of the physical and mechanical properties of all standard construction materials).</li><li>• <b>Iraqi Standard Specifications (IQS):</b> The official regulatory documents for material testing and quality control in Iraq (crucial for students to understand local construction compliance).</li></ul>
Main references (sources)	<ul style="list-style-type: none"><li>• <b>Allen, E., &amp; Iano, J. (2019).</b> <i>The Architect's Studio Companion: Rules of Thumb for Preliminary Design</i>. (Useful for understanding which materials are appropriate for different structural spans and building types).</li><li>• <b>Chudley, R., &amp; Greeno, R. (2020).</b> <i>Building Construction Handbook</i>. (The gold standard for diagrams showing how different materials are detailed and joined at corners, roofs, and foundations).</li><li>• <b>Bhavikatti, S. S. (2015).</b> <i>Building Materials</i>. (Focuses on the performance of materials under different climatic conditions, which is highly relevant for the Iraqi context).</li></ul>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"><li>• <b>Journals:</b><ul style="list-style-type: none"><li>• <i>Construction and Building Materials (Elsevier)</i>: The leading journal for research on new material performance, concrete additives, and sustainable composites.</li><li>• <i>Journal of Sustainable Architecture and Civil Engineering</i>: Focuses on low-carbon materials and energy-efficient building skins.</li></ul></li><li>• <b>Reports:</b><ul style="list-style-type: none"><li>• <b>Building Research Establishment (BRE) Digests:</b> Technical reports on how to prevent material failure (e.g., damp, efflorescence in bricks, concrete carbonation).</li><li>• <b>International Energy Agency (IEA) Reports on Sustainable Buildings:</b> Essential for students to understand how to select materials that reduce a building's total energy footprint.</li></ul></li></ul>
Electronic References, Websites	<ul style="list-style-type: none"><li>• <b><a href="http://designingbuildings.co.uk">Designing Buildings (designingbuildings.co.uk)</a>:</b> An incredible open-access wiki that explains almost every building material used in modern construction, complete with technical diagrams.</li><li>• <b><a href="#">ArchDaily: Materials Category</a>:</b> Allows students to see how contemporary architects are using traditional materials (like brick and stone) in modern, innovative ways.</li><li>• <b><a href="http://matweb.com">MatWeb (matweb.com)</a>:</b> A comprehensive database of material properties (e.g., density, thermal conductivity, compressive strength) that students can use for their technical research.</li><li>• <b><a href="http://theconstructor.org">The Constructor (theconstructor.org)</a>:</b> Provides clear, step-by-step guides on how materials are tested in a laboratory and how they perform on a construction site.</li></ul>

## Course Description Form

1. Course Name:	
Physics	
2. Course Code:	
ARC 121	
3. Semester / Year:	
Second Semester / 2025–2026	
4. Description Preparation Date:	
01/02/2026	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
100 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: PhD - Firas Fouad Abdullah Email: <a href="mailto:Firas.fuad@mu.edu.iq">Firas.fuad@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Master Units, Dimensions, and Scaling:</b> Understand the physical quantities (length, time, mass, force) and their units, ensuring precision in structural and environmental calculations.</li> <li>• <b>Apply Principles of Statics:</b> Analyze forces, vectors, and equilibrium in simple structures to understand how buildings support themselves under gravity and external loads.</li> <li>• <b>Understand Heat Transfer Mechanisms:</b> Apply the principles of conduction, convection, and radiation to evaluate the thermal performance of building envelopes and insulation.</li> <li>• <b>Master Light and Optics:</b> Apply the laws of reflection and refraction to analyze natural daylighting, shadows, and the behavior of light within interior spaces.</li> <li>• <b>Analyze Sound and Acoustics:</b> Understand the physics of wave motion, frequency, and sound absorption to design spaces with optimal acoustic quality and noise control.</li> <li>• <b>Evaluate Energy Conservation:</b> Apply the laws of thermodynamics to solve basic energy efficiency problems, optimizing building performance in the Iraqi climate.</li> <li>• <b>Relate Physics to Material Properties:</b> Explore how physical characteristics (density, thermal conductivity, elasticity) determine the selection of building materials.</li> <li>• <b>Understand Fluid Mechanics in Architecture:</b> Grasp basic principles of airflow and pressure differentials to design for natural ventilation and wind-driven comfort.</li> </ul>	Course Objectives

- **Develop Quantitative Problem-Solving:** Cultivate a rigorous, scientific approach to identifying and solving physical constraints during the design phase of a project.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenge</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.</p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	A1 A2 A <sup>4</sup> B1 B3 C1 D1 D2	Mechanics & Statics	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	A1 A2 A <sup>4</sup> B1 B3 C1 D1 D2	Mechanics & Statics	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	A1 A2 A <sup>4</sup> B1 B3 C1 D1 D2	Mechanics & Statics	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	A1 A2 A <sup>4</sup> B1 B3 C1 D1 D2	Thermodynamics	<i>Attendance</i>	Daily test
<i>Week-5</i>	2	A1 A2 A <sup>4</sup> B1 B3 C1 D1 D2	Thermodynamics	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	A1 A2 A <sup>4</sup> B1 B3 C1 D1 D2	Thermodynamics	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	A1 A2 A <sup>4</sup> B1 B3 C1 D1 D2	Architectural Optics	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	A1 A2 A <sup>4</sup> B1 B3 C1 D1 D2	Architectural Optics	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	A1 A2 A <sup>4</sup> B1 B3 C1 D1 D2	Architectural Optics	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	A1 A2 A <sup>4</sup> B1 B3 C1 D1 D2	Architectural Optics	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	A1 A2 A <sup>4</sup> B1 B3 C1 D1 D2	Acoustic Physics	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	A1 A2 A <sup>4</sup> B1 B3 C1 D1 D2	Acoustic Physics	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	A1 A2 A <sup>4</sup> B1 B3 C1 D1 D2	Acoustic Physics	<i>Attendance</i>	Daily test
<i>Week-14</i>	2	A1 A2 A <sup>4</sup> B1 B3 C1 D1 D2	Fluid Dynamics	<i>Attendance</i>	Daily test
<i>Week-15</i>	2	A1 A2 A <sup>4</sup> B1 B3 C1 D1 D2	Fluid Dynamics	<i>Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ul style="list-style-type: none"> <li>• <b>Srivastava, A. N. (2018).</b> <i>Physics for Architects</i>. (The standard introductory text that bridges physical laws with construction practices).</li> </ul>
---	--

	<ul style="list-style-type: none"> <li>• <b>Allen, E., &amp; Iano, J. (2019).</b> <i>The Architect's Studio Companion: Rules of Thumb for Preliminary Design</i>. (Crucial for learning the physical "rules of thumb" regarding structural spans, loads, and environmental performance).</li> <li>• <b>Departmental Physics Guide (Al-Muthanna University):</b> The internal manual summarizing the core physical units, conversion factors, and regional climate variables (solar intensity, humidity) relevant to Iraq.</li> </ul>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Brown, G. Z., &amp; DeKay, M. (2014).</b> <i>Sun, Wind, and Light: Architectural Design Strategies</i>. (The definitive reference for applying thermodynamics, solar geometry, and fluid dynamics to architectural design).</li> <li>• <b>Givoni, B. (1998).</b> <i>Climate Considerations in Building and Urban Design</i>. (Highly relevant for students in Al-Muthanna; it provides the physical basis for how building massing and materials regulate heat in arid, hot climates).</li> <li>• <b>Moore, F. (1993).</b> <i>Environmental Control Systems: Heating, Cooling, Lighting</i>. (Provides the mathematical and physical logic behind how we control building environments).</li> </ul>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <i>Building and Environment (Elsevier)</i>: Publishes research on the physics of heat transfer, natural ventilation, and daylighting in buildings.</li> <li>• <i>Journal of Sustainable Architecture and Civil Engineering</i>: Features reports on how physical material properties (e.g., thermal mass) reduce building energy consumption.</li> </ul> </li> <li>• <b>Reports:</b> <ul style="list-style-type: none"> <li>• <b>International Energy Agency (IEA) - Energy in Buildings and Communities Programme:</b> Technical reports on how physical design strategies can drastically lower cooling demands in hot-climate architecture.</li> </ul> </li> </ul>
Electronic References, Websites	<ul style="list-style-type: none"> <li>• <b><a href="http://www.wbdg.org">Whole Building Design Guide (WBDG.org)</a>:</b> A comprehensive, government-backed resource providing technical criteria on building physics, envelope design, and environmental performance.</li> <li>• <b><a href="http://energy-design-tools.aud.ucla.edu">Climate Consultant (energy-design-tools.aud.ucla.edu)</a>:</b> A powerful tool students can use to visualize local climate data (sun, wind, temperature) in a way that makes physical principles intuitive.</li> <li>• <b><a href="http://www.physicsclassroom.com">Physics Classroom (physicsclassroom.com)</a>:</b> Excellent for mastering the foundational concepts of light, sound, and forces through interactive simulations and quizzes.</li> <li>• <b><a href="http://www.archdaily.com">ArchDaily: Building Technology</a>:</b> Allows students to see how real-world firms apply physical principles (e.g., thermal insulation, shading) in high-performance building skins.</li> </ul>

## Course Description Form

<b>1. Course Name:</b>	
Principles of Art and Architecture	
<b>2. Course Code:</b>	
ARC 122	
<b>3. Semester / Year:</b>	
Second Semester / 2025–2026	
<b>4. Description Preparation Date:</b>	
01/02/2026	
<b>5. Available Attendance Forms:</b>	
Attendance	
<b>6. Number of Credit Hours (Total) / Number of Units (Total)</b>	
150 hours	
<b>7. Course administrator's name (mention all, if more than one name)</b>	
Name: MS.C - Saad Hussein Alwan Email: <a href="mailto:Saad@mu.edu.iq">Saad@mu.edu.iq</a>	
<b>8. Course Objectives</b>	
<ul style="list-style-type: none"> <li>• <b>Master Visual Language:</b> Define and analyze the fundamental elements of visual art—point, line, shape, form, space, texture, and color—as they appear in both paintings and architectural structures.</li> <li>• <b>Analyze Ordering Principles:</b> Identify and apply universal design principles such as balance, contrast, emphasis, rhythm, unity, and hierarchy to organize architectural compositions.</li> <li>• <b>Explore the Art-Architecture Nexus:</b> Critically examine how movements in art (e.g., De Stijl, Cubism, Minimalism) have historically influenced architectural form and space.</li> <li>• <b>Develop Critical Observation:</b> Cultivate the ability to "read" buildings and artworks, identifying the intent, formal logic, and socio-cultural context behind their creation.</li> <li>• <b>Understand Spatial Perception:</b> Explore the psychology of space, examining how scale, proportion, and light affect the human emotional and physical experience within a structure.</li> <li>• <b>Analyze Historical Precedents:</b> Evaluate key historical and contemporary works of architecture to understand the evolution of construction technologies and artistic ideologies.</li> <li>• <b>Bridge Theory and Practice:</b> Translate abstract art concepts (like "tension" or "asymmetry") into concrete architectural design decisions in studio projects.</li> </ul>	Course Objectives

- **Evaluate Proportion Systems:** Analyze the mathematical and geometric logic behind aesthetic harmony, including the Golden Ratio, Fibonacci sequences, and grid systems.
- **Communicate Aesthetic Intent:** Develop a professional vocabulary to articulate and defend design choices based on artistic principles and theoretical frameworks during studio juries.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenge</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.</p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	4	A1 A2 A3 B2 B4 B5 C2	Analyze Formal Elements	<i>Attendance</i>	Daily test
<i>Week-2</i>	4	A1 A2 A3 B2 B4 B5 C2	Apply Ordering Systems	<i>Attendance</i>	Daily test
<i>Week-3</i>	4	A1 A2 A3 B2 B4 B5 C2	Evaluate Proportion Systems	<i>Attendance</i>	Daily test
<i>Week-4</i>	4	A1 A2 A3 B2 B4 B5 C2	Understand Space and Void	<i>Attendance</i>	Daily test
<i>Week-5</i>	4	A1 A2 A3 B2 B4 B5 C2	Examine Light and Shadow	<i>Attendance</i>	Daily test
<i>Week-6</i>	4	A1 A2 A3 B2 B4 B5 C2	Relate Art History to Architecture	<i>Attendance</i>	Daily test
<i>Week-7</i>	4	A1 A2 A3 B2 B4 B5 C2	Explore Spatial Perception	<i>Attendance</i>	Daily test
<i>Week-8</i>	4	A1 A2 A3 B2 B4 B5 C2	Analyze Historical Precedents	<i>Attendance</i>	Daily test
<i>Week-9</i>	4	A1 A2 A3 B2 B4 B5 C2	Apply Theory to Practice	<i>Attendance</i>	Daily test
<i>Week-10</i>	4	A1 A2 A3 B2 B4 B5 C2	Assess Human Scale	<i>Attendance</i>	Daily test
<i>Week-11</i>	4	A1 A2 A3 B2 B4 B5 C2	Contextualize Cultural Order	<i>Attendance</i>	Daily test
<i>Week-12</i>	4	A1 A2 A3 B2 B4 B5 C2	Perform Comparative Analysis	<i>Attendance</i>	Daily test
<i>Week-13</i>	4	A1 A2 A3 B2 B4 B5 C2	Develop a Professional Vocabulary	<i>Attendance</i>	Daily test
<i>Week-14</i>	4	A1 A2 A3 B2 B4 B5 C2	Document Theoretical Thinking	<i>Attendance</i>	Daily test
<i>Week-15</i>	4	A1 A2 A3 B2 B4 B5 C2	Synthesize Aesthetics and Function	<i>Attendance</i>	Daily test

<b>11. Course Evaluation</b>	
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc	
<b>12. Learning and Teaching Resources</b>	
Required textbooks (curricular books, if any)	<ul style="list-style-type: none"> <li>• <b>Ching, F. D. K. (2014).</b> <i>Architecture: Form, Space, and Order</i>. (The essential text for every architecture student; it visually explains how point, line, plane, and volume are organized into architectural space).</li> <li>• <b>Laseau, P. (2000).</b> <i>Graphic Thinking for Architects and Designers</i>. (Focuses on how to use drawing as a way to understand and communicate artistic and architectural concepts).</li> <li>• <b>Departmental Theory Handbook:</b> The internal Al-Muthanna faculty guide covering specific pedagogical approaches to local Iraqi architectural history and contemporary aesthetics.</li> </ul>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Arnheim, R. (1977).</b> <i>The Dynamics of Architectural Form</i>. (Crucial for understanding how humans perceive and emotionally respond to architectural shapes and spaces).</li> <li>• <b>Roth, L. M. (2013).</b> <i>Understanding Architecture: Its Elements, History, and Meaning</i>. (A comprehensive reference for how cultural, artistic, and social forces have shaped architectural forms throughout history).</li> <li>• <b>Gombrich, E. H. (1995).</b> <i>The Story of Art</i>. (The definitive reference for art history; students must read this to understand how architectural aesthetics evolved alongside painting and sculpture).</li> </ul>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>○ <i>The Journal of Architecture (RIBA)</i>: Provides contemporary discourse on the relationship between theory and practice.</li> <li>○ <i>Nexus Network Journal</i>: Focuses on the intersection of architecture, geometry, and the arts—highly useful for understanding proportion systems like the Golden Ratio.</li> </ul> </li> <li>• <b>Reports:</b> <ul style="list-style-type: none"> <li>○ <b>UNESCO World Heritage Reports on Mesopotamian Architecture:</b> Essential for students at Al-Muthanna to study how ancient Iraqi structural forms (like the arch and vault) were both artistic expressions and engineering solutions.</li> </ul> </li> </ul>
Electronic References, Websites	<ul style="list-style-type: none"> <li>• <b><a href="http://smarthistory.org">Smarthistory (smarthistory.org)</a>:</b> A free, high-quality multimedia resource that analyzes art and architecture through short, expert-led videos. It is the best starting point for understanding art movements.</li> <li>• <b><a href="http://archdaily.com/tag/theory">ArchDaily - Theory (archdaily.com/tag/theory)</a>:</b> A massive database of contemporary projects that allows students to analyze how modern architects apply "Principles of Art" (like rhythm and contrast) in today's world.</li> <li>• <b><a href="http://getty.edu">The Getty: Art and Architecture (getty.edu)</a>:</b> Provides deep educational resources on historical styles and the materials/techniques used to create them.</li> <li>• <b><a href="http://firstinarchitecture.co.uk">First In Architecture (firstinarchitecture.co.uk)</a>:</b> Provides great student-level guides on how to analyze and draw architectural principles, perfect for supplementary learning.</li> </ul>

## Course Description Form

1. Course Name:	
Architectural Design I	
2. Course Code:	
ARC 123	
3. Semester / Year:	
Second Semester / 2025–2026	
4. Description Preparation Date:	
01/02/2026	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
225 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: PhD - Hadel Saad Al-Mur'ib's Email: <a href="mailto:hadel.arch@mu.edu.iq">hadel.arch@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Develop Visual Literacy:</b> Understand and apply the primary elements of design—point, line, plane, and volume—to create harmonious two-dimensional and three-dimensional compositions.</li> <li>• <b>Master Ordering Principles:</b> Identify and implement fundamental architectural ordering principles such as axis, symmetry, hierarchy, rhythm, datum, and transformation.</li> <li>• <b>Understand Human Scale and Proportion:</b> Learn the relationship between the human body and the built environment, utilizing anthropometrics to define functional clearances and comfortable spatial volumes.</li> <li>• <b>Explore Spatial Relationships:</b> Analyze and design basic spatial relationships, including space-within-a-space, interlocking spaces, adjacent spaces, and spaces linked by a common third space.</li> <li>• <b>Translate 2D to 3D:</b> Develop the cognitive and technical ability to transform two-dimensional conceptual sketches and orthographic projections into three-dimensional physical models.</li> <li>• <b>Master Architectural Representation:</b> Acquire basic skills in architectural drafting, including the correct use of line weights, scales, and the standard conventions for plans, sections, and elevations.</li> <li>• <b>Foster Abstract Thinking:</b> Encourage the ability to abstract complex ideas into simple geometric forms, allowing students to focus on "essence" rather than literal decoration.</li> <li>• <b>Develop Model-Making Craft:</b> Build manual dexterity and precision in physical model-making, using various materials (white board, foam, wood) to test and communicate spatial ideas.</li> </ul>	Course Objectives

- **Cultivate Critical Critique Culture:** Introduce the "Studio Jury" process, teaching students how to present their work verbally and how to accept and apply constructive architectural criticism.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.</p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	10	A1 A2 A3 A <sup>4</sup> B1 B3 B5 D1	The Elements of Form	<i>collective criticism + Attendance</i>	Daily test
<i>Week-2</i>	10	A1 A2 A3 A <sup>4</sup> B1 B3 B5 D1	The Elements of Form	<i>collective criticism + Attendance</i>	Daily test
<i>Week-3</i>	10	A1 A2 A3 A <sup>4</sup> B1 B3 B5 D1	Ordering & Organization	<i>collective criticism + Attendance</i>	Daily test
<i>Week-4</i>	10	A1 A2 A3 A <sup>4</sup> B1 B3 B5 D1	Ordering & Organization	<i>collective criticism + Attendance</i>	Daily test
<i>Week-5</i>	10	A1 A2 A3 A <sup>4</sup> B1 B3 B5 D1	Ordering & Organization	<i>collective criticism + Attendance</i>	Daily test
<i>Week-6</i>	10	A1 A2 A3 A <sup>4</sup> B1 B3 B5 D1	The Human Dimension	<i>collective criticism + Attendance</i>	Daily test
<i>Week-7</i>	10	A1 A2 A3 A <sup>4</sup> B1 B3 B5 D1	The Human Dimension	<i>collective criticism + Attendance</i>	Daily test
<i>Week-8</i>	10	A1 A2 A3 A <sup>4</sup> B1 B3 B5 D1	The Human Dimension	<i>collective criticism + Attendance</i>	Daily test

<i>Week-9</i>	10	A1 A2 A3 A'4 B1 B3 B5 D1	Spatial Interaction	<i>collective criticism + Attendance</i>	Daily test
<i>Week-10</i>	10	A1 A2 A3 A'4 B1 B3 B5 D1	Spatial Interaction	<i>collective criticism + Attendance</i>	Daily test
<i>Week-11</i>	10	A1 A2 A3 A'4 B1 B3 B5 D1	Spatial Interaction	<i>collective criticism + Attendance</i>	Daily test
<i>Week-12</i>	10	A1 A2 A3 A'4 B1 B3 B5 D1	Drafting Fundamentals	<i>collective criticism + Attendance</i>	Daily test
<i>Week-13</i>	10	A1 A2 A3 A'4 B1 B3 B5 D1	Drafting Fundamentals	<i>collective criticism + Attendance</i>	Daily test
<i>Week-14</i>	10	A1 A2 A3 A'4 B1 B3 B5 D1	The Final Composition	<i>collective criticism + Attendance</i>	Daily test
<i>Week-15</i>	10	A1 A2 A3 A'4 B1 B3 B5 D1	The Final Composition	<i>collective criticism + Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ul style="list-style-type: none"> <li>• <b>Ching, F. D. K. (2014).</b> <i>Architecture: Form, Space, and Order.</i> <ul style="list-style-type: none"> <li>• <b>Purpose:</b> This is the primary manual for 1st-stage students. It explains the core "vocabulary" of design—point, line, plane, and volume—and how to organize them using principles like hierarchy and rhythm.</li> </ul> </li> <li>• <b>Neufert, E. (2019).</b> <i>Architects' Data.</i> <ul style="list-style-type: none"> <li>• <b>Purpose:</b> Essential for learning <b>Anthropometrics</b> (human measurements). Students must use this to ensure their designs—even simple shelters—fit the human body and its functional movements.</li> </ul> </li> <li>• <b>Ching, F. D. K. (2018).</b> <i>Architectural Graphics.</i> <ul style="list-style-type: none"> <li>• <b>Purpose:</b> Teaches the "language of drawing." It covers line weights, orthographic projections (plans/sections/elevations), and the technical symbols required for professional-standard studio submissions.</li> </ul> </li> </ul>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Frederick, M. (2007).</b> <i>101 Things I Learned in Architecture School.</i> <ul style="list-style-type: none"> <li>• <b>Focus:</b> A concise, highly visual guide that explains complex architectural concepts (like "solid-void relationship" or "parti diagrams") in simple terms for beginners.</li> </ul> </li> <li>• <b>Unwin, S. (2014).</b> <i>Analysing Architecture.</i> <ul style="list-style-type: none"> <li>• <b>Focus:</b> Teaches students how to "read" buildings. It focuses on how basic elements like walls, hearths, and pits define "place."</li> </ul> </li> <li>• <b>Iraqi Building Code - General Principles:</b> * <b>Focus:</b> While 1st-stage design is abstract, introducing the regional standards for room heights and basic safety ensures a realistic foundation.</li> </ul>
Recommended books and references	<ul style="list-style-type: none"> <li>• <b>Journals:</b></li> </ul>

(scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <i>The Architectural Review (AR)</i>: Excellent for studying "The Big Picture" of design and high-quality photography of spatial compositions.</li> <li>• <i>Domus</i>: A leading international journal for architecture and design that focuses on the intersection of art and space.</li> <li>• <b>Reports/Monographs:</b> <ul style="list-style-type: none"> <li>• <b>UNESCO Heritage Reports on Mesopotamia</b>: Specifically regarding the spatial logic of ancient Ur and Babylon, providing local historical context for 1st-stage "place-making" exercises.</li> </ul> </li> </ul>
Electronic References, Websites	<ul style="list-style-type: none"> <li>• <a href="http://archdaily.com">ArchDaily (archdaily.com)</a>: The most visited architecture website. Students should use the "Pavilion" or "Small Scale" categories to find precedents for their studio projects.</li> <li>• <a href="http://firstinarchitecture.co.uk">First In Architecture (firstinarchitecture.co.uk)</a>: Provides excellent, student-friendly tutorials on architectural drawing, model-making, and understanding scale.</li> <li>• <a href="http://greatbuildings.com">Great Buildings Online (greatbuildings.com)</a>: A searchable database of classic architecture with photos, 3D models, and plans for historical analysis.</li> <li>• <a href="http://thearchitectureisfree.org">The Architecture Is Free Foundation</a>: Offers free lectures and resources specifically aimed at students who may have limited access to physical libraries.</li> </ul>

## Course Description Form

1. Course Name:	
Mathematics II	
2. Course Code:	
ENG 005	
3. Semester / Year:	
Second Semester / 2025–2026	
4. Description Preparation Date:	
01/02/2026	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
125 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: Ph.D. - Mustafa Hussain Abualwez Email: <a href="mailto:mustafa.hussein@mu.edu.iq">mustafa.hussein@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Master Geometric Principles:</b> Develop a deep understanding of Euclidean geometry, including properties of lines, planes, and polygons, as the bedrock for architectural plan and elevation design.</li> <li>• <b>Apply Ratios and Proportions:</b> Implement systems of proportion—such as the Golden Ratio and modular systems—to create visual harmony and balance in architectural compositions.</li> <li>• <b>Utilize Trigonometric Functions:</b> Apply trigonometry (sine, cosine, tangent) to calculate precise building heights, site distances, and angles for complex roof structures and shading systems.</li> <li>• <b>Understand Coordinate Systems:</b> Master 2D and 3D coordinate systems (Cartesian, polar, cylindrical, and spherical) to accurately map space and define the positions of architectural elements.</li> <li>• <b>Analyze Spatial Transformations:</b> Apply principles of isometries (translation, rotation, reflection) and scaling to manipulate architectural forms and understand spatial symmetry.</li> <li>• <b>Develop Structural Intuition through Math:</b> Use algebraic and basic vector analysis to understand the distribution of forces, centroids, and moments of inertia in simple structural elements.</li> <li>• <b>Master Scaling and Measurement:</b> Demonstrate proficiency in converting between physical reality, scale drawings, and models, ensuring accuracy in all design documentation.</li> </ul>	<p>Course Objectives</p>

- **Explore Analytical Modeling:** Use basic calculus concepts (rates of change, optimization) to solve practical design problems, such as maximizing floor area while minimizing material usage or optimizing daylighting.
- **Foster Computational Logic:** Cultivate a logical, step-by-step problem-solving mindset that aligns with the requirements of computer-aided design and parametric modeling software.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	A1 A3 A4 B2 B4 B5 C2 D1	Master Geometric Primitives	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	A1 A3 A4 B2 B4 B5 C2 D1	Apply Systems of Proportion	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	A1 A3 A4 B2 B4 B5 C2 D1	Execute Trigonometric Calculations	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	A1 A3 A4 B2 B4 B5 C2 D1	Manipulate Spatial Coordinates	<i>Attendance</i>	Daily test
<i>Week-5</i>	2	A1 A3 A4 B2 B4 B5 C2 D1	Understand Isometries	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	A1 A3 A4 B2 B4 B5 C2 D1	Calculate Mensuration	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	A1 A3 A4 B2 B4 B5 C2 D1	Apply Vector Analysis	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	A1 A3 A4 B2 B4 B5 C2 D1	Solve Optimization Problems	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	A1 A3 A4 B2 B4 B5 C2 D1	Relate Math to Light & Shadow	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	A1 A3 A4 B2 B4 B5 C2 D1	Perform Statistical Analysis	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	A1 A3 A4 B2 B4 B5 C2 D1	Understand Conic Sections	<i>Attendance</i>	Daily test

Week-12	2	A1 A3 A4 B2 B4 B5 C2 D1	Analyze Structural Geometry	Attendance	Daily test
Week-13	2	A1 A3 A4 B2 B4 B5 C2 D1	Model Architectural Surfaces	Attendance	Daily test
Week-14	2	A1 A3 A4 B2 B4 B5 C2 D1	Bridge Math and Logic	Attendance	Daily test
Week-15	2	A1 A3 A4 B2 B4 B5 C2 D1	Contextualize History through Math	Attendance	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ul style="list-style-type: none"> <li>• <b>Ching, F. D. K. (2014).</b> <i>Architecture: Form, Space, and Order</i>. (While a design book, its deep analysis of geometric systems, proportions, and ordering principles serves as the primary "mathematical" text for architects).</li> <li>• <b>Srivastava, A. N. (2018).</b> <i>Engineering Mathematics for Architects</i>. (A standard text that focuses specifically on geometric construction, trigonometry, and coordinate systems as they apply to building design).</li> <li>• <b>Departmental Mathematical Handbook:</b> Any internal university syllabus that outlines the specific coordinate geometry and vector analysis required for the Iraqi architectural curriculum.</li> </ul>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Neufert, E. (2020).</b> <i>Architects' Data</i>. (Crucial for the study of modular systems, anthropometric proportions, and the mathematical constraints of human-centered spaces).</li> <li>• <b>Cook, P. (2014).</b> <i>Drawing: The Motive Force of Architecture</i>. (Excellent for understanding how geometry and lines translate into complex 3D forms).</li> <li>• <b>Docci, M., &amp; Maestri, D. (2011).</b> <i>Science of Drawing: Geometry, Projection, and Perspective</i>. (The essential reference for mastering the math behind 3D projections and spatial depth).</li> </ul>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <i>Nexus Network Journal: Architecture and Mathematics</i>: The leading scientific journal for research on the relationship between mathematical theories and architectural design.</li> <li>• <i>Journal of Geometry and Graphics</i>: Useful for students to see how mathematical equations translate into structural beauty.</li> </ul> </li> <li>• <b>Reports:</b> <ul style="list-style-type: none"> <li>• <b>Structural Engineering Reports on Islamic Geometry</b>: Specifically focusing on the tessellation and mathematical complexity of historical patterns, which is highly relevant to local Iraqi architectural heritage.</li> </ul> </li> </ul>
Electronic References, Websites	<ul style="list-style-type: none"> <li>• <b><a href="http://mathworld.wolfram.com">Wolfram MathWorld (mathworld.wolfram.com)</a></b>: The most comprehensive online mathematical dictionary for exploring the properties of curves, surfaces, and geometric shapes.</li> <li>• <b><a href="#">ArchDaily: Geometry &amp; Math</a></b>: An excellent source for seeing how contemporary architects use mathematical concepts (like Voronoi diagrams or fractals) in real-world designs.</li> <li>• <b><a href="http://geogebra.org">Geogebra (geogebra.org)</a></b>: A powerful, free tool for students to interactively graph functions, explore geometry, and visualize 3D shapes in real-time.</li> <li>• <b><a href="http://geometrycode.com">The Geometry Code (geometrycode.com)</a></b>: Provides accessible explanations of the Golden Ratio and other proportions found in nature and architecture.</li> </ul>

## Course Description Form

1. Course Name:	
English language I	
2. Course Code:	
UNI 001	
3. Semester / Year:	
Second Semester / 2025–2026	
4. Description Preparation Date:	
01/02/2026	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
50 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: Ph.D. Amjad M. F. Hussein Email: <a href="mailto:amjad.muhamad@mu.edu.iq">amjad.muhamad@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Master Architectural Terminology:</b> Develop a robust vocabulary of fundamental architectural terms (e.g., structural systems, building materials, urban elements, spatial concepts) to read global architectural literature.</li> <li>• <b>Enhance Technical Reading Comprehension:</b> Analyze and extract key information from technical manuals, architectural journals, and building codes written in English.</li> <li>• <b>Improve Technical Writing Skills:</b> Practice drafting concise, professional project descriptions, technical notes, and material specifications for design portfolios.</li> <li>• <b>Develop Oral Presentation Proficiency:</b> Build confidence in presenting architectural concepts, design intentions, and design research to an audience using appropriate professional English.</li> <li>• <b>Master Software-Specific Vocabulary:</b> Understand English commands, tool descriptions, and help-files associated with industry-standard software (AutoCAD, SketchUp, Revit, etc.).</li> <li>• <b>Analyze Global Architectural Discourse:</b> Engage with English-language architectural news and theory (e.g., platforms like <i>ArchDaily</i> or <i>Dezeen</i>) to stay updated with international trends.</li> <li>• <b>Apply Grammar in Context:</b> Utilize professional English grammar structures (passive voice for technical descriptions, imperative mood for construction instructions) to improve the quality of technical documentation.</li> <li>• <b>Facilitate Collaborative Research:</b> Learn to search for, synthesize, and cite English-language research papers and reports to support architectural design research.</li> </ul>	<p>Course Objectives</p>

- **Develop Professional Correspondence:** Learn to write professional emails and cover letters suitable for future internship applications and international academic communication.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.</p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	A1 A2 B1 B3 B4 D1	Identify Core Architectural Vocabulary	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	A1 A2 B1 B3 B4 D1	Navigate Software Interfaces	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	A1 A2 B1 B3 B4 D1	Analyze Technical Manuals	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	A1 A2 B1 B3 B4 D1	Practice Passive Voice in Documentation	<i>Attendance</i>	Daily test
<i>Week-5</i>	2	A1 A2 B1 B3 B4 D1	Summarize Architectural News	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	A1 A2 B1 B3 B4 D1	Articulate Design Intent	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	A1 A2 B1 B3 B4 D1	Draft Professional Emails	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	A1 A2 B1 B3 B4 D1	Understand Building Codes	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	A1 A2 B1 B3 B4 D1	Conduct Web-Based Research.	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	A1 A2 B1 B3 B4 D1	Analyze Urban Planning Concepts	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	A1 A2 B1 B3 B4 D1	Write Concise Project Briefs	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	A1 A2 B1 B3 B4 D1	Master Presentation Fluency.	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	A1 A2 B1 B3 B4 D1	Interpret Climate/Environmental Terms	<i>Attendance</i>	Daily test
<i>Week-14</i>	2	A1 A2 B1 B3 B4 D1	Critique Architectural Precedents	<i>Attendance</i>	Daily test
<i>Week-15</i>	2	A1 A2 B1 B3 B4 D1	Prepare Resumes and Portfolios	<i>Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

<p>Required textbooks (curricular books, if any)</p>	<ul style="list-style-type: none"> <li>• <b>Glendinning, E. H., &amp; Pohl, A. (2008).</b> <i>Technology 1 (Oxford English for Careers)</i>. (The standard text for engineering and architecture students, focusing on the vocabulary of design, materials, and technology).</li> <li>• <b>Ching, F. D. K. (2014).</b> <i>Architecture: Form, Space, and Order</i>. (Used here as a linguistic reference; students use the English definitions and descriptions in this book to build their professional vocabulary).</li> <li>• <b>Departmental English-Architecture Glossary:</b> An internal Al-Muthanna document containing the core architectural terminology (building components, materials, and site analysis terms) to ensure consistency across the stage.</li> </ul>
<p>Main references (sources)</p>	<ul style="list-style-type: none"> <li>• <b>Purdue Online Writing Lab (OWL):</b> The definitive guide for academic writing, citation styles (APA/Harvard), and formal email correspondence.</li> <li>• <b>The Architect’s Handbook of Professional Practice (Vocabulary and Communication Sections):</b> Used to teach students the formal tone required for architectural specifications and project briefs.</li> <li>• <b>Dictionary of Architecture and Construction (Cyril M. Harris):</b> The essential reference for checking the precise English meaning of technical construction terms, avoiding common misunderstandings in translation.</li> </ul>
<p>Recommended books and references (scientific journals, reports...)</p>	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <i>The Architectural Review</i>: Excellent for learning high-level descriptive language and narrative-driven architectural critique.</li> <li>• <i>Journal of Architectural Education</i>: Useful for understanding how architectural concepts are debated and discussed in academic English.</li> </ul> </li> <li>• <b>Reports:</b> <ul style="list-style-type: none"> <li>• <b>Industry Specifications (MasterFormat):</b> Understanding the language of material specifications—vital for writing project documentation in English.</li> </ul> </li> </ul>
<p>Electronic References, Websites</p>	<ul style="list-style-type: none"> <li>• <b><a href="http://archdaily.com">ArchDaily (archdaily.com)</a>:</b> Students should read one project description per week. It is the best source for contemporary, professional architectural English used in practice.</li> <li>• <b><a href="http://wordreference.com">WordReference (wordreference.com)</a>:</b> Beyond just translating, the forums here are excellent for finding context-specific technical translations in architecture.</li> <li>• <b><a href="http://dezeen.com">Dezeen (dezeen.com)</a>:</b> A global design magazine that provides clear, modern examples of how to pitch design concepts in concise English.</li> <li>• <b><a href="#">Architectural English YouTube Channels (e.g., "Architecture Lectures")</a>:</b> Listening to English-speaking architects describe their work helps students develop their own oral presentation "pitch."</li> </ul>

## Course Description Form

13.	Course Name:	
	Human Rights and Democracy	
14.	Course Code:	
	UNI 006	
15.	Semester / Year:	
	Second Semester / 2025–2026	
16.	Description Preparation Date:	
	01/02/2026	
17.	Available Attendance Forms:	
	Attendance	
18.	Number of Credit Hours (Total) / Number of Units (Total)	
	50 hours	
19.	Course administrator's name (mention all, if more than one name)	
	Name: Ph.D. Amjad M. F. Hussein Email: <a href="mailto:amjad.muhamad@mu.edu.iq">amjad.muhamad@mu.edu.iq</a>	
20.	Course Objectives	
	<ul style="list-style-type: none"> <li>• <b>Master Core Concepts:</b> Define the history, development, and fundamental characteristics of human rights and democracy as enshrined in national constitutions and international declarations.</li> <li>• <b>Analyze Universal Declarations:</b> Critically examine the Universal Declaration of Human Rights and understand how these principles inform modern legal frameworks and social governance.</li> <li>• <b>Cultivate Democratic Citizenship:</b> Foster an understanding of active citizenship, including the rights and duties of individuals within a democratic Iraqi society, emphasizing participation and responsibility.</li> <li>• <b>Connect Rights to Public Space:</b> Explore the role of architecture as a catalyst for democracy, analyzing how public spaces (plazas, parks, community centers) foster inclusion, debate, and social cohesion.</li> <li>• <b>Understand Inclusive &amp; Accessible Design:</b> Link the human right to mobility and equality to the architectural necessity of universal design, ensuring spaces are accessible to all individuals regardless of physical ability.</li> <li>• <b>Analyze Social Equity in Planning:</b> Recognize how urban planning and architectural design decisions can either mitigate or exacerbate social segregation, poverty, and inequality.</li> <li>• <b>Explore Cultural Sensitivity:</b> Develop an awareness of cultural identity and heritage as fundamental rights, encouraging designs that respect and reflect the diverse traditions of local communities.</li> </ul>	Course Objectives

- **Promote Ethical Professional Practice:** Cultivate a sense of professional integrity, focusing on the architect's role in protecting public interests, transparency, and social justice.
- **Develop Dialogue & Critical Thinking:** Enhance skills in dialogue, debate, and collaborative problem-solving, preparing students to work in democratic teams that respect diverse opinions.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 21. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 22. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	A1 A2 A3 A4 B2 B4 C1 C2	Define Human Rights Frameworks	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	A1 A2 A3 A4 B2 B4 C1 C2	Contextualize Rights in Iraq	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	A1 A2 A3 A4 B2 B4 C1 C2	Analyze Democratic Theory	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	A1 A2 A3 A4 B2 B4 C1 C2	Connect Design to Dignity	<i>Attendance</i>	Daily test
<i>Week-5</i>	2	A1 A2 A3 A4 B2 B4 C1 C2	Master Inclusive/Universal Design	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	A1 A2 A3 A4 B2 B4 C1 C2	Evaluate Public Space	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	A1 A2 A3 A4 B2 B4 C1 C2	Identify Social Equity Issues	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	A1 A2 A3 A4 B2 B4 C1 C2	Understand Ethics of Practice	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	A1 A2 A3 A4 B2 B4 C1 C2	Analyze Spatial Exclusion	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	A1 A2 A3 A4 B2 B4 C1 C2	Research and Critique	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	A1 A2 A3 A4 B2 B4 C1 C2	Practice Civil Dialogue	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	A1 A2 A3 A4 B2 B4 C1 C2	Address Cultural Rights	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	A1 A2 A3 A4 B2 B4 C1 C2	Combat Corruption in Planning	<i>Attendance</i>	Daily test
<i>Week-14</i>	2	A1 A2 A3 A4 B2 B4 C1 C2	Document Rights-Based Solutions.	<i>Attendance</i>	Daily test
<i>Week-15</i>	2	A1 A2 A3 A4 B2 B4 C1 C2	Formulate Professional Ethics.	<i>Attendance</i>	Daily test

## 23. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc

## 24. Learning and Teaching Resources

<p>Required textbooks (curricular books, if any)</p>	<ul style="list-style-type: none"> <li>• <b>The Constitution of the Republic of Iraq (2005):</b> The primary legal document detailing the fundamental rights, civil liberties, and democratic framework of the nation.</li> <li>• <b>Universal Declaration of Human Rights (UDHR):</b> The core international text defining the fundamental rights to which all human beings are entitled, serving as the benchmark for global social ethics.</li> <li>• <b>Ministry-Approved Curriculum Reader:</b> The official university-issued module detailing the concepts of citizenship, the rule of law, and the Iraqi political system.</li> </ul>
<p>Main references (sources)</p>	<ul style="list-style-type: none"> <li>• <b>Zeisel, J. (2006).</b> <i>Inquiry by Design: Environment/Behavior/Neuroscience in Architecture</i>. (Explains how human needs—the basis of rights—must be translated into physical spatial design).</li> <li>• <b>Ching, F. D. K. (2014).</b> <i>Architecture: Form, Space, and Order</i>. (Essential for understanding how "ordering principles" like hierarchy and axis can be used to either democratize or segregate public space).</li> <li>• <b>United Nations (UN-Habitat):</b> <i>The Right to Adequate Housing</i>. (A crucial report that links the "right to housing" directly to the architectural planning and construction standards students will learn throughout their studies).</li> </ul>
<p>Recommended books and references (scientific journals, reports...)</p>	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>○ <i>Journal of Urbanism: International Research on Placemaking and Urban Sustainability:</i> Features studies on how public squares and community architecture promote democratic participation.</li> <li>○ <i>Architectural Research Quarterly (ARQ):</i> Often explores the "politics of space," helping students understand why the design of a building is never neutral.</li> </ul> </li> <li>• <b>Reports:</b> <ul style="list-style-type: none"> <li>○ <b>UNESCO - "Culture, Urban Development, and Human Rights":</b> Reports detailing how protecting architectural heritage and identity is a fundamental human right.</li> </ul> </li> </ul>
<p>Electronic References, Websites</p>	<ul style="list-style-type: none"> <li>• <b><a href="http://unhabitat.org">UN-Habitat (unhabitat.org)</a>:</b> Provides vast resources on "The Right to the City," a critical concept for first-year students to understand urban justice.</li> <li>• <b><a href="http://uia-architectes.org">UIA - International Union of Architects (uia-architectes.org)</a>:</b> Look specifically for the "Community Architecture and Human Rights" programme, which showcases projects where architects have successfully used their skills to defend human rights.</li> <li>• <b><a href="#">The World Bank - Urban Development</a>:</b> Offers reports on inclusive cities, essential for students looking at how to design for diverse populations in Al-Muthanna.</li> <li>• <b><a href="#">Human Rights Watch - Iraq</a>:</b> Useful for students to stay informed on the current civil rights climate in the country, providing real-world context for their theoretical studies.</li> </ul>

## Course Description Form

1. Course Name:	
Arabic Language	
2. Course Code:	
UNI 003	
3. Semester / Year:	
Second Semester / 2025–2026	
4. Description Preparation Date:	
01/02/2026	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
50 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: PhD-anwar kareem najeem Email: <a href="mailto:anwar.kareem@mu.edu.iq">anwar.kareem@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Master Advanced Grammatical Rules:</b> Achieve a high level of accuracy in Arabic grammar (<i>Nahw</i> and <i>Sarf</i>) to ensure professional-grade writing in academic and technical reports.</li> <li>• <b>Develop Architectural Vocabulary:</b> Build a specialized lexicon of architectural terminology in Arabic, enabling students to accurately describe spatial, structural, and environmental concepts.</li> <li>• <b>Enhance Academic Writing Skills:</b> Learn to structure coherent, well-argued academic papers, starting from the proposal phase to the final thesis defense.</li> <li>• <b>Master Technical Report Writing:</b> Develop the ability to draft clear, concise, and professional design reports, including project descriptions, methodology, and site analysis narratives.</li> <li>• <b>Refine Oral Presentation Skills:</b> Improve public speaking and argumentation skills to effectively defend design concepts during studio reviews and final project critiques.</li> <li>• <b>Practice Editing and Proofreading:</b> Acquire the skills to self-edit and proofread technical documents to ensure clarity, flow, and the absence of linguistic errors.</li> <li>• <b>Understand Nuances in Style:</b> Differentiate between various styles of writing (e.g., creative descriptions of spaces vs. objective technical specifications) and apply the appropriate tone for each.</li> <li>• <b>Incorporate Cultural Heritage in Writing:</b> Foster an appreciation for Arabic literary heritage, utilizing it to describe the aesthetics and historical depth of Iraqi architectural monuments.</li> </ul>	Course Objective

• **Promote Professional Ethics in Documentation:** Understand the importance of proper citation, referencing, and academic integrity to avoid plagiarism in all research and design documentation.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

### 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem–Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

### 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	A1 A2 A3 A4 B1 B3 B5 C2	Advanced Syntax & Grammar	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	A1 A2 A3 A4 B1 B3 B5 C2	Advanced Syntax & Grammar	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	A1 A2 A3 A4 B1 B3 B5 C2	Architectural Terminology	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	A1 A2 A3 A4 B1 B3 B5 C2	Architectural Terminology	<i>Attendance</i>	Daily test
<i>Week-5</i>	2	A1 A2 A3 A4 B1 B3 B5 C2	Technical Report Writing	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	A1 A2 A3 A4 B1 B3 B5 C2	Technical Report Writing	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	A1 A2 A3 A4 B1 B3 B5 C2	Technical Report Writing	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	A1 A2 A3 A4 B1 B3 B5 C2	Professional Correspondence	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	A1 A2 A3 A4 B1 B3 B5 C2	Professional Correspondence	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	A1 A2 A3 A4 B1 B3 B5 C2	Professional Correspondence	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	A1 A2 A3 A4 B1 B3 B5 C2	Critical Analysis & Research	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	A1 A2 A3 A4 B1 B3 B5 C2	Critical Analysis & Research	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	A1 A2 A3 A4 B1 B3 B5 C2	Critical Analysis & Research	<i>Attendance</i>	Daily test
<i>Week-14</i>	2	A1 A2 A3 A4 B1 B3 B5 C2	Presentation & Oral Skills	<i>Attendance</i>	Daily test
<i>Week-15</i>	2	A1 A2 A3 A4 B1 B3 B5 C2	Presentation & Oral Skills	<i>Attendance</i>	Daily test

### 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	<ol style="list-style-type: none"> <li>1. <b>Al-Ghalayini, M. (2019).</b> <i>Jami' al-Durus al-Arabiyya (Comprehensive Arabic Lessons)</i>. (The standard authority for grammatical rules and syntactic precision in formal academic writing).</li> <li>2. <b>Iraqi Ministry of Higher Education &amp; Scientific Research.</b> <i>Arabic Language Curriculum for University Stages</i>. (The official syllabus that sets the required standards for linguistic competency at the undergraduate level).</li> <li>3. <b>Al-Hashimi, A. (2018).</b> <i>Qawa'id al-Lugha al-Arabiyya (Arabic Language Rules)</i>. (Focuses on the practical application of grammar in formal documentation and report writing).</li> </ol>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Al-Mawrid Architectural Dictionary (English-Arabic):</b> Essential for translating technical terminology accurately.</li> <li>• <b>Iraqi National Construction Documentation Standards:</b> The official protocols for how technical specifications, site reports, and letters of intent must be formatted in Arabic to meet local legal requirements.</li> <li>• <b>Al-Qattan, M. (2020).</b> <i>Methods of Scientific and Academic Writing</i>. (A critical reference for teaching students how to write research papers and thesis documentation according to standard academic protocols).</li> </ul>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <i>Al-Handasa (Engineering Journal):</i> Frequently features articles on architecture in Arabic, providing students with examples of how high-level technical discourse is structured.</li> <li>• <i>Journal of Architectural and Planning Research (Arabic editions):</i> Offers peer-reviewed examples of how professional design concepts are argued and critiqued.</li> </ul> </li> <li>• <b>Books on Architectural Discourse:</b> <ul style="list-style-type: none"> <li>• <b>Rasem Badran:</b> <i>Collected Essays on Islamic and Contemporary Architecture</i>. (Provides a prime example of how to use sophisticated Arabic to describe architectural space, heritage, and the relationship between culture and design).</li> <li>• <b>Fathy, H. (2019).</b> <i>Architecture for the Poor (Translated)</i>. (Essential for analyzing how socio-economic design concepts are articulated in the Arabic language).</li> </ul> </li> </ul>
Electronic References, Websites	<ul style="list-style-type: none"> <li>• <b><a href="#">Al-Jazeera Media Institute - Writing Skills</a>:</b> Offers excellent tutorials on clear, effective, and professional writing styles that are highly applicable to technical reports.</li> <li>• <b><a href="#">Almaany Dictionary (almaany.com)</a>:</b> The most reliable online source for checking nuanced terminology, synonyms, and architectural definitions.</li> <li>• <b><a href="#">The Iraqi Academic Scientific Journals (IASJ)</a>:</b> A massive database where students can search for architectural research papers in Arabic to study how professional reports and abstracts are structured.</li> <li>• <b><a href="#">LanguageTool for Arabic</a>:</b> A useful digital tool that helps students identify grammatical errors and improve the structure of their technical reports.</li> </ul>

2nd stage

## Course Description Form

1. Course Name:	
Architectural Design II	
2. Course Code:	
ARCH 211	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
180 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: PhD - Firas Fouad Abdullah Email: <a href="mailto:Firas.fuad@mu.edu.iq">Firas.fuad@mu.edu.iq</a>  Name: M.Sc. - Alaa Taha Mohammed Email: <a href="mailto:Atmalaa@mu.edu.iq">Atmalaa@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Master Functional Programming:</b> Develop the ability to translate a client’s programmatic requirements (e.g., residential, small public facilities) into logical spatial zones.</li> <li>• <b>Internalize Human Scale &amp; Ergonomics:</b> Design spaces based on human proportions (Anthropometrics) and the minimum spatial requirements for common activities.</li> <li>• <b>Execute Multi-Scale Thinking:</b> Demonstrate the ability to work simultaneously across different scales—from the site-plan level (macro) to the detail of a single room (micro).</li> <li>• <b>Integrate Site-Contextual Design:</b> Develop architectural interventions that respond to site topography, orientation, and surrounding urban fabric.</li> <li>• <b>Master Spatial Circulation:</b> Design intuitive circulation patterns that prioritize clarity, safety, and flow, while minimizing wasted space.</li> <li>• <b>Apply Environmental Logic:</b> Integrate basic passive design principles—such as cross-ventilation, daylighting, and shading—into the early conceptual massing.</li> <li>• <b>Explore Volumetric Composition:</b> Move beyond 2D planning into complex 3D massing, exploring how roof forms and wall apertures define interior atmosphere.</li> </ul>	Course Objectives

- **Develop Graphic Narrative Skills:** Communicate architectural ideas through a clear, professional presentation package including plans, sections, elevations, and analytical diagrams.
- **Practice Iterative Design:** Implement an iterative design process where conceptual ideas are tested, critiqued, and refined through multiple phases of design development.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.</p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	10	<b>Interpret Architectural Programs:</b> Analyze client needs and functional requirements to develop coherent building programs and spatial adjacency charts.	Human Scale & Ergonomics	<i>collective criticism + Attendance</i>	Daily test
<i>Week-2</i>	10	<b>Apply Anthropometric Standards:</b> Integrate ergonomic dimensions and human-scale requirements into the design of interior and exterior spaces.	Human Scale & Ergonomics	<i>collective criticism + Attendance</i>	Daily test
<i>Week-3</i>	10	<b>Execute Site-Specific Analysis:</b> Conduct comprehensive site studies, documenting topography, solar orientation, wind patterns, and access points to inform design decisions.	Site & Contextual Analysis	<i>collective criticism + Attendance</i>	Daily test
<i>Week-4</i>	10	<b>Master Circulation Logic:</b> Design intuitive, safe, and efficient circulation paths (horizontal and vertical) that define the experience of moving through space.	Site & Contextual Analysis	<i>collective criticism + Attendance</i>	Daily test
<i>Week-5</i>	10	<b>Utilize Volumetric Massing:</b> Explore the additive and subtractive manipulation of 3D volumes to create distinct architectural forms.	Site & Contextual Analysis	<i>collective criticism + Attendance</i>	Daily test

<i>Week-6</i>	10	<b>Apply Passive Environmental Strategies:</b> Incorporate basic climate-responsive design elements, such as natural cross-ventilation, daylighting, and shading, during the conceptual massing phase.	Functional Adjacencies	<i>collective criticism + Attendance</i>	Daily test
<i>Week-7</i>	10	<b>Develop Spatial Hierarchy:</b> Organize spaces based on public, semi-private, and private functions, ensuring logical transitions and privacy control.	Functional Adjacencies	<i>collective criticism + Attendance</i>	Daily test
<i>Week-8</i>	10	<b>Understand Structure and Form:</b> Recognize the relationship between structural systems (e.g., frame vs. load-bearing) and the resulting architectural character.	Functional Adjacencies	<i>collective criticism + Attendance</i>	Daily test
<i>Week-9</i>	10	<b>Explore Materiality and Texture:</b> Select materials that respond to both the local Iraqi climate and the intended character/function of the building.	Massing & Volumetric Logic	<i>collective criticism + Attendance</i>	Daily test
<i>Week-10</i>	10	<b>Apply Proportioning Systems:</b> Use architectural principles such as the Golden Ratio or grid systems to establish harmony and rhythm in facade design.	Massing & Volumetric Logic	<i>collective criticism + Attendance</i>	Daily test
<i>Week-11</i>	10	<b>Draft Precise Technical Representations:</b> Produce high-quality, professional-grade floor plans, sections, and elevations that adhere to architectural drawing standards.	Massing & Volumetric Logic	<i>collective criticism + Attendance</i>	Daily test
<i>Week-12</i>	10	<b>Master 3D Visualization:</b> Generate perspectives and axonometric drawings that clearly communicate the architectural atmosphere and design intent.	Environmental Integration	<i>collective criticism + Attendance</i>	Daily test
<i>Week-13</i>	10	<b>Implement Iterative Design Processes:</b> Demonstrate the ability to critique, refine, and evolve design proposals through successive phases of sketches and models.	Environmental Integration	<i>collective criticism + Attendance</i>	Daily test
<i>Week-14</i>	10	<b>Design for Contextual Integration:</b> Develop architectural solutions that respect the existing urban morphology and local cultural context of Al-Muthanna.	Documentation & Synthesis	<i>collective criticism + Attendance</i>	Daily test
<i>Week-15</i>	10	<b>Produce Professional Design Reports:</b> Synthesize analytical diagrams, research, and design development into a comprehensive and coherent presentation portfolio.	Documentation & Synthesis	<i>collective criticism + Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

<p>Required textbooks (curricular books, if any)</p>	<ol style="list-style-type: none"> <li>1. <b>Ching, F. D. K. (2014).</b> <i>Architecture: Form, Space, and Order</i>. (The definitive textbook for understanding design elements, spatial relationships, and organizational principles).</li> <li>2. <b>Clark, R. H., &amp; Pause, M. (2012).</b> <i>Precedents in Architecture: Analytic Diagrams, Formative Ideas, and Partis</i>. (Essential for teaching students how to analyze great buildings and apply those logic structures to their own design work).</li> <li>3. <b>Neufert, E. (2019).</b> <i>Architects' Data</i>. (The absolute standard for ergonomic dimensions, clearance requirements, and functional spatial programming).</li> </ol>
<p>Main references (sources)</p>	<ul style="list-style-type: none"> <li>• <b>White, E. T. (1983).</b> <i>Site Analysis: Diagramming Information for Architectural Design</i>. (Crucial for teaching students how to convert site data like topography and sun paths into design strategies).</li> <li>• <b>Unwin, S. (2020).</b> <i>Analysing Architecture</i>. (A brilliant theoretical work that breaks down how architecture creates "space" and "place," helping students think more deeply about the impact of their designs).</li> <li>• <b>Iraqi National Building Standards for Residential and Public Buildings:</b> (Students must be grounded in local codes regarding set-backs, site coverage ratios, and ventilation requirements).</li> </ul>
<p>Recommended books and references (scientific journals, reports...)</p>	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <i>Architectural Record (Design Vanguard issue)</i>: Excellent for studying how young, innovative firms handle functional programs.</li> <li>• <i>Journal of Architectural Education (JAE)</i>: Provides insight into design pedagogy and the evolution of design studio culture.</li> </ul> </li> <li>• <b>Reports/Scientific Focus:</b> <ul style="list-style-type: none"> <li>• <b>UN-Habitat:</b> Reports on urban density and sustainable residential design (critical for the evolving urban fabric of Iraqi cities).</li> <li>• <b>Gehl, J. (2010).</b> <i>Cities for People</i>. (Focuses on the <i>experience</i> of the human scale, which is vital for the 2nd-stage design focus).</li> </ul> </li> </ul>
<p>Electronic References, Websites</p>	<ul style="list-style-type: none"> <li>• <b><a href="#">ArchDaily</a>:</b> The most accessible resource for high-quality architectural projects. Students should use the "Projects" filter to search for specific typologies (e.g., "Library," "Housing") to see how others handle circulation and massing.</li> <li>• <b><a href="#">Divisare</a>:</b> A curated platform that offers high-quality photography and, more importantly, <b>thematic collections</b> (e.g., "Courtyard Houses") that help students develop their own design vocabulary.</li> <li>• <b><a href="#">Parametric Architecture (PA)</a>:</b> For students interested in exploring advanced geometry and modern computational design as a means to respond to site and climate.</li> <li>• <b><a href="#">DesignBoom</a>:</b> Excellent for keeping up with global trends in material use and innovative small-scale architectural solutions.</li> </ul>

## Course Description Form

1. Course Name:	
Architectural Graphics I	
2. Course Code:	
ARCH 212	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
45 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: M.Sc. - Saad Hussein Alwan Email: <a href="mailto:Saad@mu.edu.iq">Saad@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Master Technical Drafting Fundamentals:</b> Achieve proficiency in the use of standard drawing instruments, line weights, lettering conventions, and sheet formatting to produce clear, professional technical documents.</li> <li>• <b>Develop Orthographic Visualization:</b> Master the ability to represent 3D objects in 2D space through accurate plan, section, and elevation projections.</li> <li>• <b>Understand Geometric Construction:</b> Apply principles of descriptive geometry to construct complex forms, including intersections, developments of surfaces, and conic sections.</li> <li>• <b>Execute Pictorial Representations:</b> Develop skills in generating paraline drawings, including isometric and axonometric projections, to communicate spatial volumes.</li> <li>• <b>Master Perspective Construction:</b> Learn to construct one-point and two-point perspectives to represent architectural space with correct depth, scale, and human proportions.</li> <li>• <b>Develop Freehand Sketching Skills:</b> Improve hand-eye coordination through rapid sketching of daily objects, natural forms, and existing buildings to capture design intent quickly.</li> <li>• <b>Apply Graphic Semantics:</b> Learn to differentiate between various drawing types through "graphic hierarchy"—using line weights, textures, and shading to signify what is cut, what is in profile, and what is in the background.</li> </ul>	Course Objectives

- **Understand Architectural Scaling:** Apply architectural scales accurately across different drawing types to ensure precision in site plans, floor plans, and building details.
- **Practice Iterative Communication:** Utilize drawing as a tool for "thinking" and "problem-solving," refining design ideas through successive stages of graphic development.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	3	<b>Master Technical Drafting Conventions:</b> Utilize architectural drawing instruments (T-squares, triangles, scales, compasses) to produce precise technical drawings with professional line weights and lettering.	Drafting Fundamentals	<i>collective criticism + Attendance</i>	Daily test
<i>Week-2</i>	3	<b>Execute Orthographic Projections:</b> Translate 3D architectural forms into accurate 2D multiview representations (plans, sections, and elevations).	Drafting Fundamentals	<i>collective criticism + Attendance</i>	Daily test
<i>Week-3</i>	3	<b>Apply Descriptive Geometry:</b> Solve complex geometric problems involving lines, planes, and solid intersections in three-dimensional space.	Drafting Fundamentals	<i>collective criticism + Attendance</i>	Daily test
<i>Week-4</i>	3	<b>Master Paraline Projections:</b> Construct isometric and axonometric drawings to communicate the volumetric massing of architectural designs clearly.	Orthographic Projection	<i>collective criticism + Attendance</i>	Daily test
<i>Week-5</i>	3	<b>Construct Perspective Views:</b> Apply vanishing point principles to create one-point and two-point perspectives that accurately represent spatial depth, scale, and human proportions.	Orthographic Projection	<i>collective criticism + Attendance</i>	Daily test
<i>Week-6</i>	3	<b>Develop Freehand Sketching Competency:</b> Execute rapid, observational sketches of natural and man-made forms to capture design	Orthographic Projection	<i>collective criticism + Attendance</i>	Daily test

		concepts and spatial relationships quickly.			
<i>Week-7</i>	3	<b>Implement Graphic Hierarchy:</b> Apply varying line weights (thick for cuts, thin for profiles, lighter for background) to create depth and clarity in section and elevation drawings.	Axonometry & Isometry	<i>collective criticism + Attendance</i>	Daily test
<i>Week-8</i>	3	<b>Understand Architectural Scaling:</b> Apply standard architectural scales accurately to site plans, floor plans, and building details to maintain proportional integrity.	Axonometry & Isometry	<i>collective criticism + Attendance</i>	Daily test
<i>Week-9</i>	3	<b>Master Geometric Surface Development:</b> Develop flat patterns for complex 3D forms (truncated cones, pyramids, or curved surfaces) to understand spatial unfolding.	Axonometry & Isometry	<i>collective criticism + Attendance</i>	Daily test
<i>Week-10</i>	3	<b>Refine Tone and Shading:</b> Utilize diverse shading techniques (hatching, cross-hatching, stippling) to define form, highlight texture, and establish light source direction in drawings.	Perspective Construction	<i>collective criticism + Attendance</i>	Daily test
<i>Week-11</i>	3	<b>Demonstrate Sheet Composition:</b> Organize multiple drawings (plans, elevations, perspectives) onto a single sheet following grid layouts, balance, and clear annotation principles.	Perspective Construction	<i>collective criticism + Attendance</i>	Daily test
<i>Week-12</i>	3	<b>Apply Analytical Diagramming:</b> Distinguish between representational drawings and analytical diagrams (explaining circulation, sun path, or spatial zones).	Shading, Texture & Depth	<i>collective criticism + Attendance</i>	Daily test
<i>Week-13</i>	3	<b>Utilize Architectural Notation:</b> Apply standard symbols for dimensions, materials, door/window types, and furniture to make drawings readable for construction.	Shading, Texture & Depth	<i>collective criticism + Attendance</i>	Daily test
<i>Week-14</i>	3	<b>Practice Iterative Representation:</b> Demonstrate the ability to evolve a design idea from a rough conceptual sketch into a refined technical presentation drawing.	Presentation Synthesis	<i>collective criticism + Attendance</i>	Daily test
<i>Week-15</i>	3	<b>Produce Professional Presentation Sets:</b> Synthesize a cohesive portfolio of work that demonstrates clarity of communication, technical rigor, and aesthetic sensitivity.	Presentation Synthesis	<i>collective criticism + Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ul style="list-style-type: none"> <li>• <b>Ching, F. D. K. (2015).</b> <i>Architectural Graphics</i>. (The industry-standard reference for drawing conventions, line weights, and projection systems).</li> <li>• <b>Ching, F. D. K. (2019).</b> <i>Design Drawing</i>. (Focuses on freehand sketching, tonal values, and the logic of constructed perspective).</li> </ul>
---	--

	<ul style="list-style-type: none"> <li>• <b>Neufert, E. (2019).</b> <i>Architects' Data</i>. (Essential for teaching students how to represent human scale, functional clearances, and standardized architectural elements accurately).</li> </ul>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Yee, R. (2013).</b> <i>Architectural Drawing: A Visual Compendium of Types and Methods</i>. (A comprehensive guide covering every drawing type, from orthographic projections to complex paraline systems).</li> <li>• <b>Montague, J. (2013).</b> <i>Basic Perspective Drawing: A Visual Approach</i>. (Provides clear, step-by-step methods for constructing perfect one-point and two-point perspectives).</li> <li>• <b>Iraqi National Building Code for Drawing and Documentation:</b> (Students must refer to local standards for title blocks, notation, and drawing organization).</li> </ul>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <b>Books:</b> <ul style="list-style-type: none"> <li>• <b>Elam, K. (2001).</b> <i>Geometry of Design: Studies in Proportion and Composition</i>. (Teaches the mathematical foundations of aesthetic proportions).</li> <li>• <b>Unwin, S. (2020).</b> <i>Analysing Architecture</i>. (Excellent for learning how to use diagrams to deconstruct and communicate architectural space).</li> </ul> </li> <li>• <b>Journals/Scientific:</b> <ul style="list-style-type: none"> <li>• <i>EGA-Revista de Expresion Grafica Arquitectonica</i>: A peer-reviewed journal dedicated exclusively to the study of graphic expression in architecture.</li> <li>• <i>Journal of Architectural Education (JAE)</i>: Frequently features articles on innovative drawing pedagogy and the shift between manual and digital representation.</li> </ul> </li> </ul>
Electronic References, Websites	<ul style="list-style-type: none"> <li>• <b><a href="#">Visualizing Architecture (Alex Hogrefe)</a></b>: One of the best resources for learning how to blend technical drawings with artistic post-production (Photoshop/rendering techniques).</li> <li>• <b><a href="#">ArchDaily</a></b>: An invaluable database where students can search for "Drawings" or "Diagrams" to study how professional firms represent plans, sections, and site analyses.</li> <li>• <b><a href="#">Master Architectural Drawing</a></b>: Offers high-level tutorials focusing on the logical, structured approach required for elite-level manual architectural sketching and drafting.</li> <li>• <b><a href="#">Archtextures</a></b>: A digital tool for creating and understanding architectural textures, useful for learning how to represent materials graphically.</li> </ul>

## Course Description Form

1. Course Name:	
Chemistry	
2. Course Code:	
ARC 213	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: PhD - Firas Fouad Abdullah Email: <a href="mailto:Firas.fuad@mu.edu.iq">Firas.fuad@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Understand Atomic Structure &amp; Bonding:</b> Explain how different types of chemical bonds (covalent, ionic, metallic) dictate the physical properties of building materials, such as hardness, ductility, and transparency.</li> <li>• <b>Master Material Composition:</b> Identify the chemical composition of fundamental construction materials—including cement, aggregates, and metals—and predict how variations in these compositions affect structural strength and setting times.</li> <li>• <b>Analyze Corrosion &amp; Material Degradation:</b> Understand the chemical mechanisms behind corrosion (e.g., oxidation and galvanic action) and evaluate protective strategies to extend the lifespan of metal and reinforced concrete structures.</li> <li>• <b>Evaluate Sustainability &amp; Toxicity:</b> Assess the chemical makeup of modern building products (adhesives, coatings, insulation) to minimize the use of Volatile Organic Compounds (VOCs) and hazardous flame retardants, thereby improving indoor air quality.</li> <li>• <b>Interpret Environmental Impact:</b> Utilize the principles of "Green Chemistry" to evaluate the lifecycle impact of materials, focusing on embodied energy, biodegradability, and the carbon footprint of chemical production.</li> <li>• <b>Apply Phase Change &amp; Thermal Physics:</b> Understand how phase-change materials (PCMs) can be integrated into building envelopes to absorb and release heat, thereby increasing energy efficiency in passive cooling strategies.</li> <li>• <b>Examine Surface Chemistry:</b> Comprehend how surface treatments and protective chemical coatings (such as TiO<sub>2</sub> coatings on glass) can provide self-cleaning properties or reflect UV radiation to maintain building aesthetics and thermal comfort.</li> </ul>	Course Objective

- **Understand Polymer Science:** Categorize the chemical properties of plastics, rubbers, and polymers used in architecture to select the right material for flexible, elastic, or insulating applications.
- **Develop Research & Scientific Inquiry:** Build the capacity to interpret technical data sheets and environmental product declarations (EPDs) to make informed, evidence-based material specifications in architectural design.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	<b>Analyze Atomic and Molecular Structures:</b> Relate the atomic and molecular structure of materials to their macroscopic architectural properties, such as hardness, density, and elasticity.	Fundamentals of Matter	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	<b>Evaluate Chemical Bonding in Solids:</b> Distinguish between metallic, ionic, and covalent bonds and predict how these bonds influence the strength and conductivity of structural components.	Fundamentals of Matter	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	<b>Master Cement and Concrete Chemistry:</b> Explain the chemical processes of hydration in Portland cement and how these reactions influence the setting time, strength development, and curing of structural concrete.	Fundamentals of Matter	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	<b>Analyze Corrosion Mechanisms:</b> Identify the electrochemical processes behind the corrosion of metals (like steel reinforcement in concrete) and explain how environmental factors accelerate degradation.	Binders & Concrete	<i>Attendance</i>	Daily test

<i>Week-5</i>	2	<b>Assess Polymer Properties:</b> Categorize the chemical properties of plastics, resins, and elastomers used in modern architecture to select appropriate materials for insulation and waterproofing.	Binders & Concrete	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	<b>Understand Glass and Ceramic Chemistry:</b> Describe the composition of silica-based materials and how additive chemical oxides (like iron or cobalt) alter the color, transparency, and UV-filtering properties of glass.	Metals & Corrosion	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	<b>Implement Surface Chemistry Strategies:</b> Explain how chemical surface treatments (such as hydrophobicity or photocatalytic TiO <sub>2</sub> coatings) enhance the self-cleaning and maintenance properties of facades.	Metals & Corrosion	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	<b>Apply Principles of Green Chemistry:</b> Evaluate the environmental impact of construction materials based on their chemical life cycle, embodied energy, and potential for recycling or upcycling.	Metals & Corrosion	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	<b>Identify Indoor Air Quality (IAQ) Risks:</b> Analyze the chemistry of Volatile Organic Compounds (VOCs) and formaldehyde found in paints, adhesives, and sealants to mitigate health risks in interior design.	Polymers & Organics	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	<b>Comprehend Thermal Chemistry:</b> Describe how phase-change materials (PCMs) function at the chemical level to store and release latent heat for building energy optimization.	Polymers & Organics	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	<b>Evaluate Additives and Admixtures:</b> Identify the chemical roles of plasticizers, accelerators, and air-entraining agents in improving the performance of high-strength concrete mixes.	Polymers & Organics	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	<b>Analyze Fire Chemistry:</b> Understand the chemical processes of combustion and the role of flame retardants in building materials to improve life-safety design.	Glass, Ceramics & Coatings	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	<b>Interpret Technical Material Sheets:</b> Demonstrate the ability	Glass, Ceramics & Coatings	<i>Attendance</i>	Daily test

		to read and critique Material Safety Data Sheets (MSDS) and Environmental Product Declarations (EPDs) for informed material selection.			
Week-14	2	<b>Understand Water Chemistry in Construction:</b> Analyze how water pH and mineral content (sulfates/chlorides) affect the chemical integrity of concrete and foundations.	Sustainability & Future Materials	Attendance	Daily test
Week-15	2	<b>Collaborate on Material Performance:</b> Communicate effectively with structural and material engineers regarding the chemical compatibility and long-term durability of selected construction systems.	Sustainability & Future Materials	Attendance	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ol style="list-style-type: none"> <li><b>Addis, B. (2014).</b> <i>Building with Steel: Design and Technology</i>. (Excellent for understanding the chemical processes of iron and steel production and the prevention of chemical corrosion).</li> <li><b>Mindess, S., Young, J. F., &amp; Darwin, D. (2002).</b> <i>Concrete</i>. (This is the industry standard for understanding the chemistry of cement hydration, chemical admixtures, and concrete degradation).</li> <li><b>Chudley, R., &amp; Greeno, R. (2020).</b> <i>Building Construction Handbook</i>. (Provides the necessary context on material performance that relies on chemical foundations).</li> </ol>
Main references (sources)	<ul style="list-style-type: none"> <li><b>Foster, P. K. (2017).</b> <i>Materials Science and Engineering: An Introduction for Architects</i>. (Crucial for linking atomic bonding to material hardness and elasticity).</li> <li><b>Iraqi National Building Code - Materials Section:</b> The mandatory local reference for the chemical requirements of aggregates, cement, and water quality in regional construction.</li> <li><b>Callister, W. D. (2018).</b> <i>Materials Science and Engineering</i>. (The definitive reference for understanding how different chemical structures form polymers, ceramics, and metals).</li> </ul>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li><b>Journals:</b> <ul style="list-style-type: none"> <li><i>Cement and Concrete Research</i>: Peer-reviewed scientific journal focusing on the chemical processes in cementitious materials.</li> <li><i>Journal of Building Engineering</i>: Features the latest research on phase-change materials (PCMs) and chemical heat-storage in buildings.</li> </ul> </li> <li><b>Reports:</b></li> </ul>

	<ul style="list-style-type: none"> <li>• <b>UNEP (United Nations Environment Programme):</b> <i>Buildings and Climate Change</i>. Provides critical data on the embodied energy and chemical footprints of modern construction.</li> </ul>
Electronic References, Websites	<ul style="list-style-type: none"> <li>• <b><a href="http://buildinggreen.com">BuildingGreen (buildinggreen.com)</a>:</b> A leading source for independent information on green building materials, including their chemical toxicity and environmental impacts.</li> <li>• <b><a href="http://matweb.com">MatWeb (matweb.com)</a>:</b> An extensive database of material properties (thermal, mechanical, and chemical) for thousands of construction materials.</li> <li>• <b><a href="http://ulprospector.com">UL Prospector (ulprospector.com)</a>:</b> Excellent for searching technical data sheets (TDS) and safety sheets (MSDS/SDS) for construction chemicals, resins, and polymers.</li> <li>• <b><a href="http://greenchemistryinstitute.org">The American Chemical Society (ACS) - Green Chemistry Institute:</a></b> Offers resources on how chemical innovation is creating safer building products.</li> </ul>

## Course Description Form

1. Course Name:	
The Crimes of the Baath regime	
2. Course Code:	
UNI 0010	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: PhD-anwar kareem najeem Email: <a href="mailto:anwar.kareem@mu.edu.iq">anwar.kareem@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Analyze the Historical Context of the Ba'ath Regime:</b> Develop a comprehensive understanding of the political, social, and legislative environment in Iraq during the period of Ba'athist rule (1968–2003).</li> <li>• <b>Document Systemic Human Rights Violations:</b> Identify and classify the various types of state-sponsored crimes, including political repression, arbitrary arrests, extrajudicial executions, and forced disappearances.</li> <li>• <b>Evaluate the Impact of "Scorched Earth" Policies:</b> Examine the environmental and architectural consequences of the regime's policies, such as the destruction of cities, villages, and the systematic bulldozing of agricultural landscapes (e.g., palm groves).</li> <li>• <b>Understand the Mechanics of Genocide:</b> Study the chronological stages of crimes, including the Anfal operations and the chemical bombing of Halabja, using documentation from the Iraqi Supreme Criminal Court.</li> <li>• <b>Critique the Militarization of Society:</b> Analyze how the regime's control over public institutions and the promotion of a militarized society affected individual freedoms and social cohesion.</li> <li>• <b>Examine the Destruction of Cultural Heritage:</b> Investigate the deliberate damage or neglect of religious shrines, historical sites, and monuments as a tool for suppressing cultural and religious identity.</li> <li>• <b>Foster Human Rights Culture:</b> Cultivate a personal commitment to the principles of human rights, democracy, and the protection of the dignity of all Iraqi citizens, regardless of their background.</li> <li>• <b>Develop Research and Documentation Skills:</b> Enhance the ability to gather, analyze, and present information regarding historical atrocities through scholarly research, documentation, and the review of judicial decisions.</li> </ul>	Course Objective

- **Promote Civic Responsibility in Design:** Reflect on the responsibility of the architect in a post-conflict society to design environments that promote healing, peaceful coexistence, and respect for historical memory.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	<b>Analyze the Historical Evolution of the Regime:</b> Identify the political and ideological foundations of the Ba'ath Party in Iraq and the systemic methods used to consolidate absolute power.	The Rise to Power	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	<b>Document Systemic Human Rights Violations:</b> Critically review the legal and historical records of extrajudicial killings, arbitrary arrests, and forced disappearances that characterized the regime.	The Rise to Power	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	<b>Evaluate the Impact on Cultural Heritage:</b> Assess the regime's deliberate neglect, alteration, or destruction of religious shrines, historical mosques, and sites of cultural significance to Iraqi communities.	Human Rights & Repression	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	<b>Critique "Scorched Earth" Policies:</b> Analyze the environmental and urban consequences of policies that targeted agricultural land, villages, and marshes, leading to systematic ecological and rural destruction.	Human Rights & Repression	<i>Attendance</i>	Daily test

<i>Week-5</i>	2	<b>Understand the Mechanics of Genocide:</b> Examine the historical record of the Anfal operations and the chemical attack on Halabja, focusing on the tactical use of violence against civilian populations.	Human Rights & Repression	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	<b>Analyze the Militarization of Public Space:</b> Identify how urban planning and public architecture were leveraged to intimidate the populace and maintain regime control over communal life.	Urban & Cultural Erasure	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	<b>Identify Social and Demographic Engineering:</b> Investigate state policies designed to force demographic changes, including the expulsion of minority populations and the changing of local geographic names.	Urban & Cultural Erasure	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	<b>Evaluate Judicial Documentation:</b> Develop the ability to interpret records from the Iraqi Supreme Criminal Court to verify facts and counter historical revisionism.	Urban & Cultural Erasure	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	<b>Promote Human Rights Standards:</b> Apply international and national human rights standards to evaluate historical events and advocate for the protection of human dignity in modern society.	Genocide & State Violence	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	<b>Reflect on the Architect's Role in Reconciliation:</b> Discuss how the design of public spaces, museums, and memorials can facilitate social healing and national reconciliation after periods of trauma.	Genocide & State Violence	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	<b>Analyze the Role of Propaganda Architecture:</b> Critically review the regime's use of monumental architecture and grandiose projects as tools for personality-cult construction and distraction from internal crises.	Genocide & State Violence	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	<b>Investigate State-Sponsored Forced Displacement:</b> Examine the impact of forced relocation programs on the urban density, social fabric, and architectural continuity of Iraqi cities.	Propaganda & Monuments	<i>Attendance</i>	Daily test

Week-13	2	<b>Foster Civic Responsibility:</b> Develop a personal and professional commitment to democratic principles, transparency, and the rejection of totalitarianism in professional practice.	Propaganda & Monuments	Attendance	Daily test
Week-14	2	<b>Conduct Ethical Research:</b> Utilize archival and primary sources to conduct research on historical atrocities while maintaining academic integrity and sensitivity to victims' families.	Legacy & Responsibility	Attendance	Daily test
Week-15	2	<b>Synthesize History with Modern Planning:</b> Present findings on how the legacy of the regime's crimes influences contemporary urban planning and the need for inclusive, safe, and democratic public space design.	Legacy & Responsibility	Attendance	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ol style="list-style-type: none"> <li><b>Iraqi High Tribunal (IHT) Records:</b> The official court documents and transcripts from the trials (e.g., the Anfal and Dujail trials). These are the fundamental legal sources for understanding the regime's criminal apparatus.</li> <li><b>Farouk-Sluglett, M., &amp; Sluglett, P. (2001).</b> <i>Iraq Since 1958: From Revolution to Dictatorship</i>. (A standard academic text providing a comprehensive political history of Iraq during the period).</li> <li><b>Kanan Makiya (1989).</b> <i>Republic of Fear: The Politics of Modern Iraq</i>. (An essential foundational text that analyzed the regime's mechanisms of terror and surveillance).</li> </ol>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Human Rights Watch (HRW) Reports:</b> <i>Iraq's Crime of Genocide: The Anfal Campaign against the Kurds</i>. (Crucial for its systematic documentation of the rural destruction and mass killings).</li> <li>• <b>Hiro, D. (2002).</b> <i>Iraq: In the Eye of the Storm</i>. (Provides a detailed account of the regime's foreign policy, militarization, and internal repression).</li> <li>• <b>The National Center for Documentation of Ba'ath Crimes:</b> Accessing archival collections and victim testimonials is vital for empirical research and primary source analysis.</li> </ul>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <b>Books:</b> <ul style="list-style-type: none"> <li>• <b>Tripp, C. (2007).</b> <i>A History of Iraq</i>. (Offers an excellent overview of the structural changes in Iraqi society under authoritarian rule).</li> <li>• <b>Stover, E., &amp; Peress, G. (1998).</b> <i>The Graves: Srebrenica and Vukovar</i>. (While focused on other regions, this text provides a vital methodology for architectural students on how to document and memorialize sites of mass trauma).</li> </ul> </li> <li>• <b>Journals/Reports:</b></li> </ul>

	<ul style="list-style-type: none"> <li>• <i>Journal of Genocide Research</i>: Frequently features articles on the Iraqi context and the methodology of state-sponsored mass violence.</li> <li>• <b>Amnesty International Reports on Iraq (1980–2003)</b>: An invaluable chronological source for tracking human rights abuses throughout the decades.</li> </ul>
<p>Electronic References, Websites</p>	<ul style="list-style-type: none"> <li>• <b><u><a href="http://imf-iraq.org">The Iraqi Memory Foundation (imf-iraq.org)</a></u></b>: A critical digital archive dedicated to documenting the history of the Ba'ath era and preserving the memory of victims.</li> <li>• <b><u><a href="#">UNAMI (United Nations Assistance Mission for Iraq) Archives</a></u></b>: Contains reports and documentation regarding human rights in Iraq, including the legacy of past conflicts.</li> <li>• <b><u><a href="#">The Genocide Archive Rwanda (for comparative methodology)</a></u></b>: While not Iraqi-focused, this is an excellent <b>electronic reference for architectural students</b> to study how other nations have used technology and physical design to document and memorialize genocide.</li> <li>• <b><u><a href="#">Iraqi Supreme Criminal Court (ISCC) Archive Summaries</a></u></b>: Accessible summaries of the legal findings regarding the regime's crimes against humanity.</li> </ul>

## Course Description Form

1. Course Name:	
English Language II	
2. Course Code:	
UNI 002	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: PhD - Ahmed Raad Radif Email: <a href="mailto:ahmad_al_iraqi2000@mu.edu.iq">ahmad_al_iraqi2000@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Master Technical Architectural Vocabulary:</b> Acquire and correctly utilize a specialized lexicon related to building materials, structural components, design methodologies, and urban planning.</li> <li>• <b>Enhance Professional Communication:</b> Develop the ability to draft professional emails, project briefs, and technical specifications that adhere to standard international construction industry conventions.</li> <li>• <b>Refine Presentation Skills:</b> Practice delivering clear, structured oral presentations to explain design concepts, site analyses, and project proposals in a formal architectural context.</li> <li>• <b>Analyze Architectural Literature:</b> Cultivate the skill of reading, summarizing, and critically evaluating international architectural journals, research papers, and building regulations.</li> <li>• <b>Interpret Design Briefs:</b> Learn to deconstruct complex written design briefs to identify project requirements, constraints, and functional goals.</li> <li>• <b>Develop Academic Writing Competencies:</b> Improve the ability to write coherent, cohesive academic essays and reports related to architectural theory and historical precedents.</li> <li>• <b>Apply Grammar in Context:</b> Utilize advanced grammatical structures (e.g., passive voice for technical descriptions, conditional forms for design possibilities) to enhance the precision of technical writing.</li> <li>• <b>Improve Listening Comprehension:</b> Practice understanding spoken English in professional settings, such as client meetings, site update briefings, and international architecture lectures.</li> </ul>	Course Objective

- **Promote Intercultural Competence:** Engage with global perspectives on architecture, sustainability, and urbanism to understand how different cultural contexts shape contemporary design debates.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	<i>D4, D3, D2, D1</i>	Tenses	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	<i>D4, D3, D2, D1</i>	Present Simple	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	<i>D4, D3, D2, D1</i>	Past Simple	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	<i>D4, D3, D2, D1</i>	Past Tenses	<i>Attendance</i>	Daily test
<i>Week-5</i>	2	<i>D4, D3, D2, D1</i>	Have to	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	<i>D4, D3, D2, D1</i>	Future Form	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	<i>D4, D3, D2, D1</i>	Information Questions	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	<i>D4, D3, D2, D1</i>	The Present Perfect	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	<i>D4, D3, D2, D1</i>	The Present Perfect	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	<i>D4, D3, D2, D1</i>	articles	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	<i>D4, D3, D2, D1</i>	Writing emails	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	<i>D4, D3, D2, D1</i>	Conditional	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	<i>D4, D3, D2, D1</i>	Conditional	<i>Attendance</i>	Daily test
<i>Week-14</i>	2	<i>D4, D3, D2, D1</i>	Model Verbs	<i>Attendance</i>	Daily test
<i>Week-15</i>	2	<i>D4, D3, D2, D1</i>	Midterm	<i>Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc

## 12. Learning and Teaching Resources

<p>Required textbooks (curricular books, if any)</p>	<ol style="list-style-type: none"> <li>1. <b>Bastow, H., et al. (2018). English for Architects: Professional Communication Skills.</b> (A core text that focuses on formal email writing, client reports, and project documentation).</li> <li>2. <b>Iraqi Ministry of Higher Education. English Language for Scientific &amp; Engineering Departments.</b> (The standard curricular guide for maintaining academic consistency across Iraqi technical universities).</li> <li>3. <b>Ching, F. D. K. (2019). A Visual Dictionary of Architecture.</b> (While a design reference, it is an essential "textbook" for learning the correct English terminology for architectural components and construction methods).</li> </ol>
<p>Main references (sources)</p>	<ul style="list-style-type: none"> <li>• <b>Swan, M. (2016). Practical English Usage.</b> (The definitive reference for advanced grammar and syntax, crucial for students writing technical specifications or research abstracts).</li> <li>• <b>Architectural Record - "Technical" Section:</b> Students should regularly read these articles to understand how complex architectural concepts (e.g., facade systems, structural innovation) are explained in professional English.</li> <li>• <b>Writing for Architecture (Design Studio Manuals):</b> Internal departmental guides on how to structure a project brief or "Design Concept Statement" in clear, concise English.</li> </ul>
<p>Recommended books and references (scientific journals, reports...)</p>	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>○ <b>The Journal of Architecture (RIBA):</b> Provides high-level academic discourse; excellent for students to study the structure of professional English arguments.</li> <li>○ <b>Architectural Science Review:</b> Focuses on technical and environmental design, perfect for learning terminology related to sustainable architecture.</li> </ul> </li> <li>• <b>Reports:</b> <ul style="list-style-type: none"> <li>○ <b>Building Research Establishment (BRE) Technical Reports:</b> These provide excellent examples of how to write precise, objective, and technical English for building performance documentation.</li> <li>○ <b>UNESCO World Heritage Documentation:</b> Useful for analyzing how cultural heritage sites are described and managed in international reports.</li> </ul> </li> </ul>
<p>Electronic References, Websites</p>	<ul style="list-style-type: none"> <li>• <b><a href="http://archdaily.com">ArchDaily (archdaily.com)</a>:</b> The most accessible resource for students to read short, well-structured English project descriptions that explain design intent.</li> <li>• <b><a href="#">TED Talks: Architecture Playlist</a>:</b> An excellent resource for improving listening comprehension, focusing on public speaking and design conceptualization.</li> <li>• <b><a href="#">Grammarly for Architectural Writing</a>:</b> A digital tool recommended to help students identify errors in formal technical writing and improve the flow of their project narratives.</li> <li>• <b><a href="#">The Purdue Online Writing Lab (OWL)</a>:</b> The gold standard for learning how to cite sources (APA/MLA) and structure formal academic research papers.</li> </ul>

## Course Description Form

13.	Course Name:	
	Building Construction I	
14.	Course Code:	
	ARC 214	
15.	Semester / Year:	
	First Semester / 2025–2026	
16.	Description Preparation Date:	
	01/09/2025	
17.	Available Attendance Forms:	
	Attendance	
18.	Number of Credit Hours (Total) / Number of Units (Total)	
	45 hours	
19.	Course administrator's name (mention all, if more than one name)	
	Name: M.Sc.- Zahraa Tawfiq Naeem Email: <a href="mailto:Zahraa.tn@mu.edu.iq">Zahraa.tn@mu.edu.iq</a>	
	Name: M.Sc.- Ali Muhammad Ali Naji Email: <a href="mailto:alimnaji@mu.edu.iq">alimnaji@mu.edu.iq</a>	
20.	Course Objectives	
	<ul style="list-style-type: none"> <li>• <b>Understand Foundation Systems:</b> Categorize different types of foundation systems (shallow vs. deep) and analyze their selection based on soil conditions and structural load requirements.</li> <li>• <b>Master Masonry Techniques:</b> Detail the assembly of load-bearing masonry walls, including brick bonding patterns, mortar types, and structural integration.</li> <li>• <b>Analyze Floor and Roof Assemblies:</b> Develop the ability to design and detail floor and roof systems, including structural decking, insulation, and waterproofing layers.</li> <li>• <b>Examine Structural Frame Systems:</b> Identify the components of reinforced concrete (RC) and steel frame systems, focusing on the connection points between beams, columns, and slabs.</li> <li>• <b>Master Vertical Circulation Design:</b> Learn the technical requirements for staircases and ramps, including slope, tread-riser ratios, and structural support methods.</li> <li>• <b>Evaluate Moisture and Thermal Control:</b> Apply the principles of damp-proof courses (DPC), vapor barriers, and thermal insulation to ensure building envelope performance in the Iraqi climate.</li> </ul>	Course Objective

- **Understand Building Regulations:** Introduce the relevant Iraqi building codes and standards for fire safety, accessibility, and structural integrity that govern construction in the region.
- **Develop Precision Detailing:** Master the craft of producing professional technical drawings (sections and construction details) that clearly communicate material junctions and assembly logic.
- **Bridge Design and Construction:** Foster an iterative workflow where architectural design decisions are continuously tested against technical constraints and material availability.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 21. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 22. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	<b>Analyze Foundation Systems:</b> Compare and select appropriate foundation types (shallow footings, raft, or piles) based on soil-bearing capacity and building load requirements.	Substructure	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	<b>Master Masonry Assembly:</b> Apply knowledge of traditional and modern masonry bonding patterns, mortar composition, and the structural role of cavity walls.	Substructure	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	<b>Detail Horizontal Floor Systems:</b> Design and document structural floor assemblies, including slab-on-grade, suspended RC slabs, and beam-and-block systems.	Walls & Masonry	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	<b>Evaluate Roof Typologies:</b> Contrast flat, pitched, and shell roof assemblies, detailing the necessary components for structural support, drainage, and insulation.	Walls & Masonry	<i>Attendance</i>	Daily test

<i>Week-5</i>	2	<b>Master Vertical Circulation Design:</b> Calculate and draw compliant staircase and ramp designs, incorporating structural supports, balustrades, and tread-riser ergonomic ratios.	Floor Systems	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	<b>Apply Moisture Control Logic:</b> Implement Damp-Proof Courses (DPC) and waterproofing membranes at critical junctions to prevent moisture ingress in the regional climate.	Floor Systems	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	<b>Detail Envelope Assemblies:</b> Create precise section details showing the junctions between external walls, floor slabs, and roof membranes.	Floor Systems	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	<b>Understand Structural Frame Integration:</b> Analyze the connection logic between columns, beams, and slabs in both reinforced concrete and steel frame construction.	Roofing & Drainage	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	<b>Implement Thermal Performance:</b> Integrate insulation strategies within the building envelope to optimize energy efficiency and thermal comfort.	Roofing & Drainage	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	<b>Comprehend Building Regulations:</b> Interpret the Iraqi Building Code regarding fire safety, accessibility, and structural load requirements for residential and public buildings.	Roofing & Drainage	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	<b>Master Technical Drafting:</b> Translate design intentions into professional technical drawings that communicate material properties and assembly sequences.	Stairs & Circulation	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	<b>Evaluate Material Compatibility:</b> Assess the chemical and physical compatibility of different materials used in junctions (e.g., preventing galvanic corrosion between steel and aluminum).	Stairs & Circulation	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	<b>Design for Constructability:</b> Critically evaluate design proposals for buildability, ensuring that details can be practically executed on-site.	Stairs & Circulation	<i>Attendance</i>	Daily test

Week-14	2	<b>Manage Tolerance and Joints:</b> Explain the importance of expansion joints and movement joints in large-scale structures to prevent cracking and structural stress.	Frames & Connections	Attendance	Daily test
Week-15	2	<b>Collaborate on Technical Documentation:</b> Prepare a comprehensive set of construction documents that coordinate architectural, structural, and service-based requirements.	Frames & Connections	Attendance	Daily test

### 23. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc

### 24. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ul style="list-style-type: none"> <li>• <b>Chudley, R., &amp; Greeno, R. (2020).</b> <i>Building Construction Handbook</i>. (The industry standard for illustrating the construction of foundations, walls, roofs, and stairs).</li> <li>• <b>Foster, J. S. (2007).</b> <i>Mitchell's Structure and Fabric (Part 1)</i>. (An essential textbook for understanding the "fabric" of a building, including traditional and modern wall assemblies).</li> <li>• <b>Iraqi Building Code (IBC) - Construction Standards:</b> The official regulatory document for all structural and material requirements in Iraq.</li> </ul>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Allen, E., &amp; Iano, J. (2019).</b> <i>Fundamentals of Building Construction: Materials and Methods</i>. (This text is critical for teaching students how to bridge the gap between design and site reality).</li> <li>• <b>Ramsey/Sleeper.</b> <i>Architectural Graphic Standards</i>. (The fundamental reference for how to properly draft construction details, symbols, and annotations).</li> <li>• <b>McEvoy, M. (2004).</b> <i>Mitchell's External Components</i>. (Specifically addresses the performance of building envelopes, including moisture and thermal control).</li> </ul>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <b>Journal of Building Engineering:</b> Focuses on the performance of building envelopes and structural efficiency.</li> <li>• <b>Construction and Building Materials:</b> Peer-reviewed research on material behavior (e.g., concrete strength, brick masonry performance).</li> </ul> </li> <li>• <b>Reports:</b> <ul style="list-style-type: none"> <li>• <b>The Building Research Establishment (BRE) Digests:</b> A series of expert technical reports on best practices for preventing moisture ingress, structural failure, and insulation installation.</li> </ul> </li> </ul>
Electronic References, Websites	<p><a href="http://detail-online.com">Detail Online (detail-online.com)</a>: The gold standard for architectural detailing. Students can browse high-quality sections and construction details that illustrate complex junctions.</p> <ul style="list-style-type: none"> <li>• <a href="http://constructiondetails.com">Construction Details (constructiondetails.com)</a>: A massive library of CAD/BIM details that students can use to understand how to assemble various building components.</li> <li>• <a href="http://designingbuildings.co.uk">Designing Buildings (designingbuildings.co.uk)</a>: An open-access construction knowledge base that provides simplified, expert-written articles on everything from "Foundation types" to "Staircase design."</li> <li>• <a href="http://Autodesk BIM 360/Revit Knowledge Base">Autodesk BIM 360/Revit Knowledge Base</a>: Essential for students to understand the <i>digital</i> side of construction detailing (BIM workflow) for modern projects.</li> </ul>

## Course Description Form

1. Course Name:	
Computer II	
2. Course Code:	
UNI 005	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
45 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: PhD - Amjad M. F. Hussein Email: <a href="mailto:Amjad.muhamad@mu.edu.iq">Amjad.muhamad@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Master 3D Modeling Fundamentals:</b> Develop proficiency in creating accurate three-dimensional digital models from 2D architectural plans, focusing on both solid and surface modeling techniques.</li> <li>• <b>Integrate Parametric Thinking:</b> Introduce the logic of parametric design, where geometric forms are generated based on rules and data inputs rather than just static manual input.</li> <li>• <b>Execute Photorealistic Rendering:</b> Learn to apply sophisticated materials, textures, lighting, and camera settings to create professional-quality architectural visualizations.</li> <li>• <b>Develop Digital Graphic Documentation:</b> Bridge the gap between 3D models and 2D documentation by generating automatic sections, elevations, and details directly from the digital model.</li> <li>• <b>Master Post-Production Techniques:</b> Utilize image-editing software to enhance digital renders, adding context (entourage, people, vegetation) to improve the emotional and narrative quality of the presentation.</li> <li>• <b>Analyze Building Information Modeling (BIM) Concepts:</b> Understand the foundational concepts of BIM, focusing on how information-rich models facilitate better collaboration and integrated design processes.</li> <li>• <b>Explore Digital Fabrication Logic:</b> Introduce the requirements for digital fabrication (such as 3D printing and laser cutting), teaching students how to prepare "watertight" models for physical output.</li> </ul>	Course Objective

- **Apply Graphic Identity & Layout:** Master digital layout tools to organize architectural presentations, ensuring professional consistency, proper typography, and visual hierarchy.
- **Practice Iterative Digital Workflows:** Develop a non-linear design process where the digital model is used as a tool for constant testing, critique, and rapid refinement of spatial ideas.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	3	<i>D4, D3, D2, D1</i>	<i>Explore the AutoCAD II interface</i>	<i>Attendance</i>	Daily test
<i>Week-2</i>	3	<i>D4, D3, D2, D1</i>	Explore the AutoCAD II interface	<i>Attendance</i>	Daily test
<i>Week-3</i>	3	<i>D4, D3, D2, D1</i>	Explore the AutoCAD II interface	<i>Attendance</i>	Daily test
<i>Week-4</i>	3	<i>D4, D3, D2, D1</i>	Explore the AutoCAD II interface	<i>Attendance</i>	Daily test
<i>Week-5</i>	3	<i>D4, D3, D2, D1</i>	Explore the AutoCAD II interface	<i>Attendance</i>	Daily test
<i>Week-6</i>	3	<i>D4, D3, D2, D1</i>	<i>Explore the AutoCAD II interface</i>	<i>Attendance</i>	Daily test
<i>Week-7</i>	3	<i>D4, D3, D2, D1</i>	Explore the AutoCAD II interface	<i>Attendance</i>	Daily test
<i>Week-8</i>	3	<i>D4, D3, D2, D1</i>	How to convert the interface from AutoCAD 2D to AutoCAD 3D	<i>Attendance</i>	Daily test
<i>Week-9</i>	3	<i>D4, D3, D2, D1</i>	How to convert the interface from AutoCAD 2D to AutoCAD 3D	<i>Attendance</i>	Daily test

Week-10	3	D4, D3, D2, D1	Drawing and editing commands (Raise a plan from 2D to 3D-Wall)	Attendance	Daily test
Week-11	3	D4, D3, D2, D1	Drawing and editing commands (Raise a plan from 2D to 3D-Wall)	Attendance	Daily test
Week-12	3	D4, D3, D2, D1	Drawing and editing commands (Raise a plan from 2D to 3D-Door)	Attendance	Daily test
Week-13	3	D4, D3, D2, D1	Drawing and editing commands (Raise a plan from 2D to 3D-Door)	Attendance	Daily test
Week-14	3	D4, D3, D2, D1	Drawing and editing commands (Raise a plan from 2D to 3D-Window)	Attendance	Daily test
Week-15	3	D4, D3, D2, D1	Drawing and editing commands (Raise a plan from 2D to 3D-Window)	Attendance	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ol style="list-style-type: none"> <li>1. <b>Omura, G., &amp; Benton, B. C. (2020).</b> <i>Mastering AutoCAD</i>. (The foundational text for precise technical drafting and understanding the interface of industry-standard 2D/3D software).</li> <li>2. <b>Krygiel, E., &amp; Nies, B. (2018).</b> <i>Mastering Autodesk Revit Architecture</i>. (This is the essential guide to BIM, teaching students to build "data-rich" models rather than just "drawings").</li> <li>3. <b>McNeel &amp; Associates.</b> <i>The Rhino 3D Level 1 Training Guide</i>. (The definitive text for mastering free-form 3D modeling and complex geometry).</li> </ol>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Seidler, D. R. (2012).</b> <i>Digital Drawing for Designers: A Visual Guide to AutoCAD</i>. (Focuses on the translation of architectural intent into digital lines and layers).</li> <li>• <b>Watts, A. (2016).</b> <i>Modern Construction Handbook</i>. (Use this to teach students how to model real-world construction details—like wall sections and roof joints—within their BIM environment).</li> <li>• <b>Iraqi BIM Standardization Guidelines (Drafts/Reports):</b> Essential for teaching students how to organize their models according to standard collaborative practices for future professional work in Iraq.</li> </ul>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <b>Books:</b> <ul style="list-style-type: none"> <li>• <b>Picon, A. (2010).</b> <i>Digital Culture in Architecture</i>. (Provides the theoretical framework for how computers have transformed the architect's creative process).</li> <li>• <b>Peters, B. (2013).</b> <i>Inside Smartgeometry: Expanding the Architectural Possibilities of Computational Design</i>. (An excellent introduction to parametric workflows and algorithmic design).</li> </ul> </li> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <i>International Journal of Architectural Computing (IJAC)</i>: Focuses on the role of computation in design, construction, and urban planning.</li> <li>• <i>Architectural Record (Technology Section)</i>: Keeps students updated on the latest digital tools and software trends in the industry.</li> </ul> </li> </ul>

Electronic References, Websites	<ul style="list-style-type: none"> <li>• <a href="http://au.autodesk.com">Autodesk University (au.autodesk.com)</a>: The gold standard for free professional-grade video tutorials on Revit, AutoCAD, and 3ds Max.</li> <li>• <a href="#">ArchDaily: Software Category</a>: Excellent for analyzing case studies where architects explain which digital tools they used to solve specific design challenges.</li> <li>• <a href="#">Rendering/Visualization Portals (e.g., RonenBekerman.com)</a>: The go-to site for high-end rendering workflows, lighting techniques, and post-production advice.</li> </ul>
---------------------------------	---

## Course Description Form

1. Course Name:	
Architectural Design III	
2. Course Code:	
ARC 221	
3. Semester / Year:	
Second Semester / 2025–2026	
4. Description Preparation Date:	
01/02/2026	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
180 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: PhD - Firas Fouad Abdullah Email: <a href="mailto:Firas.fuad@mu.edu.iq">Firas.fuad@mu.edu.iq</a>  Name: M.Sc. - Alaa Taha Mohammed Email: <a href="mailto:Atmalaa@mu.edu.iq">Atmalaa@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Master Functional Programming:</b> Develop the ability to translate a client’s programmatic requirements (e.g., residential, small public facilities) into logical spatial zones.</li> <li>• <b>Internalize Human Scale &amp; Ergonomics:</b> Design spaces based on human proportions (Anthropometrics) and the minimum spatial requirements for common activities.</li> <li>• <b>Execute Multi-Scale Thinking:</b> Demonstrate the ability to work simultaneously across different scales—from the site-plan level (macro) to the detail of a single room (micro).</li> <li>• <b>Integrate Site-Contextual Design:</b> Develop architectural interventions that respond to site topography, orientation, and surrounding urban fabric.</li> <li>• <b>Master Spatial Circulation:</b> Design intuitive circulation patterns that prioritize clarity, safety, and flow, while minimizing wasted space.</li> </ul>	Course Objectives

- **Apply Environmental Logic:** Integrate basic passive design principles—such as cross-ventilation, daylighting, and shading—into the early conceptual massing.
- **Explore Volumetric Composition:** Move beyond 2D planning into complex 3D massing, exploring how roof forms and wall apertures define interior atmosphere.
- **Develop Graphic Narrative Skills:** Communicate architectural ideas through a clear, professional presentation package including plans, sections, elevations, and analytical diagrams.
- **Practice Iterative Design:** Implement an iterative design process where conceptual ideas are tested, critiqued, and refined through multiple phases of design development.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	10	<b>Interpret Architectural Programs:</b> Analyze client needs and functional requirements to develop coherent building programs and spatial adjacency charts.	Human Scale & Ergonomics	<i>collective criticism + Attendance</i>	Daily test
<i>Week-2</i>	10	<b>Apply Anthropometric Standards:</b> Integrate ergonomic dimensions and human-scale requirements into the design of interior and exterior spaces.	Human Scale & Ergonomics	<i>collective criticism + Attendance</i>	Daily test
<i>Week-3</i>	10	<b>Execute Site-Specific Analysis:</b> Conduct comprehensive site studies, documenting topography, solar orientation, wind patterns, and access points to inform design decisions.	Site & Contextual Analysis	<i>collective criticism + Attendance</i>	Daily test
<i>Week-4</i>	10	<b>Master Circulation Logic:</b> Design intuitive, safe, and efficient circulation paths (horizontal and	Site & Contextual Analysis	<i>collective criticism + Attendance</i>	Daily test

		vertical) that define the experience of moving through space.			
<i>Week-5</i>	10	<b>Utilize Volumetric Massing:</b> Explore the additive and subtractive manipulation of 3D volumes to create distinct architectural forms.	Site & Contextual Analysis	<i>collective criticism + Attendance</i>	Daily test
<i>Week-6</i>	10	<b>Apply Passive Environmental Strategies:</b> Incorporate basic climate-responsive design elements, such as natural cross-ventilation, daylighting, and shading, during the conceptual massing phase.	Functional Adjacencies	<i>collective criticism + Attendance</i>	Daily test
<i>Week-7</i>	10	<b>Develop Spatial Hierarchy:</b> Organize spaces based on public, semi-private, and private functions, ensuring logical transitions and privacy control.	Functional Adjacencies	<i>collective criticism + Attendance</i>	Daily test
<i>Week-8</i>	10	<b>Understand Structure and Form:</b> Recognize the relationship between structural systems (e.g., frame vs. load-bearing) and the resulting architectural character.	Functional Adjacencies	<i>collective criticism + Attendance</i>	Daily test
<i>Week-9</i>	10	<b>Explore Materiality and Texture:</b> Select materials that respond to both the local Iraqi climate and the intended character/function of the building.	Massing & Volumetric Logic	<i>collective criticism + Attendance</i>	Daily test
<i>Week-10</i>	10	<b>Apply Proportioning Systems:</b> Use architectural principles such as the Golden Ratio or grid systems to establish harmony and rhythm in facade design.	Massing & Volumetric Logic	<i>collective criticism + Attendance</i>	Daily test
<i>Week-11</i>	10	<b>Draft Precise Technical Representations:</b> Produce high-quality, professional-grade floor plans, sections, and elevations that adhere to architectural drawing standards.	Massing & Volumetric Logic	<i>collective criticism + Attendance</i>	Daily test
<i>Week-12</i>	10	<b>Master 3D Visualization:</b> Generate perspectives and axonometric drawings that clearly communicate the architectural atmosphere and design intent.	Environmental Integration	<i>collective criticism + Attendance</i>	Daily test
<i>Week-13</i>	10	<b>Implement Iterative Design Processes:</b> Demonstrate the ability to critique, refine, and evolve design proposals through successive phases of sketches and models.	Environmental Integration	<i>collective criticism + Attendance</i>	Daily test
<i>Week-14</i>	10	<b>Design for Contextual Integration:</b> Develop architectural solutions that respect the existing urban morphology and local cultural context of Al-Muthanna.	Documentation & Synthesis	<i>collective criticism + Attendance</i>	Daily test
<i>Week-15</i>	10	<b>Produce Professional Design Reports:</b> Synthesize analytical diagrams, research, and design development into a comprehensive and coherent presentation portfolio.	Documentation & Synthesis	<i>collective criticism + Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

<p>Required textbooks (curricular books, if any)</p>	<ol style="list-style-type: none"> <li>4. <b>Ching, F. D. K. (2014).</b> <i>Architecture: Form, Space, and Order</i>. (The definitive textbook for understanding design elements, spatial relationships, and organizational principles).</li> <li>5. <b>Clark, R. H., &amp; Pause, M. (2012).</b> <i>Precedents in Architecture: Analytic Diagrams, Formative Ideas, and Partis</i>. (Essential for teaching students how to analyze great buildings and apply those logic structures to their own design work).</li> <li>6. <b>Neufert, E. (2019).</b> <i>Architects' Data</i>. (The absolute standard for ergonomic dimensions, clearance requirements, and functional spatial programming).</li> </ol>
<p>Main references (sources)</p>	<ul style="list-style-type: none"> <li>• <b>White, E. T. (1983).</b> <i>Site Analysis: Diagramming Information for Architectural Design</i>. (Crucial for teaching students how to convert site data like topography and sun paths into design strategies).</li> <li>• <b>Unwin, S. (2020).</b> <i>Analysing Architecture</i>. (A brilliant theoretical work that breaks down how architecture creates "space" and "place," helping students think more deeply about the impact of their designs).</li> <li>• <b>Iraqi National Building Standards for Residential and Public Buildings:</b> (Students must be grounded in local codes regarding set-backs, site coverage ratios, and ventilation requirements).</li> </ul>
<p>Recommended books and references (scientific journals, reports...)</p>	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <i>Architectural Record (Design Vanguard issue)</i>: Excellent for studying how young, innovative firms handle functional programs.</li> <li>• <i>Journal of Architectural Education (JAE)</i>: Provides insight into design pedagogy and the evolution of design studio culture.</li> </ul> </li> <li>• <b>Reports/Scientific Focus:</b> <ul style="list-style-type: none"> <li>• <b>UN-Habitat:</b> Reports on urban density and sustainable residential design (critical for the evolving urban fabric of Iraqi cities).</li> <li>• <b>Gehl, J. (2010).</b> <i>Cities for People</i>. (Focuses on the <i>experience</i> of the human scale, which is vital for the 2nd-stage design focus).</li> </ul> </li> </ul>
<p>Electronic References, Websites</p>	<ul style="list-style-type: none"> <li>• <b><a href="#">ArchDaily</a>:</b> The most accessible resource for high-quality architectural projects. Students should use the "Projects" filter to search for specific typologies (e.g., "Library," "Housing") to see how others handle circulation and massing.</li> <li>• <b><a href="#">Divisare</a>:</b> A curated platform that offers high-quality photography and, more importantly, <b>thematic collections</b> (e.g., "Courtyard Houses") that help students develop their own design vocabulary.</li> <li>• <b><a href="#">Parametric Architecture (PA)</a>:</b> For students interested in exploring advanced geometry and modern computational design as a means to respond to site and climate.</li> <li>• <b><a href="#">DesignBoom</a>:</b> Excellent for keeping up with global trends in material use and innovative small-scale architectural solutions.</li> </ul>

## Course Description Form

1. Course Name:	
Architectural Graphics II	
2. Course Code:	
ARC 222	
3. Semester / Year:	
Second Semester / 2025–2026	
4. Description Preparation Date:	
01/02/2026	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
45 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: M.Sc. - Saad Hussein Alwan Email: <a href="mailto:Saad@mu.edu.iq">Saad@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Master Technical Drafting Fundamentals:</b> Achieve proficiency in the use of standard drawing instruments, line weights, lettering conventions, and sheet formatting to produce clear, professional technical documents.</li> <li>• <b>Develop Orthographic Visualization:</b> Master the ability to represent 3D objects in 2D space through accurate plan, section, and elevation projections.</li> <li>• <b>Understand Geometric Construction:</b> Apply principles of descriptive geometry to construct complex forms, including intersections, developments of surfaces, and conic sections.</li> <li>• <b>Execute Pictorial Representations:</b> Develop skills in generating paraline drawings, including isometric and axonometric projections, to communicate spatial volumes.</li> <li>• <b>Master Perspective Construction:</b> Learn to construct one-point and two-point perspectives to represent architectural space with correct depth, scale, and human proportions.</li> <li>• <b>Develop Freehand Sketching Skills:</b> Improve hand-eye coordination through rapid sketching of daily objects, natural forms, and existing buildings to capture design intent quickly.</li> </ul>	Course Objectives

- **Apply Graphic Semantics:** Learn to differentiate between various drawing types through "graphic hierarchy"—using line weights, textures, and shading to signify what is cut, what is in profile, and what is in the background.
- **Understand Architectural Scaling:** Apply architectural scales accurately across different drawing types to ensure precision in site plans, floor plans, and building details.
- **Practice Iterative Communication:** Utilize drawing as a tool for "thinking" and "problem-solving," refining design ideas through successive stages of graphic development.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	3	<b>Master Technical Drafting Conventions:</b> Utilize architectural drawing instruments (T-squares, triangles, scales, compasses) to produce precise technical drawings with professional line weights and lettering.	Drafting Fundamentals	<i>collective criticism + Attendance</i>	Daily test
<i>Week-2</i>	3	<b>Execute Orthographic Projections:</b> Translate 3D architectural forms into accurate 2D multiview representations (plans, sections, and elevations).	Drafting Fundamentals	<i>collective criticism + Attendance</i>	Daily test
<i>Week-3</i>	3	<b>Apply Descriptive Geometry:</b> Solve complex geometric problems involving lines, planes, and solid intersections in three-dimensional space.	Drafting Fundamentals	<i>collective criticism + Attendance</i>	Daily test
<i>Week-4</i>	3	<b>Master Paraline Projections:</b> Construct isometric and axonometric drawings to communicate the volumetric massing of architectural designs clearly.	Orthographic Projection	<i>collective criticism + Attendance</i>	Daily test
<i>Week-5</i>	3	<b>Construct Perspective Views:</b> Apply vanishing point principles to create one-point and two-point perspectives that accurately represent spatial depth, scale, and human proportions.	Orthographic Projection	<i>collective criticism + Attendance</i>	Daily test

<i>Week-6</i>	3	<b>Develop Freehand Sketching Competency:</b> Execute rapid, observational sketches of natural and man-made forms to capture design concepts and spatial relationships quickly.	Orthographic Projection	<i>collective criticism + Attendance</i>	Daily test
<i>Week-7</i>	3	<b>Implement Graphic Hierarchy:</b> Apply varying line weights (thick for cuts, thin for profiles, lighter for background) to create depth and clarity in section and elevation drawings.	Axonometry & Isometry	<i>collective criticism + Attendance</i>	Daily test
<i>Week-8</i>	3	<b>Understand Architectural Scaling:</b> Apply standard architectural scales accurately to site plans, floor plans, and building details to maintain proportional integrity.	Axonometry & Isometry	<i>collective criticism + Attendance</i>	Daily test
<i>Week-9</i>	3	<b>Master Geometric Surface Development:</b> Develop flat patterns for complex 3D forms (truncated cones, pyramids, or curved surfaces) to understand spatial unfolding.	Axonometry & Isometry	<i>collective criticism + Attendance</i>	Daily test
<i>Week-10</i>	3	<b>Refine Tone and Shadowing:</b> Utilize diverse shading techniques (hatching, cross-hatching, stippling) to define form, highlight texture, and establish light source direction in drawings.	Perspective Construction	<i>collective criticism + Attendance</i>	Daily test
<i>Week-11</i>	3	<b>Demonstrate Sheet Composition:</b> Organize multiple drawings (plans, elevations, perspectives) onto a single sheet following grid layouts, balance, and clear annotation principles.	Perspective Construction	<i>collective criticism + Attendance</i>	Daily test
<i>Week-12</i>	3	<b>Apply Analytical Diagramming:</b> Distinguish between representational drawings and analytical diagrams (explaining circulation, sun path, or spatial zones).	Shading, Texture & Depth	<i>collective criticism + Attendance</i>	Daily test
<i>Week-13</i>	3	<b>Utilize Architectural Notation:</b> Apply standard symbols for dimensions, materials, door/window types, and furniture to make drawings readable for construction.	Shading, Texture & Depth	<i>collective criticism + Attendance</i>	Daily test
<i>Week-14</i>	3	<b>Practice Iterative Representation:</b> Demonstrate the ability to evolve a design idea from a rough conceptual sketch into a refined technical presentation drawing.	Presentation Synthesis	<i>collective criticism + Attendance</i>	Daily test
<i>Week-15</i>	3	<b>Produce Professional Presentation Sets:</b> Synthesize a cohesive portfolio of work that demonstrates clarity of communication, technical rigor, and aesthetic sensitivity.	Presentation Synthesis	<i>collective criticism + Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

<p>Required textbooks (curricular books, if any)</p>	<ul style="list-style-type: none"> <li>• <b>Ching, F. D. K. (2015).</b> <i>Architectural Graphics</i>. (The industry-standard reference for drawing conventions, line weights, and projection systems).</li> <li>• <b>Ching, F. D. K. (2019).</b> <i>Design Drawing</i>. (Focuses on freehand sketching, tonal values, and the logic of constructed perspective).</li> <li>• <b>Neufert, E. (2019).</b> <i>Architects' Data</i>. (Essential for teaching students how to represent human scale, functional clearances, and standardized architectural elements accurately).</li> </ul>
<p>Main references (sources)</p>	<ul style="list-style-type: none"> <li>• <b>Yee, R. (2013).</b> <i>Architectural Drawing: A Visual Compendium of Types and Methods</i>. (A comprehensive guide covering every drawing type, from orthographic projections to complex paraline systems).</li> <li>• <b>Montague, J. (2013).</b> <i>Basic Perspective Drawing: A Visual Approach</i>. (Provides clear, step-by-step methods for constructing perfect one-point and two-point perspectives).</li> <li>• <b>Iraqi National Building Code for Drawing and Documentation:</b> (Students must refer to local standards for title blocks, notation, and drawing organization).</li> </ul>
<p>Recommended books and references (scientific journals, reports...)</p>	<ul style="list-style-type: none"> <li>• <b>Books:</b> <ul style="list-style-type: none"> <li>• <b>Elam, K. (2001).</b> <i>Geometry of Design: Studies in Proportion and Composition</i>. (Teaches the mathematical foundations of aesthetic proportions).</li> <li>• <b>Unwin, S. (2020).</b> <i>Analysing Architecture</i>. (Excellent for learning how to use diagrams to deconstruct and communicate architectural space).</li> </ul> </li> <li>• <b>Journals/Scientific:</b> <ul style="list-style-type: none"> <li>• <i>EGA-Revista de Expresion Grafica Arquitectonica</i>: A peer-reviewed journal dedicated exclusively to the study of graphic expression in architecture.</li> <li>• <i>Journal of Architectural Education (JAE)</i>: Frequently features articles on innovative drawing pedagogy and the shift between manual and digital representation.</li> </ul> </li> </ul>
<p>Electronic References, Websites</p>	<ul style="list-style-type: none"> <li>• <b><a href="#">Visualizing Architecture (Alex Hogrefe)</a>:</b> One of the best resources for learning how to blend technical drawings with artistic post-production (Photoshop/rendering techniques).</li> <li>• <b><a href="#">ArchDaily</a>:</b> An invaluable database where students can search for "Drawings" or "Diagrams" to study how professional firms represent plans, sections, and site analyses.</li> <li>• <b><a href="#">Master Architectural Drawing</a>:</b> Offers high-level tutorials focusing on the logical, structured approach required for elite-level manual architectural sketching and drafting.</li> <li>• <b><a href="#">Archtextures</a>:</b> A digital tool for creating and understanding architectural textures, useful for learning how to represent materials graphically.</li> </ul>

## Course Description Form

1. Course Name:	
History of Architecture I	
2. Course Code:	
ARC 223	
3. Semester / Year:	
Second Semester / 2025–2026	
4. Description Preparation Date:	
01/02/2026	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: PhD-anwar kareem najeem Email: <a href="mailto:anwar.kareem@mu.edu.iq">anwar.kareem@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Analyze Historical Contextualization:</b> Identify and explain the socio-political, religious, and economic factors that shaped architectural developments from prehistoric times through the ancient world.</li> <li>• <b>Master Architectural Terminology:</b> Develop a professional vocabulary to describe key architectural elements, building types, and construction methods characteristic of different historical periods.</li> <li>• <b>Evaluate Environmental Adaptability:</b> Examine how ancient civilizations responded to their specific geographic and climatic conditions through material choices, orientation, and urban planning.</li> <li>• <b>Critique Spatial and Formal Logic:</b> Develop the ability to "read" a building by analyzing its plan, section, and elevation, understanding how spatial arrangements reflect the cultural priorities of the time.</li> <li>• <b>Develop Comparative Historical Analysis:</b> Compare architectural solutions across different civilizations (e.g., comparing Mesopotamian ziggurats with Egyptian pyramids) to understand varying approaches to monumentalism and purpose.</li> <li>• <b>Document Heritage through Drawing:</b> Enhance architectural representation skills by documenting historical buildings through</li> </ul>	Course Objectives

sketches, analytical drawings, and diagrams, fostering a deep understanding of their proportions and details.

- **Foster Cultural Heritage Awareness:** Cultivate an appreciation for Iraq’s unique historical contribution to world architecture, specifically focusing on Mesopotamian traditions and their influence on later styles.
- **Formulate Critical Perspectives:** Develop the capacity to discuss architecture as a complex phenomenon influenced by art, science, and politics, avoiding simplistic interpretations of historical "style."
- **Apply Historical Knowledge to Modern Practice:** Reflect on historical design principles to identify lessons that can be applied to contemporary sustainable and culturally responsive architectural design.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem–Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	<b>Analyze Cultural Context:</b> Evaluate how religious, political, and social institutions influenced the morphology and functionality of ancient architectural types.	The Foundations	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	<b>Deconstruct Structural Logic:</b> Identify and explain the structural systems—such as post-and-lintel, corbeling, and early arch/vault techniques—that enabled ancient monumental construction.	The Foundations	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	<b>Master Historical Vocabulary:</b> Correctly utilize specialized architectural terminology (e.g., capitals, pediments, ziggurats, hypostyle halls) to describe building components.	Mesopotamian Cradle	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	<b>Evaluate Environmental Strategies:</b> Analyze how ancient civilizations optimized passive environmental control through site orientation, thermal mass, and natural ventilation systems.	Mesopotamian Cradle	<i>Attendance</i>	Daily test

<i>Week-5</i>	2	<b>Critique Spatial Composition:</b> Perform formal spatial analysis by interpreting historical floor plans, sections, and elevations to understand circulation and hierarchical space.	Mesopotamian Cradle	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	<b>Perform Comparative Analysis:</b> Compare architectural typologies across diverse civilizations (e.g., Greek vs. Roman, Mesopotamian vs. Persian) to identify distinct approaches to aesthetics and engineering.	Mesopotamian Cradle	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	<b>Document Heritage through Analytical Drawing:</b> Create accurate measured sketches and axonometric diagrams that reveal the proportion, geometry, and construction logic of historical precedents.	Mesopotamian Cradle	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	<b>Understand Regional Influence:</b> Trace the impact of Mesopotamian and regional Iraqi architectural traditions on the development of subsequent world architecture.	Mesopotamian Cradle	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	<b>Apply Historical Precedents to Contemporary Design:</b> Propose modern architectural interventions that derive inspiration from the formal principles and material logic of historical building types.	Ancient Egypt	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	<b>Analyze Urban Planning Concepts:</b> Assess the evolution of city planning in ancient civilizations, including street layouts, public squares, and the relationship between civic and private domains.	Ancient Egypt	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	<b>Evaluate Materiality:</b> Discuss the relationship between locally available building materials (mud-brick, stone, timber) and the resulting architectural style and durability.	Classical Greek Architecture	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	<b>Synthesize History with Theory:</b> Relate architectural theory of the era (e.g., Vitruvian principles) to the physical execution of buildings, bridging intent and reality.	Roman Engineering & Urbanism	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	<b>Conduct Ethical Research:</b> Utilize primary sources and historical critiques to form evidence-based arguments regarding architectural authorship and cultural significance.	Pre-Islamic Heritage	<i>Attendance</i>	Daily test
<i>Week-14</i>	2	<b>Document Architectural Evolution:</b> Map the chronological progression of building technology from primitive shelters to complex multi-story structures.	Pre-Islamic Heritage	<i>Attendance</i>	Daily test
<i>Week-15</i>	2	<b>Develop a Professional Perspective:</b> Communicate the significance of preserving cultural heritage as a fundamental responsibility of the modern architect.	Pre-Islamic Heritage	<i>Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc

## 12. Learning and Teaching Resources

<p>Required textbooks (curricular books, if any)</p>	<ul style="list-style-type: none"> <li>• <b>Ching, F. D. K. (2014).</b> <i>A Global History of Architecture</i>. (The primary visual guide; its focus on diagrams makes it essential for teaching students how to read building plans and sections).</li> <li>• <b>Trachtenberg, M., &amp; Hyman, I. (2002).</b> <i>Architecture: From Prehistory to Postmodernity</i>. (A classic text that emphasizes the cultural and technological context behind architectural forms).</li> <li>• <b>Fletcher, B. (1996).</b> <i>A History of Architecture (Sir Banister Fletcher's)</i>. (The definitive reference for technical details, regional variations, and architectural "orders").</li> </ul>
<p>Main references (sources)</p>	<ul style="list-style-type: none"> <li>• <b>Lloyd, S. (1980).</b> <i>The Archaeology of Mesopotamia: From the Stone Age to the Persian Conquest</i>. (Essential for understanding the evolution of the Ziggurat and mud-brick urban planning).</li> <li>• <b>Kostof, S. (1995).</b> <i>A History of Architecture: Settings and Rituals</i>. (Provides a human-centered look at how space was used for social and religious rituals).</li> <li>• <b>Watkin, D. (2015).</b> <i>A History of Western Architecture</i>. (Excellent for analyzing the evolution of the arch, vault, and urban space in the classical world).</li> </ul>
<p>Recommended books and references (scientific journals, reports...)</p>	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <i>Journal of Architectural History</i>: Focuses on the methodology of documenting historical sites and analyzing architectural precedents.</li> <li>• <i>Nexus Network Journal</i>: Excellent for exploring the intersection of geometry, mathematics, and ancient architecture.</li> </ul> </li> <li>• <b>Reports:</b> <ul style="list-style-type: none"> <li>• <b>UNESCO World Heritage Reports on Iraqi Sites</b>: Vital for students to understand the challenges of preserving historical sites in the Middle East.</li> <li>• <b>The Getty Conservation Institute (GCI)</b>: Technical reports on the conservation of mud-brick and earthen architecture.</li> </ul> </li> </ul>
<p>Electronic References, Websites</p>	<ul style="list-style-type: none"> <li>• <b><a href="#">ArchDaily: History Category</a></b>: Provides short, graphic-heavy articles on historical buildings that are perfect for studio-based learning.</li> <li>• <b><a href="#">Great Buildings Online (greatbuildings.com)</a></b>: A searchable database of classic architecture, offering 3D models, photos, and drawings of historical structures.</li> <li>• <b><a href="#">Metropolitan Museum of Art - Heilbrunn Timeline of Art History</a></b>: An excellent tool for visualizing the chronological overlap of different architectural styles across civilizations.</li> <li>• <b><a href="#">The Virtual Museum of Iraq</a></b>: An essential digital resource for students at Al-Muthanna to study Mesopotamian artifacts and their architectural context in 3D.</li> </ul>

## Course Description Form

25.	Course Name:	
	Building Construction II	
26.	Course Code:	
	ARC 224	
27.	Semester / Year:	
	Second Semester / 2025–2026	
28.	Description Preparation Date:	
	01/02/2026	
29.	Available Attendance Forms:	
	Attendance	
30.	Number of Credit Hours (Total) / Number of Units (Total)	
	75 hours	
31.	Course administrator's name (mention all, if more than one name)	
	Name: M.Sc.- Zahraa Tawfiq Naeem Email: <a href="mailto:Zahraa.tn@mu.edu.iq">Zahraa.tn@mu.edu.iq</a>	
32.	Course Objectives	
	<ul style="list-style-type: none"> <li>• <b>Understand Foundation Systems:</b> Categorize different types of foundation systems (shallow vs. deep) and analyze their selection based on soil conditions and structural load requirements.</li> <li>• <b>Master Masonry Techniques:</b> Detail the assembly of load-bearing masonry walls, including brick bonding patterns, mortar types, and structural integration.</li> <li>• <b>Analyze Floor and Roof Assemblies:</b> Develop the ability to design and detail floor and roof systems, including structural decking, insulation, and waterproofing layers.</li> <li>• <b>Examine Structural Frame Systems:</b> Identify the components of reinforced concrete (RC) and steel frame systems, focusing on the connection points between beams, columns, and slabs.</li> <li>• <b>Master Vertical Circulation Design:</b> Learn the technical requirements for staircases and ramps, including slope, tread-riser ratios, and structural support methods.</li> <li>• <b>Evaluate Moisture and Thermal Control:</b> Apply the principles of damp-proof courses (DPC), vapor barriers, and thermal insulation to ensure building envelope performance in the Iraqi climate.</li> </ul>	Course Objective

- **Understand Building Regulations:** Introduce the relevant Iraqi building codes and standards for fire safety, accessibility, and structural integrity that govern construction in the region.
- **Develop Precision Detailing:** Master the craft of producing professional technical drawings (sections and construction details) that clearly communicate material junctions and assembly logic.
- **Bridge Design and Construction:** Foster an iterative workflow where architectural design decisions are continuously tested against technical constraints and material availability.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

### 33. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

### 34. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	<b>Analyze Foundation Systems:</b> Compare and select appropriate foundation types (shallow footings, raft, or piles) based on soil-bearing capacity and building load requirements.	Substructure	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	<b>Master Masonry Assembly:</b> Apply knowledge of traditional and modern masonry bonding patterns, mortar composition, and the structural role of cavity walls.	Substructure	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	<b>Detail Horizontal Floor Systems:</b> Design and document structural floor assemblies, including slab-on-grade, suspended RC slabs, and beam-and-block systems.	Walls & Masonry	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	<b>Evaluate Roof Typologies:</b> Contrast flat, pitched, and shell roof assemblies, detailing the necessary components for structural support, drainage, and insulation.	Walls & Masonry	<i>Attendance</i>	Daily test

<i>Week-5</i>	2	<b>Master Vertical Circulation Design:</b> Calculate and draw compliant staircase and ramp designs, incorporating structural supports, balustrades, and tread-riser ergonomic ratios.	Floor Systems	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	<b>Apply Moisture Control Logic:</b> Implement Damp-Proof Courses (DPC) and waterproofing membranes at critical junctions to prevent moisture ingress in the regional climate.	Floor Systems	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	<b>Detail Envelope Assemblies:</b> Create precise section details showing the junctions between external walls, floor slabs, and roof membranes.	Floor Systems	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	<b>Understand Structural Frame Integration:</b> Analyze the connection logic between columns, beams, and slabs in both reinforced concrete and steel frame construction.	Roofing & Drainage	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	<b>Implement Thermal Performance:</b> Integrate insulation strategies within the building envelope to optimize energy efficiency and thermal comfort.	Roofing & Drainage	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	<b>Comprehend Building Regulations:</b> Interpret the Iraqi Building Code regarding fire safety, accessibility, and structural load requirements for residential and public buildings.	Roofing & Drainage	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	<b>Master Technical Drafting:</b> Translate design intentions into professional technical drawings that communicate material properties and assembly sequences.	Stairs & Circulation	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	<b>Evaluate Material Compatibility:</b> Assess the chemical and physical compatibility of different materials used in junctions (e.g., preventing galvanic corrosion between steel and aluminum).	Stairs & Circulation	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	<b>Design for Constructability:</b> Critically evaluate design proposals for buildability, ensuring that details can be practically executed on-site.	Stairs & Circulation	<i>Attendance</i>	Daily test
<i>Week-14</i>	2	<b>Manage Tolerance and Joints:</b> Explain the importance of expansion joints and movement joints in large-	Frames & Connections	<i>Attendance</i>	Daily test

		scale structures to prevent cracking and structural stress.			
Week-15	2	<b>Collaborate on Technical Documentation:</b> Prepare a comprehensive set of construction documents that coordinate architectural, structural, and service-based requirements.	Frames & Connections	Attendance	Daily test

### 35. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

### 36. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ul style="list-style-type: none"> <li>• <b>Chudley, R., &amp; Greeno, R. (2020).</b> <i>Building Construction Handbook</i>. (The industry standard for illustrating the construction of foundations, walls, roofs, and stairs).</li> <li>• <b>Foster, J. S. (2007).</b> <i>Mitchell's Structure and Fabric (Part 1)</i>. (An essential textbook for understanding the "fabric" of a building, including traditional and modern wall assemblies).</li> <li>• <b>Iraqi Building Code (IBC) - Construction Standards:</b> The official regulatory document for all structural and material requirements in Iraq.</li> </ul>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Allen, E., &amp; Iano, J. (2019).</b> <i>Fundamentals of Building Construction: Materials and Methods</i>. (This text is critical for teaching students how to bridge the gap between design and site reality).</li> <li>• <b>Ramsey/Sleeper.</b> <i>Architectural Graphic Standards</i>. (The fundamental reference for how to properly draft construction details, symbols, and annotations).</li> <li>• <b>McEvoy, M. (2004).</b> <i>Mitchell's External Components</i>. (Specifically addresses the performance of building envelopes, including moisture and thermal control).</li> </ul>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <b>Journal of Building Engineering:</b> Focuses on the performance of building envelopes and structural efficiency.</li> <li>• <b>Construction and Building Materials:</b> Peer-reviewed research on material behavior (e.g., concrete strength, brick masonry performance).</li> </ul> </li> <li>• <b>Reports:</b> <ul style="list-style-type: none"> <li>• <b>The Building Research Establishment (BRE) Digests:</b> A series of expert technical reports on best practices for preventing moisture ingress, structural failure, and insulation installation.</li> </ul> </li> </ul>
Electronic References, Websites	<p><a href="http://detail-online.com">Detail Online (detail-online.com)</a>: The gold standard for architectural detailing. Students can browse high-quality sections and construction details that illustrate complex junctions.</p> <ul style="list-style-type: none"> <li>• <a href="http://constructiondetails.com">Construction Details (constructiondetails.com)</a>: A massive library of CAD/BIM details that students can use to understand how to assemble various building components.</li> <li>• <a href="http://designingbuildings.co.uk">Designing Buildings (designingbuildings.co.uk)</a>: An open-access construction knowledge base that provides simplified, expert-written articles on everything from "Foundation types" to "Staircase design."</li> <li>• <a href="http://autodesk.com">Autodesk BIM 360/Revit Knowledge Base</a>: Essential for students to understand the <i>digital</i> side of construction detailing (BIM workflow) for modern projects.</li> </ul>

## Course Description Form

1. Course Name:	
Arabic Language II	
2. Course Code:	
UNI 011	
3. Semester / Year:	
Second Semester / 2025–2026	
4. Description Preparation Date:	
01/02/2026	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: PhD-anwar kareem najeem Email: <a href="mailto:anwar.kareem@mu.edu.iq">anwar.kareem@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Master Advanced Grammatical Rules:</b> Achieve a high level of accuracy in Arabic grammar (<i>Nahw</i> and <i>Sarf</i>) to ensure professional-grade writing in academic and technical reports.</li> <li>• <b>Develop Architectural Vocabulary:</b> Build a specialized lexicon of architectural terminology in Arabic, enabling students to accurately describe spatial, structural, and environmental concepts.</li> <li>• <b>Enhance Academic Writing Skills:</b> Learn to structure coherent, well-argued academic papers, starting from the proposal phase to the final thesis defense.</li> <li>• <b>Master Technical Report Writing:</b> Develop the ability to draft clear, concise, and professional design reports, including project descriptions, methodology, and site analysis narratives.</li> <li>• <b>Refine Oral Presentation Skills:</b> Improve public speaking and argumentation skills to effectively defend design concepts during studio reviews and final project critiques.</li> <li>• <b>Practice Editing and Proofreading:</b> Acquire the skills to self-edit and proofread technical documents to ensure clarity, flow, and the absence of linguistic errors.</li> <li>• <b>Understand Nuances in Style:</b> Differentiate between various styles of writing (e.g., creative descriptions of spaces vs. objective technical specifications) and apply the appropriate tone for each.</li> </ul>	Course Objective

- **Incorporate Cultural Heritage in Writing:** Foster an appreciation for Arabic literary heritage, utilizing it to describe the aesthetics and historical depth of Iraqi architectural monuments.
- **Promote Professional Ethics in Documentation:** Understand the importance of proper citation, referencing, and academic integrity to avoid plagiarism in all research and design documentation.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	<b>Master Linguistic Precision:</b> Apply advanced Arabic grammatical and syntactical rules to produce error-free technical and academic texts.	Advanced Syntax & Grammar	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	<b>Develop Architectural Lexicon:</b> Identify and correctly utilize specialized Arabic terminology related to spatial geometry, structural systems, and material properties.	Advanced Syntax & Grammar	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	<b>Execute Professional Correspondence:</b> Draft formal letters, emails, memos, and project proposals that adhere to standard professional Arabic business conventions.	Architectural Terminology	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	<b>Master Technical Report Writing:</b> Structure and compose comprehensive architectural reports, including project descriptions, methodology sections, and design justifications.	Architectural Terminology	<i>Attendance</i>	Daily test
<i>Week-5</i>	2	<b>Analyze Academic and Technical Texts:</b> Critically read and summarize contemporary architectural research and building	Technical Report Writing	<i>Attendance</i>	Daily test

		regulations written in academic Arabic.			
<i>Week-6</i>	2	<b>Refine Oral Argumentation:</b> Present design concepts and defend project decisions during studio reviews using clear, persuasive, and grammatically sound spoken Arabic.	Technical Report Writing	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	<b>Apply Graphic-Linguistic Synergy:</b> Integrate concise and descriptive Arabic captions, notes, and annotations into architectural drawings and presentation boards to ensure clarity.	Technical Report Writing	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	<b>Understand Heritage Terminology:</b> Interpret traditional Arabic architectural terms (e.g., <i>mashrabiya</i> , <i>badgir</i> , <i>courtyard</i> , <i>muqarnas</i> ) and describe their historical and climatic functions accurately.	Professional Correspondence	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	<b>Practice Editing and Proofreading:</b> Perform self-assessment and peer-review of technical documents to eliminate ambiguity and linguistic errors.	Professional Correspondence	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	<b>Incorporate Cultural Narrative:</b> Describe the aesthetic and historical depth of Iraqi architectural monuments through expressive and culturally resonant Arabic prose.	Professional Correspondence	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	<b>Maintain Academic Integrity:</b> Apply proper citation and referencing methods in Arabic to support arguments and avoid plagiarism in research projects.	Critical Analysis & Research	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	<b>Master Presentation Flow:</b> Organize information logically within written reports and oral presentations, following the transition from conceptual thinking to technical application.	Critical Analysis & Research	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	<b>Adapt Language to Audience:</b> Differentiate between the tones required for a formal client presentation, a technical specification document, and an informal studio discussion.	Critical Analysis & Research	<i>Attendance</i>	Daily test
<i>Week-14</i>	2	<b>Evaluate Modern Arabic Architectural Discourse:</b> Critically engage with current trends and debates in the Arab architectural world through	Presentation & Oral Skills	<i>Attendance</i>	Daily test

		analysis of contemporary journals and professional discourse.			
Week-15	2	<b>Produce Comprehensive Project Documentation:</b> Synthesize complex technical and design information into a coherent final Arabic-language documentation set for a studio project.	Presentation & Oral Skills	Attendance	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ol style="list-style-type: none"> <li>1. <b>Al-Ghalayini, M. (2019).</b> <i>Jami' al-Durus al-Arabiyya (Comprehensive Arabic Lessons)</i>. (The standard authority for grammatical rules and syntactic precision in formal academic writing).</li> <li>2. <b>Iraqi Ministry of Higher Education &amp; Scientific Research.</b> <i>Arabic Language Curriculum for University Stages</i>. (The official syllabus that sets the required standards for linguistic competency at the undergraduate level).</li> <li>3. <b>Al-Hashimi, A. (2018).</b> <i>Qawa'id al-Lugha al-Arabiyya (Arabic Language Rules)</i>. (Focuses on the practical application of grammar in formal documentation and report writing).</li> </ol>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Al-Mawrid Architectural Dictionary (English-Arabic):</b> Essential for translating technical terminology accurately.</li> <li>• <b>Iraqi National Construction Documentation Standards:</b> The official protocols for how technical specifications, site reports, and letters of intent must be formatted in Arabic to meet local legal requirements.</li> <li>• <b>Al-Qattan, M. (2020).</b> <i>Methods of Scientific and Academic Writing</i>. (A critical reference for teaching students how to write research papers and thesis documentation according to standard academic protocols).</li> </ul>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <i>Al-Handasa (Engineering Journal):</i> Frequently features articles on architecture in Arabic, providing students with examples of how high-level technical discourse is structured.</li> <li>• <i>Journal of Architectural and Planning Research (Arabic editions):</i> Offers peer-reviewed examples of how professional design concepts are argued and critiqued.</li> </ul> </li> <li>• <b>Books on Architectural Discourse:</b> <ul style="list-style-type: none"> <li>• <b>Rasem Badran:</b> <i>Collected Essays on Islamic and Contemporary Architecture</i>. (Provides a prime example of how to use sophisticated Arabic to describe architectural space, heritage, and the relationship between culture and design).</li> <li>• <b>Fathy, H. (2019).</b> <i>Architecture for the Poor (Translated)</i>. (Essential for analyzing how socio-economic design concepts are articulated in the Arabic language).</li> </ul> </li> </ul>

Electronic References, Websites	<ul style="list-style-type: none"> <li>• <a href="#">Al-Jazeera Media Institute - Writing Skills</a>: Offers excellent tutorials on clear, effective, and professional writing styles that are highly applicable to technical reports.</li> <li>• <a href="#">Almaany Dictionary (almaany.com)</a>: The most reliable online source for checking nuanced terminology, synonyms, and architectural definitions.</li> <li>• <a href="#">The Iraqi Academic Scientific Journals (IASJ)</a>: A massive database where students can search for architectural research papers in Arabic to study how professional reports and abstracts are structured.</li> <li>• <a href="#">LanguageTool for Arabic</a>: A useful digital tool that helps students identify grammatical errors and improve the structure of their technical reports.</li> </ul>
---------------------------------	--

## Course Description Form

1. Course Name:	
Structure I	
2. Course Code:	
ARCH 225	
3. Semester / Year:	
Second Semester / 2025–2026	
4. Description Preparation Date:	
01/02/2026	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: M.Sc.- Alaa Taha Mohammed Email: <a href="mailto:atmalaa@mu.edu.iq">atmalaa@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Master Vector Mechanics:</b> Develop the ability to resolve forces into components and calculate resultant forces using vector addition and trigonometry.</li> <li>• <b>Apply Equilibrium Principles:</b> Understand and apply the conditions of static equilibrium (<math>\sum F_x = 0</math>, <math>\sum F_y = 0</math>, <math>\sum M = 0</math>) to solve for unknown support reactions in beams and simple trusses.</li> <li>• <b>Analyze Internal Forces:</b> Calculate internal shear forces and bending moments at critical sections of beams under various loading conditions (point, uniform, and triangular loads).</li> <li>• <b>Understand Stress and Strain:</b> Comprehend the relationship between axial loads and material deformation, specifically calculating normal stress (<math>\sigma = P/A</math>) and strain.</li> <li>• <b>Master Geometric Properties:</b> Calculate the properties of cross-sections—such as the Centroid, Moment of Inertia (<math>I</math>), and Section Modulus (<math>S</math>)—essential for determining bending resistance.</li> </ul>	Course Objective

- **Evaluate Trusses:** Master the "Method of Joints" and "Method of Sections" to determine internal member forces in simple roof and bridge trusses.
- **Recognize Material Behavior:** Identify the physical properties of common architectural materials (concrete, steel, timber) regarding elasticity, plasticity, and failure modes.
- **Formulate Structural Logic:** Connect structural efficiency to architectural form, demonstrating how the choice of structural system influences the span, volume, and character of a space.
- **Develop Mathematical Literacy for Design:** Enhance the capacity to use mathematical formulas to verify the safety and stability of conceptual design proposals during the early design stage.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	<b>Analyze Force Systems:</b> Identify and resolve coplanar force systems into horizontal and vertical components to establish the basis of static analysis.	Fundamentals of Statics	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	<b>Apply Equilibrium Equations:</b> Calculate unknown support reactions for statically determinate structures using the three basic equilibrium conditions: $\sum F_x = 0$ , $\sum F_y = 0$ , and $\sum M = 0$ .	Fundamentals of Statics	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	• <b>Construct Free-Body Diagrams (FBD):</b> Isolate structural elements from their environment to visualize and document all acting loads and support reactions.	Beams & Load Analysis	<i>Attendance</i>	Daily test

<i>Week-4</i>	2	<b>Master Beam Analysis:</b> Plot Shear Force Diagrams (SFD) and Bending Moment Diagrams (BMD) to visualize the internal force distribution along beam spans.	Beams & Load Analysis	<i>Attendance</i>	Daily test
<i>Week-5</i>	2	<b>Calculate Sectional Properties:</b> Compute the centroid and the Moment of Inertia ( $I_x$ ) for various common architectural cross-sections, which are essential for determining resistance to bending.	Properties of Sections	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	<b>Evaluate Normal and Shear Stresses:</b> Apply the fundamental stress formulas ( $\sigma = P/A$ and $\tau = V/A$ ) to determine if a structural member is adequate for its intended load.	Properties of Sections	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	<b>Master Truss Analysis:</b> Utilize the "Method of Joints" and "Method of Sections" to determine if internal truss members are in tension or compression.	Properties of Sections	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	<b>Understand Material Mechanics:</b> Interpret the stress-strain relationship of construction materials (steel, concrete, wood) to identify the proportional limit and ultimate failure points.	Mechanics of Materials	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	<b>Apply Hooke's Law:</b> Calculate structural deformations and elastic shortening/elongation under axial loads to ensure serviceability and structural integrity.	Mechanics of Materials	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	<b>Design for Bending Resistance:</b> Utilize the flexure formula ( $\sigma = My/I$ ) to select appropriate beam sections that satisfy strength requirements under maximum bending moments.	Mechanics of Materials	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	<b>Evaluate Column Stability:</b> Comprehend Euler's buckling theory to recognize the limits of slender compression members and the risks of buckling.	Trusses & Frames	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	<b>Analyze Load Paths:</b> Trace the transfer of gravity	Trusses & Frames	<i>Attendance</i>	Daily test

		loads from the roof down to the foundation, ensuring continuity in the structural system.			
Week-13	2	<b>Correlate Structure with Form:</b> Evaluate how the choice of structural system (e.g., frame vs. load-bearing wall) impacts the architectural spatial organization and facade design.	Trusses & Frames	<i>Attendance</i>	Daily test
Week-14	2	<b>Integrate Building Codes:</b> Introduce local structural building codes to ensure designs comply with safety margins and minimum requirements for regional construction.	Buckling & Columns	<i>Attendance</i>	Daily test
Week-15	2	<b>Verify Design Iterations:</b> Use structural calculations to critique and refine conceptual designs during the early studio phase, ensuring that the architecture is not only aesthetic but also physically viable.	Buckling & Columns	<i>Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ol style="list-style-type: none"> <li>1. <b>Ching, F. D. K., Onouye, B., &amp; Zuberbuhler, D. (2014).</b> <i>Building Structures: Illustrated</i>. (The gold standard for architects, providing intuitive, visual explanations of structural systems, loads, and force distribution).</li> <li>2. <b>Hibbeler, R. C. (2021).</b> <i>Statics and Mechanics of Materials</i>. (The primary technical reference for solving equilibrium, shear/moment diagrams, and stress-strain calculations).</li> <li>3. <b>Schodek, D. L., &amp; Bechthold, M. (2013).</b> <i>Structures</i>. (Essential for teaching how different structural materials—steel, concrete, and timber—behave under loading)</li> </ol>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Allen, E., &amp; Zalewski, W. (2009).</b> <i>Form and Forces: Designing Efficient, Expressive Structures</i>. (Crucial for teaching students the relationship between architectural form and structural efficiency).</li> <li>• <b>Iraqi National Building Code for Structural Design:</b> The mandatory reference for regional standards regarding material properties, safety factors, and load calculations.</li> <li>• <b>Ambrose, J. (2011).</b> <i>Simplified Design of Building Structures</i>. (Focuses on the practical, simplified calculations that architects use in the early design phase).</li> </ul>

<p>Recommended books and references (scientific journals, reports...)</p>	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <i>Journal of the International Association for Shell and Spatial Structures (IASS)</i>: Excellent for studying how complex forms are achieved through structural innovation.</li> <li>• <i>Engineering Structures (Journal)</i>: Provides high-level technical research on material performance and structural stability.</li> </ul> </li> <li>• <b>Reports:</b> <ul style="list-style-type: none"> <li>• <b>ASCE (American Society of Civil Engineers) Reports</b>: Specifically on the behavior of structural steel and reinforced concrete in high-temperature environments (relevant for regional climate considerations).</li> </ul> </li> </ul>
<p>Electronic References, Websites</p>	<ul style="list-style-type: none"> <li>• <a href="http://skyciv.com">SkyCiv (skyciv.com)</a>: An online structural analysis tool where students can input their own beam/truss designs to instantly view Shear Force and Bending Moment diagrams.</li> <li>• <a href="http://structurepoint.org">StructurePoint (structurepoint.org)</a>: Provides clear documentation on the design and structural behavior of reinforced concrete elements, which is the most common construction method in Iraq.</li> <li>• <a href="http://structuralguide.com">Structural Guide (structuralguide.com)</a>: Offers simplified, step-by-step articles on complex structural engineering topics, written in a way that is highly accessible for architecture students.</li> <li>• <a href="http://ocw.mit.edu/courses/1.002">MIT OpenCourseWare - Structures</a>: Features lecture notes and problem sets that provide a gold-standard academic approach to structural design for architects.</li> </ul>

3rd stage

## Course Description Form

<b>1. Course Name:</b>	
Architectural Design IV	
<b>2. Course Code:</b>	
ARCH 311	
<b>3. Semester / Year:</b>	
First Semester / 2025–2026	
<b>4. Description Preparation Date:</b>	
01/09/2025	
<b>5. Available Attendance Forms:</b>	
Attendance	
<b>6. Number of Credit Hours (Total) / Number of Units (Total)</b>	
180 hours	
<b>7. Course administrator's name (mention all, if more than one name)</b>	
Name: MS.c- Ali Saad Al-Rubay Email: <a href="mailto:alisaad@mu.edu.iq">alisaad@mu.edu.iq</a>	
<b>8. Course Objectives</b>	
<ul style="list-style-type: none"> <li>● Understand the concept of design and its importance to architecture.</li> <li>● Understand the different units used in architecture (e.g., meters , centimeters , millimeters and their equivalents in other international standard systems).</li> <li>● Introduce students to complex and multifunctional projects for their various major and secondary spaces as well as service spaces.</li> <li>● Introducing students to the appropriate functional basis for distributing architectural spaces that serve the building in its main and service types.</li> <li>● Introduce students to the appropriate structural foundation for the selection of architectural structural systems as well as construction details, where construction decisions and implementation technology are at the forefront of the design proposal.</li> <li>● Introduce students to the different types of materials and their applications in exterior façade design , structural element installation , interior design as well as landscape</li> </ul>	<p>Course Objectives</p>

design leading to a BOQ (Quantities Calculation ) for all project materials.

- Introducing students to sustainability, green architecture, and smart architecture and ways to apply them in the building to serve the functional effectiveness of the building.
- Introduce students in the second semester to a multi-storey project, to learn through design principles for functional requirements of a typical repetitive nature, such as educational, administrative, residential, and commercial buildings.
- Introducing the student to some of the structural details directed to this purpose, as well as the possibility of applying what the student has learned in the subject of health services and the air conditioning and lighting services provided to him in the first and second semesters.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	12	<i>The field study of the real condition through the field measurements and photographing and freehand drawing and reviewing the valid rules and limitations.</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-2</i>	12	<i>The field study of the real condition through the field measurements and photographing and freehand</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test

		<i>drawing and reviewing the valid rules and limitations.</i>			
<i>Week-3</i>	12	<i>Presenting the preliminary planning and developing concepts through the field study and limitations of the site.</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-4</i>	12	<i>Presenting the preliminary planning and developing concepts through the field study and limitations of the site.</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-5</i>	12	<i>Presenting a suggested basic plan of the developmental alternative that supports the well established intellectual base.</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-6</i>	12	<i>Presenting a suggested basic plan of the developmental alternative that supports the well established intellectual base.</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-7</i>	12	<i>The final presentation of the suggested alternative (a 3d model with a suitable measure and basic plans of all the project which clarify the general application and the distribution of the adopted functions)</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-8</i>	12	<i>The final presentation of the suggested alternative (a 3d model with a suitable measure and basic plans of all the project which clarify the general application and the distribution of the adopted functions)</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-9</i>	12	<i>The final presentation of the suggested alternative (a 3d model with a suitable measure and basic plans of all the project which clarify the general application and the distribution of the adopted functions)</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-10</i>	12	<i>Presenting architectural details and important parts in the site which are divided on the student individually.</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-11</i>	12	<i>Presenting architectural details and important parts in the site which are divided on the student individually.</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-12</i>	12	<i>Presenting architectural details and important parts in the site which are divided on the student individually.</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-13</i>	12	<i>Day sketches during the semester</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-14</i>	12	<i>Day sketches during the semester</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test

<i>Week-15</i>	12	<i>Day sketches during the semester</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<b>11. Course Evaluation</b>					
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc					
<b>12. Learning and Teaching Resources</b>					
Required textbooks (curricular books, if any)	1. Neufert 2. Time Saver Standards for Architectural Design Data Green Building Conditions and Specifications				
Main references (sources)	<a href="https://issuu.com/twentytwo22magazine">https://issuu.com/twentytwo22magazine</a> A monthly electronic magazine issued by the A non-governmental volunteer specialized in the field of architecture and architects' affairs through education, training and rehabilitation <a href="http://www.architectureweek.com">http://www.architectureweek.com</a> A specialized magazine that presents a wide range of articles and designs that are of interest to the students of the Department of Architecture				
Recommended books and references (scientific journals, reports...)	<a href="https://www.diwanarch.com/">https://www.diwanarch.com/</a> An important site for architects that organizes competitions and architectural works <a href="https://big.dk/">https://big.dk/</a> The most important sites that contain various projects and architectural ideas <a href="https://www.asla.org/">https://www.asla.org/</a> An important site for the design of outdoor spaces and gardens <a href="https://divisare.com/">https://divisare.com/</a> An important location that contains architectural projects Section -diagram -plans- renders- <a href="https://www.arch-news.net/">https://www.arch-news.net/</a> Arab Architectural News Portal <a href="https://www.cpas-egypt.com/">https://www.cpas-egypt.com/</a> A famous and distinctive Arabic engineering site, it is considered a planning studies center that publishes architectural topics and projects continuously				
Electronic References, Websites	1-Arch Daily: <a href="https://www.archdaily.com">https://www.archdaily.com</a> 2. Dezeen: <a href="https://www.dezeen.COM">https://www.dezeen.COM</a>				

## Course Description Form

1. Course Name:	
Structure II	
2. Course Code:	
ARCH 312	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: MS.c - Zahraa Tawfiq Naeem Email: <a href="mailto:Zahraa.tn@mu.edu.iq">Zahraa.tn@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Analyze Load Path and Transfer:</b> Master the conceptual and mathematical tracing of loads (dead, live, and environmental) from slabs to beams, columns, and ultimately to the foundations.</li> <li>• <b>Master Reinforced Concrete Theory:</b> Understand the composite behavior of concrete and steel, specifically the Limit State Design (LSD) and Working Stress Design (WSD) philosophies used in modern Iraqi building codes.</li> <li>• <b>Design for Flexure (Beams):</b> Calculate and specify the required longitudinal reinforcement for rectangular and T-beams to resist bending moments.</li> <li>• <b>Execute Shear and Torsion Design:</b> Design stirrups and transverse reinforcement to prevent diagonal tension failures in structural members.</li> <li>• <b>Evaluate Column Behavior:</b> Analyze and design short and slender reinforced concrete columns under axial loads and uniaxial/biaxial bending.</li> <li>• <b>Analyze Slab Systems:</b> Differentiate between one-way and two-way slab systems, calculating reinforcement for various edge support conditions (fixed, continuous, or simply supported).</li> </ul>	Course Objectives

- **Integrate Structure with Form:** Develop the ability to select the most appropriate structural system (frames, shear walls, or flat slabs) that aligns with the architectural intent of a 3rd-stage design project.
- **Introduction to Steel Member Design:** Understand the fundamental behavior of structural steel, focusing on the design of tension members and simple beams using AISC standards.
- **Interpret Structural Drawings:** Gain proficiency in reading and producing detailed structural reinforcement schedules and shop drawings to bridge the gap between design and construction.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	<i>Fundamentals of R.C.</i>	<i>Loads (Dead/Live), Safety Factors, and the Strength Design Method (LRFD).</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-2</i>	2	<i>Fundamentals of R.C.</i>	<i>Loads (Dead/Live), Safety Factors, and the Strength Design Method (LRFD).</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-3</i>	2	<i>Flexural Design of Beams</i>	<i>Rectangular and T-Beams; Singularity vs. Doubly reinforced sections.</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-4</i>	2	<i>Flexural Design of Beams</i>	<i>Rectangular and T-Beams; Singularity vs. Doubly reinforced sections.</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-5</i>	2	<i>Flexural Design of Beams</i>	<i>Rectangular and T-Beams; Singularity vs. Doubly reinforced sections.</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-6</i>	2	<i>Flexural Design of Beams</i>	<i>Rectangular and T-Beams; Singularity vs. Doubly reinforced sections.</i>	<i>Attendance</i>	<i>Daily test</i>

Week-7	2	Shear and Serviceability	Stirrup design, diagonal tension, and deflection/crack control.	Attendance	Daily test
Week-8	2	Shear and Serviceability	Stirrup design, diagonal tension, and deflection/crack control.	Attendance	Daily test
Week-9	2	Slab Systems	One-way and Two-way solid slabs; introduction to Ribbed/Joist slabs.	Attendance	Daily test
Week-10	2	Slab Systems	One-way and Two-way solid slabs; introduction to Ribbed/Joist slabs.	Attendance	Daily test
Week-11	2	Slab Systems	One-way and Two-way solid slabs; introduction to Ribbed/Joist slabs.	Attendance	Daily test
Week-12	2	Vertical Members	Short and Slender Columns; Tied vs. Spiral reinforcement.	Attendance	Daily test
Week-13	2	Vertical Members	Short and Slender Columns; Tied vs. Spiral reinforcement.	Attendance	Daily test
Week-14	2	Steel & Integration	Steel tension/compression members and coordinating grids in Studio.	Attendance	Daily test
Week-15	2	Steel & Integration	Steel tension/compression members and coordinating grids in Studio.	Attendance	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ul style="list-style-type: none"> <li>• <b>Schueller, W. (1977).</b> <i>High-Rise Building Structures</i>. (The definitive textbook for understanding the behavior of tall buildings under lateral wind and seismic loads).</li> <li>• <b>Nilson, A. H., Darwin, D., &amp; Dolan, C. W. (2016).</b> <i>Design of Concrete Structures</i>. (The primary reference for advanced reinforced concrete design, including two-way slabs, shear walls, and prestressed elements).</li> <li>• <b>Salvadori, M., &amp; Heller, R. (1986).</b> <i>Structure in Architecture: The Building of Form</i>. (A fundamental text that explains complex structural behavior qualitatively, essential for 5th-stage design synthesis).</li> </ul>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Engel, H. (2007).</b> <i>Structure Systems</i>. (A visual encyclopedia of structural systems—form-active, vector-active, and surface-active—crucial for large-span projects).</li> <li>• <b>ACI Committee 318.</b> <i>Building Code Requirements for Structural Concrete</i>. (The American Concrete Institute</li> </ul>

	<p>code, which is the technical basis for most Iraqi structural engineering standards).</p> <ul style="list-style-type: none"> <li>• <b>Taranath, B. S. (2016).</b> <i>Structural Analysis and Design of Tall Buildings: Steel and Composite Construction</i>. (A deep dive into the bracing systems and core-and-outrigger designs used in modern skyscrapers).</li> </ul>
<p>Recommended books and references (scientific journals, reports...)</p>	<ul style="list-style-type: none"> <li>• <b>Macdonald, A. J. (2001).</b> <i>Structure and Architecture</i>. (Focuses on the relationship between structural logic and architectural expression).</li> <li>• <b>Sandaker, B. N., Eggen, A. P., &amp; Cruickshank, I. R. (2011).</b> <i>The Structural Basis of Architecture</i>. (Excellent for analyzing the aesthetics of exposed structures in contemporary architecture).</li> <li>• <b>Scientific Journals:</b> * <i>Engineering Structures</i> (Elsevier). <ul style="list-style-type: none"> <li>• <i>Journal of the International Association for Shell and Spatial Structures (IASS)</i>.</li> <li>• <i>ASCE Journal of Structural Engineering</i>.</li> </ul> </li> </ul>
<p>Electronic References, Websites</p>	<ul style="list-style-type: none"> <li>• <a href="#"><u><b>Sky-Skan / Council on Tall Buildings and Urban Habitat (CTBUH)</b></u></a>: The global authority on high-rise data, technical papers on damping systems, and structural innovations.</li> <li>• <a href="#"><u><b>SkyCiv Structural Analysis Software - Documentation</b></u></a>: An excellent resource for understanding the behavior of trusses, frames, and plates through interactive modules.</li> <li>• <a href="#"><u><b>Structure Magazine</b></u></a>: An industry-leading publication that covers unique case studies of complex structural failures and successes.</li> <li>• <a href="#"><u><b>Iraqi Central Organization for Standardization and Quality Control (COSQC)</b></u></a>: For accessing the latest versions of the Iraqi Building Code (Structural sections).</li> </ul>

## Course Description Form

1. Course Name:	
Computer Applications I	
2. Course Code:	
ARCH 313	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
45 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: MS.c- Ali Saad Al-Rubay Email: <a href="mailto:alisaad@mu.edu.iq">alisaad@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Master Parametric and Polygon Modeling:</b> Transition from basic geometric primitives to advanced "Edit Poly" techniques for creating complex architectural forms and custom building components.</li> <li>• <b>Apply Spline-Based Workflows:</b> Utilize 2D splines and modifiers (Lathe, Sweep, Extrude) to generate organic profiles, classical moldings, and intricate structural elements.</li> <li>• <b>Execute Precise CAD Integration:</b> Develop a seamless workflow for importing AutoCAD/Revit files into 3ds Max while maintaining scale accuracy and organizing layer hierarchies for efficient scene management.</li> <li>• <b>Understand Physical Materiality:</b> Master the "Physical Material" and "PBR" (Physically Based Rendering) workflows to simulate realistic textures like concrete, brushed metal, glass, and wood with accurate reflection and refraction properties.</li> <li>• <b>Master Architectural Lighting:</b> Configure natural (Sun/Sky) and artificial (IES Photometric) lighting systems to simulate specific atmospheric conditions and interior moods in accordance with real-world physics.</li> <li>• <b>Optimize Camera Composition:</b> Apply professional photography principles (Focal Length, Depth of Field, Vertical Tilt Correction) within the 3ds Max Physical Camera to create compelling architectural narratives.</li> <li>• <b>Explore Exterior &amp; Environment Design:</b> Utilize scattering tools and proxy systems (like Forest Pack or built-in tools) to manage high-polygon vegetation and site context without compromising system performance.</li> </ul>	Course Objectives

- **Render Engine Proficiency (V-Ray/Arnold):** Understand the technical parameters of rendering engines, including Global Illumination (GI), sampling rates, and denoising, to produce high-resolution, noise-free final outputs.
- **Develop Post-Production Workflows:** Learn to utilize Render Elements (Z-Depth, Ambient Occlusion, Wirecolor) to enhance and refine final images in external software like Adobe Photoshop.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	3	Configure the 3ds Max workspace, including unit setup and snapping tools, to ensure a professional and efficient modeling environment.	<b>Navigate and Customize the Interface:</b>	<i>Attendance</i>	Daily test
<i>Week-2</i>	3	AutoCAD or 3D Revit files into 3ds Max while maintaining geometric accuracy and organizing scene hierarchies for complex projects.	<b>Execute CAD Integration: Import 2D</b>	<i>Attendance</i>	Daily test
<i>Week-3</i>	3	Utilize geometric primitives and modifiers (e.g., Extrude, Lathe, Sweep, Bevel) to construct precise structural building elements.	<b>Master Parametric Modeling:</b>	<i>Attendance</i>	Daily test
<i>Week-4</i>	3	Demonstrate proficiency in "Edit Poly" techniques (Vertex, Edge, Polygon manipulation) to create custom architectural details and organic forms.	<b>Apply Advanced Polygon Editing:</b>	<i>Attendance</i>	Daily test

<i>Week-5</i>	3	Construct complex architectural profiles and moldings using splines as the foundational logic for 3D surfaces.	<b>Utilize Spline-Based Workflows:</b>	<i>Attendance</i>	Daily test
<i>Week-6</i>	3	Ensure architectural accuracy in proportions, scale, and dimensions for all building components and furniture.	<b>Implement Precision Modeling:</b>	<i>Attendance</i>	Daily test
<i>Week-7</i>	3	Create and assign realistic materials (concrete, glass, wood, metal) with appropriate reflection, refraction, and bump maps.	<b>Apply Physically Based Rendering (PBR) Materials:</b>	<i>Attendance</i>	Daily test
<i>Week-8</i>	3	Properly map textures to diverse architectural geometries to prevent distortion and ensure realistic scale.	<b>Master UVW Mapping:</b>	<i>Attendance</i>	Daily test
<i>Week-9</i>	3	Set up natural sunlight (Daylight systems) and artificial IES photometric lights to simulate real-world illumination conditions	<b>Configure Photometric Lighting: .</b>	<i>Attendance</i>	Daily test
<i>Week-10</i>	3	: Use the Physical Camera to apply professional photography principles, including focal length, field of view, and vertical tilt correction for architectural perspective	<b>Optimize Camera Composition.</b>	<i>Attendance</i>	Daily test
<i>Week-11</i>	3	Employ "Instances" and "Proxies" (e.g., for vegetation, entourage, or high-poly furniture) to maintain performance in large architectural scenes.	<b>Manage Scene Complexity:</b>	<i>Attendance</i>	Daily test
<i>Week-12</i>	3	Adjust core parameters in engines like V-Ray or Arnold (Sampling, Global Illumination, Noise Thresholds) to achieve high-quality final outputs	<b>Master Render Engine Settings: .</b>	<i>Attendance</i>	Daily test
<i>Week-13</i>	3	Utilize render elements (Z-Depth, Ambient Occlusion, Wirecolor) in external image editing software (like Photoshop) to enhance visual clarity and atmospheric mood.	<b>Execute Post-Production Workflows:</b>	<i>Attendance</i>	Daily test
<i>Week-14</i>	3	Animate camera paths and keyframes to create professional flythrough or walkthrough	<b>Produce Immersive Walkthroughs:</b>	<i>Attendance</i>	Daily test

		animations for design presentations.			
<i>Week-15</i>	3	Synthesize all technical skills to produce a final, high-quality rendered image or short animation that communicates architectural intent.	<b>Develop a Professional Portfolio:</b>	<i>Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ul style="list-style-type: none"> <li>• <b>Autodesk 3ds Max Learning Channel / Official Documentation:</b> While not a "printed book," this is the primary, ever-evolving curriculum source for all 3ds Max users. It covers everything from interface basics to complex modeling.</li> <li>• <b>Derakhshani, D. (Latest Edition).</b> <i>Autodesk 3ds Max Essentials</i>. (This is the industry-standard textbook for mastering the core interface, modeling modifiers, and animation tools).</li> <li>• <b>Khatri, R. (2020).</b> <i>3ds Max for Architects: Rendering and Visualization</i>. (Specifically focuses on the architectural pipeline: importing CAD/Revit, lighting interiors, and achieving photorealism).</li> </ul>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Grant Warwick, <i>Mastering V-Ray for 3ds Max:</i></b> (Considered the "Bible" of architectural rendering for 3ds Max users).</li> <li>• <b>Guillermo Leal, <i>Architectural Visualization with 3ds Max and V-Ray:</i></b> (Essential for understanding how to light complex architectural scenes and manage scene assets).</li> <li>• <b>3ds Max Physical Camera Guide:</b> Technical documentation on applying real-world camera optics (focal length, depth of field, and vertical perspective correction) to 3D architectural renders.</li> </ul>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <b>Beyer, H. (2014).</b> <i>Lighting for Animation and Architecture</i>. (Focuses on the theory of light, color temperature, and mood, which is crucial for 3rd-stage design studio projects).</li> <li>• <b>Journals/Platforms:</b> <ul style="list-style-type: none"> <li>• <b><a href="#">ArchViz - 3D World Magazine</a>:</b> Excellent for staying up to date with the latest industry plugins, rendering tricks, and professional pipelines.</li> <li>• <b><a href="#">CGSociety</a>:</b> A high-level professional platform where top visualization artists share project breakdowns.</li> </ul> </li> <li>• <b>Scientific Reports:</b></li> </ul>

	<ul style="list-style-type: none"> <li>• <b>NVIDIA Architectural Visualization Benchmarks:</b> Reports on how to optimize hardware settings (GPU vs. CPU rendering) for large-scale architectural scenes</li> </ul>
Electronic References, Websites	<ul style="list-style-type: none"> <li>• <b><u>Autodesk AREA</u></b>: The official community site with tutorials, free assets, and scripts for 3ds Max.</li> <li>• <b><u>CGArchitect</u></b>: The premier online community for professional architectural visualization; essential for keeping students inspired by the "state of the art."</li> <li>• <b><u>Evermotion</u></b>: While a commercial site, their "Tutorials" section provides the best industry-standard walkthroughs for modeling specific architectural details.</li> <li>• <b><u>PolyHaven</u></b>: A vital resource for high-quality, free, physically based (PBR) textures and HDRI environments that students can use to add immediate realism to their scenes.</li> </ul>

## Course Description Form

1. Course Name:	
Building Construction III	
2. Course Code:	
ARCH 314	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
125 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: MS.c - Zahraa Tawfiq Naeem Email: <a href="mailto:Zahraa.tn@mu.edu.iq">Zahraa.tn@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Analyze Multi-Story Assemblies:</b> Master the assembly details of non-load-bearing curtain walls, rain-screen systems, and structural glazing for high-rise buildings.</li> <li>• <b>Detail Large-Span Systems:</b> Design and document assemblies for large-span structures, including space frames, trusses, and folded plates, focusing on connection logistics.</li> <li>• <b>Evaluate Vertical Circulation:</b> Integrate advanced vertical circulation systems (commercial elevators, escalators, and fire-rated stairs) into multi-story building floor plans.</li> <li>• <b>Master Advanced Foundation Systems:</b> Analyze deep foundation techniques (piles, caissons, and diaphragm walls) necessary for high-density urban sites in regions like Al-Muthanna.</li> <li>• <b>Assess Building Envelope Performance:</b> Integrate high-performance insulation, vapor barriers, and air-sealant systems to meet energy-efficiency requirements in extreme desert climates.</li> <li>• <b>Manage Building Services (MEP) Integration:</b> Coordinate the spatial requirements of HVAC ducts, plumbing chases, and electrical cable trays within the structural slab and ceiling void (plenum).</li> <li>• <b>Detail Fire Safety &amp; Egress:</b> Apply local and international building codes (IBC/NFPA) to design fire-rated partitions, smoke extraction systems, and protected egress paths.</li> </ul>	Course Objectives

- **Execute Technical Documentation:** Produce high-standard, annotated construction drawings, sections, and exploded axonometric that are ready for tender and construction.
- **Select Sustainable Materials:** Evaluate modern construction materials (high-strength concrete, lightweight steel, composite panels) based on their life-cycle analysis, carbon footprint, and local availability in Iraq.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	5	<b>Analyze Subsurface Systems:</b> Design pile caps and diaphragm wall anchors.	Advanced Substructures	<i>Attendance</i>	Daily test
<i>Week-2</i>	5	<b>Detail Envelope Assemblies:</b> Design curtain wall systems with thermal breaks.	Advanced Substructures	<i>Attendance</i>	Daily test
<i>Week-3</i>	5	<b>Coordinate Large Spans:</b> Detail connections for steel space frames.	Advanced Substructures	<i>Attendance</i>	Daily test
<i>Week-4</i>	5	<b>Integrate Vertical Transit:</b> Size elevator shafts and machine rooms.	High-Rise Envelope	<i>Attendance</i>	Daily test
<i>Week-5</i>	5	<b>Apply Fire Safety:</b> Design fire-rated partitions (ASTM/IBC standards).	High-Rise Envelope	<i>Attendance</i>	Daily test
<i>Week-6</i>	5	<b>Manage Thermal Loads:</b> Detail wall assemblies for extreme desert climate performance.	High-Rise Envelope	<i>Attendance</i>	Daily test
<i>Week-7</i>	5	<b>Resolve MEP Clashes:</b> Coordinate ducts and	High-Rise Envelope	<i>Attendance</i>	Daily test

		structural beams in plan/section.			
<i>Week-8</i>	5	<b>Document Details:</b> Produce high-accuracy 1:20 scale construction drawings.	Vertical Circulation	<i>Attendance</i>	Daily test
<i>Week-9</i>	5	<b>Specify Materials:</b> Select materials based on environmental impact and durability.	Vertical Circulation	<i>Attendance</i>	Daily test
<i>Week-10</i>	5	<b>Assess Structural Realism:</b> Verify constructability of complex architectural forms.	Vertical Circulation	<i>Attendance</i>	Daily test
<i>Week-11</i>	5	<b>Apply Building Codes:</b> Implement local Iraqi and international safety codes.	Vertical Circulation	<i>Attendance</i>	Daily test
<i>Week-12</i>	5	<b>Detail Waterproofing:</b> Create multi-layer systems for podiums and roofs.	Service Integration (MEP)	<i>Attendance</i>	Daily test
<i>Week-13</i>	5	<b>Design Expansion Joints:</b> Address movement in large-scale structures.	Service Integration (MEP)	<i>Attendance</i>	Daily test
<i>Week-14</i>	5	<b>Manage Construction Sequence:</b> Plan logistics for high-rise site work.	Service Integration (MEP)	<i>Attendance</i>	Daily test
<i>Week-15</i>	5	<b>Synthesize Tenders:</b> Compile a comprehensive technical construction document set.	Service Integration (MEP)	<i>Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)

- **Ching, F. D. K. (2014).** *Building Construction Illustrated*. (The definitive graphic manual for assembly logic; essential for students to learn how to draw 1:20 and 1:10 scale details).
- **Allen, E., & Iano, J. (2019).** *The Architect's Studio Companion: Rules of Thumb for Preliminary Design*. (Crucial for teaching students how to integrate structural and MEP service requirements into their floor plans early in the design process).
- **Iraqi National Code for Building and Construction (Latest Edition).** (The mandatory technical standard for all construction materials, structural safety, and fire-rating requirements in Iraq).

Main references (sources)

- **Watts, A. (2005).** *Modern Construction Handbook*. (Covers advanced systems like rain-screens, structural

	<p>glazing, and curtain walls with high-level technical diagrams).</p> <ul style="list-style-type: none"> <li>• <b>Schueller, W. (1977).</b> <i>High-Rise Building Structures</i>. (The primary reference for understanding how tall building structures—and their associated vertical circulation cores—behave and are assembled).</li> <li>• <b>McEvoy, M. (1994).</b> <i>Mitchell's: External Components</i>. (Provides critical details on how to handle weather-proofing and moisture management in complex multi-story building skins).</li> </ul>
<p>Recommended books and references (scientific journals, reports...)</p>	<ul style="list-style-type: none"> <li>• <b>Journals/Publications:</b> <ul style="list-style-type: none"> <li>• <i>Detail Magazine</i> (Specifically the "Structure" and "Facade" editions; this is the world's leading journal for architectural technical details).</li> <li>• <i>Journal of Construction Engineering and Management (ASCE)</i>.</li> </ul> </li> <li>• <b>Reports:</b> <ul style="list-style-type: none"> <li>• <b>CTBUH (Council on Tall Buildings and Urban Habitat) Technical Guides:</b> Essential for high-rise assembly, wind loading impact on facades, and vertical transport efficiency.</li> </ul> </li> <li>• <b>Scientific Focus:</b> <ul style="list-style-type: none"> <li>• <b>Herzog, T., et al. (2004).</b> <i>Facade Construction Manual</i>. (Essential for the High-Rise Envelope unit).</li> </ul> </li> </ul>
<p>Electronic References, Websites</p>	<ul style="list-style-type: none"> <li>• <b><a href="#">Detail.de (Detail Inspiration)</a>:</b> The best online database for high-quality architectural details, including section views of wall assemblies, roofs, and foundations.</li> <li>• <b><a href="#">Archnet.org</a>:</b> A fantastic resource for studying regional technical solutions and large-scale public projects in the Middle East.</li> <li>• <b><a href="#">Construction Details (CADblocksfree.com / CADdetails.com)</a>:</b> Provides manufacturers' standard details for structural steel, curtain walls, and MEP systems, helping students learn how professional details are constructed.</li> <li>• <b><a href="#">International Building Code (IBC) - ICCSAFE.org</a>:</b> Provides clear documentation on fire safety, egress requirements, and accessibility for commercial and high-rise projects.</li> </ul>

## Course Description Form

1. Course Name:	
History of Architecture II	
2. Course Code:	
ARCH 315	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: MS.c - Saad Hussein Alwan Email: <a href="mailto:Saad@mu.edu.iq">Saad@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>Definition of the history of architecture and its concepts.</li> <li>Introducing the student to the basic terms and other important vocabulary.</li> <li>Training students to build important decisions based on the above and clarify the architectural history of a number of civilizations in all its structural, aesthetic, architectural and urban details.</li> </ul> <p>The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.</p>	Course Objectives
9. Teaching and Learning Strategies	
<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem–Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	Origins of shelter, nomadic vs. sedentary life, and the first "architectural" gestures.	<i>Prehistoric 1</i>	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	Origins of shelter, nomadic vs. sedentary life, and the first "architectural" gestures.	<i>Prehistoric 2</i>	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	Neolithic Revolution; Catalhoyuk; Megalithic structures and the birth of geometry.	<i>Stone Ages 1</i>	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	Neolithic Revolution; Catalhoyuk; Megalithic structures and the birth of geometry.	<i>Stone Ages 2</i>	<i>Attendance</i>	Daily test
<i>Week-5</i>	2	Sumerian, Akkadian, and Babylonian architecture; The Arch, Vault, and the Ziggurat.	<i>Mesopotamian Civilization 1</i>	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	Sumerian, Akkadian, and Babylonian architecture; The Arch, Vault, and the Ziggurat.	<i>Mesopotamian Civilization 2</i>	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	Sumerian, Akkadian, and Babylonian architecture; The Arch, Vault, and the Ziggurat.	<i>Mesopotamian civilization 3</i>	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	Old, Middle, and New Kingdom; The Columnar orders; The Great Temples of Karnak/Luxor.	<i>Civilization of the Nile Valley 1</i>	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	Old, Middle, and New Kingdom; The Columnar orders; The Great Temples of Karnak/Luxor.	<i>Civilization of the Nile Valley 2</i>	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	The commercial cities of the Levant; The incense route and stone towers of Arabia.	<i>Civilization of Arabia 1</i>	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	The commercial cities of the Levant; The incense route and stone towers of Arabia.	<i>Civilization of Arabia 2</i>	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	Vernacular roots; Earth as a primary medium; Defensive Kasbahs.	<i>Maghreb Civilization</i>	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	Vernacular roots; Earth as a primary medium; Defensive Kasbahs.	<i>Maghreb Civilization</i>	<i>Attendance</i>	Daily test
<i>Week-14</i>	2	Vernacular roots; Earth as a primary medium; Defensive Kasbahs.	<i>Civilization of African countries</i>	<i>Attendance</i>	Daily test
<i>Week-15</i>	2	The Indus Valley (Mohenjo-daro) and early Chinese spatial philosophy.	<i>Civilization of Asia</i>	<i>Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)

- **Fletcher, B. (Latest Edition).** *A History of Architecture.* (Commonly known as "The Bible of Architecture," this is the primary global textbook used in Iraqi architectural departments for its detailed comparative analysis and technical drawings).
- **Kostof, S. (1995).** *A History of Architecture: Settings and Rituals.* (Focuses on the social and ritualistic context of

	<p>ancient spaces, essential for understanding the transition from Prehistoric to Mesopotamian urbanism).</p> <ul style="list-style-type: none"> <li>• <b>Chadirji, R. (1995).</b> <i>The Regionalist International Architecture</i>. (While theoretical, it is often a core curricular requirement in Iraq to connect ancient Mesopotamian logic to modern regional identity).</li> </ul>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Lloyd, S. (1978).</b> <i>The Archaeology of Mesopotamia: From the Old Stone Age to the Persian Conquest</i>. (The definitive reference for Mesopotamian Units 1, 2, and 3).</li> <li>• <b>Edwards, I. E. S. (1993).</b> <i>The Pyramids of Egypt</i>. (Crucial for the Nile Valley units, detailing the transition from Mastaba to Pyramid).</li> <li>• <b>Mitchell, G. (1978).</b> <i>Architecture of the Islamic World: Its History and Social Meaning</i>. (While the course is "History II," this source is vital for the <b>Civilization of Arabia</b> and <b>Maghreb</b> units to understand the early vernacular roots that preceded later periods)</li> </ul>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <i>Journal of Cuneiform Studies</i> (For high-level research on Mesopotamian urban life).</li> <li>• <i>The Journal of Ancient Architecture</i> (Covers the Mediterranean, North Africa, and Western Asia between 1000 BCE and 500 CE).</li> <li>• <i>Architectural Histories (EAHN)</i> (For modern critical perspectives on ancient built environments).</li> </ul> </li> <li>• <b>Scientific Reports:</b> <ul style="list-style-type: none"> <li>• <b>UNESCO World Heritage Center Reports:</b> Essential for the current state and structural analysis of sites like Babylon, Hatra, and Ancient Thebes.</li> </ul> </li> <li>• <b>Asia &amp; Africa Focus:</b> <ul style="list-style-type: none"> <li>• <b>Connah, G. (2001).</b> <i>African Civilizations: An Archaeological Perspective</i>. (Vital for the "Civilization of African Countries" unit).</li> <li>• <b>Chakrabarti, D. K. (2004).</b> <i>Indus Civilization Sites in India</i>. (Core reference for the "Civilization of Asia" unit).</li> </ul> </li> </ul>
Electronic References, Websites	<ul style="list-style-type: none"> <li>• <b><a href="http://archnet.org">Archnet.org</a>:</b> The largest digital archive for the architecture of the Middle East and Africa; perfect for finding plans and sections of Levantine and Arabian sites.</li> <li>• <b><a href="http://britishmuseum.org/collections/ancient-egypt">The British Museum - Mesopotamia Collection</a>:</b> Offers detailed visual analysis of artifacts and architectural fragments from Sumer, Akkad, and Babylon.</li> <li>• <b><a href="http://digital.egyptology.ucl.ac.uk">Digital Egypt for Universities (UCL)</a>:</b> A massive learning resource specifically for the Nile Valley units.</li> <li>• <b><a href="http://www.google.com/cultural/heritage/edge/">Google Arts &amp; Culture - Heritage on the Edge</a>:</b> Interactive 3D models of world heritage sites, useful for visualizing the scale of ancient monuments.</li> </ul>

## Course Description Form

1. Course Name:	
Principles of planning I	
2. Course Code:	
ARCH 316	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: MS.c - Nadia Qasim Muhammad Email: <a href="mailto:nadia.qasim@mu.edu.iq">nadia.qasim@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Analyze Urban Morphology:</b> Develop the ability to read the "fabric" of a city—analyzing street patterns, plot sizes, and building densities to understand how cities have evolved historically.</li> <li>• <b>Master Land Use Theory:</b> Understand the relationship between zoning, density, and land value, and how different functions (residential, commercial, industrial) interact within an urban framework.</li> <li>• <b>Evaluate Public Space Dynamics:</b> Assess the quality of urban open spaces (plazas, parks, streets) based on accessibility, safety, human comfort, and social interaction.</li> <li>• <b>Analyze Transportation Networks:</b> Evaluate the hierarchy of mobility, including pedestrian flow, vehicular traffic, and public transit connectivity in modern urban environments.</li> <li>• <b>Master Urban Sustainability Metrics:</b> Apply principles of sustainable planning, such as walkability indices, environmental micro-climates, and efficient resource distribution in desert climates.</li> <li>• <b>Apply Statistical Literacy:</b> Learn to read urban data—population demographics, infrastructure capacity, and growth projections—to inform spatial design decisions.</li> <li>• <b>Deconstruct Planning Policies:</b> Critique the role of local master plans and building regulations (setbacks, height limits, floor-area ratios) in shaping the urban identity of Iraqi cities.</li> <li>• <b>Execute Site-Context Integration:</b> Demonstrate the skill of "contextual urbanism" by designing site layouts that respond to surrounding street connectivity and existing social landmarks.</li> </ul>	Course Objectives

- **Develop Participatory Frameworks:** Recognize the social responsibility of the urban planner by incorporating community needs and public interest into planning proposals.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	<b>Define Core Planning Terms:</b> Master land use, zoning, and urban density metrics.	Planning Fundamentals	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	<b>Analyze Morphology:</b> Evaluate city growth patterns and street network development.	Planning Fundamentals	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	<b>Execute Field Surveys:</b> Perform systematic visual and physical urban audits.	Planning Fundamentals	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	<b>Process Demographic Data:</b> Apply population trends to spatial planning requirements.	Urban Analysis & Data	<i>Attendance</i>	Daily test
<i>Week-5</i>	2	<b>Calculate Densities:</b> Compute net/gross density for residential/commercial zones.	Urban Analysis & Data	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	<b>Apply Zoning Codes:</b> Translate legal frameworks into physical massing constraints.	Urban Analysis & Data	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	<b>Evaluate Public Space:</b> Assess plazas and parks for social accessibility and safety.	Urban Form & Morphology	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	<b>Model Connectivity:</b> Design efficient pedestrian and vehicular flow hierarchies.	Urban Form & Morphology	<i>Attendance</i>	Daily test

<i>Week-9</i>	2	<b>Climate-Responsive Planning:</b> Apply passive solar and wind strategies to master planning.	Urban Form & Morphology	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	<b>Critique Policy:</b> Assess the impact of master plans on local Iraqi urban identity.	Regulation & Land Use	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	<b>Contextual Integration:</b> Harmonize new design proposals with existing city fabric.	Regulation & Land Use	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	<b>Master Site Analysis:</b> Synthesize site data (slope, sun, wind, proximity) for planning.	Infrastructure & Mobility	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	<b>Participatory Planning:</b> Integrate community needs into master-plan scenarios.	Infrastructure & Mobility	<i>Attendance</i>	Daily test
<i>Week-14</i>	2	<b>Sustainable Resource Use:</b> Design for efficient utility and resource distribution.	Public Space & Sustainability	<i>Attendance</i>	Daily test
<i>Week-15</i>	2	<b>Produce Master Plans:</b> Synthesize technical findings into professional, coherent urban sets.	Public Space & Sustainability	<i>Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ul style="list-style-type: none"> <li>• <b>Lynch, K. (1960).</b> <i>The Image of the City</i>. (The standard text for understanding how people perceive and navigate urban environments, focusing on paths, edges, districts, nodes, and landmarks).</li> <li>• <b>Kostof, S. (1991).</b> <i>The City Shaped: Urban Patterns and Meanings Through History</i>. (An essential historical analysis of how urban form has evolved, helping students understand organic versus grid-iron planning).</li> <li>• <b>Hough, M. (1995).</b> <i>Cities and Natural Process: A Basis for Sustainability</i>. (Crucial for the context of Al-Muthanna, this book bridges urban planning with environmental/climate-responsive design).</li> </ul>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Hall, P. (2014).</b> <i>Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century</i>. (Provides the political and social context of why cities are planned the way they are).</li> <li>• <b>Barton, H., et al. (2010).</b> <i>Shaping Neighborhoods: For Local Health and Global Sustainability</i>. (A practical guide on how to design neighborhoods that are walkable, healthy, and resource-efficient).</li> </ul>

	<ul style="list-style-type: none"> <li>• <b>Iraqi Master Planning Guidelines &amp; Local Zoning Ordinances:</b> (The primary legal framework for all development within Iraq, essential for students to learn how to interpret and apply building codes to master plans).</li> </ul>
<p>Recommended books and references (scientific journals, reports...)</p>	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <i>Journal of Urban Design</i> (Focuses on the quality of urban space and the design of the public realm).</li> <li>• <i>Landscape and Urban Planning</i> (Excellent for researching the integration of desert-climate greening strategies).</li> </ul> </li> <li>• <b>Reports:</b> <ul style="list-style-type: none"> <li>• <b>UN-Habitat: World Cities Report</b> (Provides global data on urban growth, which is critical for understanding rapid urbanization in Iraqi governorates).</li> </ul> </li> <li>• <b>Scientific Focus:</b> <ul style="list-style-type: none"> <li>• <b>Gehl, J. (2010). <i>Cities for People</i>.</b> (The definitive reference on how to design streetscapes that prioritize pedestrians over vehicles).</li> </ul> </li> </ul>
<p>Electronic References, Websites</p>	<ul style="list-style-type: none"> <li>• <b><a href="#">ArchDaily Urbanism</a>:</b> Offers a massive library of contemporary urban design projects, including site analysis diagrams and master-planning strategies.</li> <li>• <b><a href="#">The Project for Public Spaces (PPS)</a>:</b> A leading resource for understanding the "Placemaking" approach—how to design public spaces that people actually want to use.</li> <li>• <b><a href="#">CityForm-Interactions</a>:</b> A research site dedicated to the study of the relationship between urban form and sustainable living, offering data-driven insights into density and walkability.</li> <li>• <b><a href="#">UN-Habitat Urban Planning Portal</a>:</b> Provides technical manuals and toolkits for urban planning in developing regions, highly relevant to local Iraqi contexts.</li> </ul>

## Course Description Form

1. Course Name:	
Architectural Design V	
2. Course Code:	
ARCH 321	
3. Semester / Year:	
Second Semester / 2025–2026	
4. Description Preparation Date:	
01/02/2026	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
180 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: MS.c- Ali Saad Al-Rubay Email: <a href="mailto:alisaad@mu.edu.iq">alisaad@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>● Understand the concept of design and its importance to architecture.</li> <li>● Understand the different units used in architecture (e.g., meters , centimeters , millimeters and their equivalents in other international standard systems).</li> <li>● Introduce students to complex and multifunctional projects for their various major and secondary spaces as well as service spaces.</li> <li>● Introducing students to the appropriate functional basis for distributing architectural spaces that serve the building in its main and service types.</li> <li>● Introduce students to the appropriate structural foundation for the selection of architectural structural systems as well as construction details, where construction decisions and implementation technology are at the forefront of the design proposal.</li> <li>● Introduce students to the different types of materials and their applications in exterior façade design , structural element installation , interior design as well as landscape</li> </ul>	<p>Course Objectives</p>

design leading to a BOQ (Quantities Calculation ) for all project materials.

- Introducing students to sustainability, green architecture, and smart architecture and ways to apply them in the building to serve the functional effectiveness of the building.
- Introduce students in the second semester to a multi-storey project, to learn through design principles for functional requirements of a typical repetitive nature, such as educational, administrative, residential, and commercial buildings.
- Introducing the student to some of the structural details directed to this purpose, as well as the possibility of applying what the student has learned in the subject of health services and the air conditioning and lighting services provided to him in the first and second semesters.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	12	<i>The field study of the real condition through the field measurements and photographing and freehand drawing and reviewing the valid rules and limitations.</i>	<i>2<sup>nd</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-2</i>	12	<i>The field study of the real condition through the field measurements and photographing and freehand</i>	<i>2<sup>nd</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test

		<i>drawing and reviewing the valid rules and limitations.</i>			
<i>Week-3</i>	12	<i>Presenting the preliminary planning and developing concepts through the field study and limitations of the site.</i>	<i>2<sup>nd</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-4</i>	12	<i>Presenting the preliminary planning and developing concepts through the field study and limitations of the site.</i>	<i>2<sup>nd</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-5</i>	12	<i>Presenting a suggested basic plan of the developmental alternative that supports the well established intellectual base.</i>	<i>2<sup>nd</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-6</i>	12	<i>Presenting a suggested basic plan of the developmental alternative that supports the well established intellectual base.</i>	<i>2<sup>nd</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-7</i>	12	<i>The final presentation of the suggested alternative (a 3d model with a suitable measure and basic plans of all the project which clarify the general application and the distribution of the adopted functions)</i>	<i>2<sup>nd</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-8</i>	12	<i>The final presentation of the suggested alternative (a 3d model with a suitable measure and basic plans of all the project which clarify the general application and the distribution of the adopted functions)</i>	<i>2<sup>nd</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-9</i>	12	<i>The final presentation of the suggested alternative (a 3d model with a suitable measure and basic plans of all the project which clarify the general application and the distribution of the adopted functions)</i>	<i>2<sup>nd</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-10</i>	12	<i>Presenting architectural details and important parts in the site which are divided on the student individually.</i>	<i>2<sup>nd</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-11</i>	12	<i>Presenting architectural details and important parts in the site which are divided on the student individually.</i>	<i>2<sup>nd</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-12</i>	12	<i>Presenting architectural details and important parts in the site which are divided on the student individually.</i>	<i>2<sup>nd</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-13</i>	12	<i>Day sketches during the semester</i>	<i>2<sup>nd</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-14</i>	12	<i>Day sketches during the semester</i>	<i>2<sup>nd</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test

<i>Week-15</i>	12	<i>Day sketches during the semester</i>	<i>2<sup>nd</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<b>11. Course Evaluation</b>					
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc					
<b>12. Learning and Teaching Resources</b>					
Required textbooks (curricular books, if any)	3. Neufert 4. Time Saver Standards for Architectural Design Data Green Building Conditions and Specifications				
Main references (sources)	<a href="https://issuu.com/twentytwo22magazine">https://issuu.com/twentytwo22magazine</a> A monthly electronic magazine issued by the A non-governmental volunteer specialized in the field of architecture and architects' affairs through education, training and rehabilitation <a href="http://www.architectureweek.com">http://www.architectureweek.com</a> A specialized magazine that presents a wide range of articles and designs that are of interest to the students of the Department of Architecture				
Recommended books and references (scientific journals, reports...)	<a href="https://www.diwanarch.com/">https://www.diwanarch.com/</a> An important site for architects that organizes competitions and architectural works <a href="https://big.dk/">https://big.dk/</a> The most important sites that contain various projects and architectural ideas <a href="https://www.asla.org/">https://www.asla.org/</a> An important site for the design of outdoor spaces and gardens <a href="https://divisare.com/">https://divisare.com/</a> An important location that contains architectural projects Section -diagram -plans- renders- <a href="https://www.arch-news.net/">https://www.arch-news.net/</a> Arab Architectural News Portal <a href="https://www.cpas-egypt.com/">https://www.cpas-egypt.com/</a> A famous and distinctive Arabic engineering site, it is considered a planning studies center that publishes architectural topics and projects continuously				
Electronic References, Websites	1-Arch Daily: <a href="https://www.archdaily.com">https://www.archdaily.com</a> 2. Dezeen: <a href="https://www.dezeen.COM">https://www.dezeen.COM</a>				

## Course Description Form

1. Course Name:	
Lighting services	
2. Course Code:	
ARCH 322	
3. Semester / Year:	
Second Semester / 2025–2026	
4. Description Preparation Date:	
01/02/2026	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: PhD - Mustafa Hussain Abualwez Email: <a href="mailto:mustafa.hussein@mu.edu.iq">mustafa.hussein@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Analyze Urban Morphology:</b> Develop the ability to read the "fabric" of a city—analyzing street patterns, plot sizes, and building densities to understand how cities have evolved historically.</li> <li>• <b>Master Land Use Theory:</b> Understand the relationship between zoning, density, and land value, and how different functions (residential, commercial, industrial) interact within an urban framework.</li> <li>• <b>Evaluate Public Space Dynamics:</b> Assess the quality of urban open spaces (plazas, parks, streets) based on accessibility, safety, human comfort, and social interaction.</li> <li>• <b>Analyze Transportation Networks:</b> Evaluate the hierarchy of mobility, including pedestrian flow, vehicular traffic, and public transit connectivity in modern urban environments.</li> <li>• <b>Master Urban Sustainability Metrics:</b> Apply principles of sustainable planning, such as walkability indices, environmental micro-climates, and efficient resource distribution in desert climates.</li> <li>• <b>Apply Statistical Literacy:</b> Learn to read urban data—population demographics, infrastructure capacity, and growth projections—to inform spatial design decisions.</li> <li>• <b>Deconstruct Planning Policies:</b> Critique the role of local master plans and building regulations (setbacks, height limits, floor-area ratios) in shaping the urban identity of Iraqi cities.</li> <li>• <b>Execute Site-Context Integration:</b> Demonstrate the skill of "contextual urbanism" by designing site layouts that respond to surrounding street connectivity and existing social landmarks.</li> </ul>	Course Objectives

- **Develop Participatory Frameworks:** Recognize the social responsibility of the urban planner by incorporating community needs and public interest into planning proposals.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	<b>Define Photometrics:</b> Master terminology: Luminous Flux, Illuminance, and Luminance.	The Physics of Light	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	<b>Evaluate Health Impacts:</b> Analyze the link between light and circadian rhythms.	The Physics of Light	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	<b>Calculate Daylight:</b> Execute daylight factor analysis for window optimization.	The Physics of Light	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	<b>Master Inverse Square Law:</b> Calculate point-source illumination levels.	Natural Daylight	<i>Attendance</i>	Daily test
<i>Week-5</i>	2	<b>Apply Color Theory:</b> Properly select CCT and CRI for interior design needs.	Natural Daylight	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	<b>Compare Lamp Tech:</b> Select appropriate LED drivers and light engines.	Natural Daylight	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	<b>Select Luminaires:</b> Analyze IES photometric files for spatial distribution.	Artificial Light Sources	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	<b>Execute Zonal Cavity:</b> Calculate number of fixtures for uniform ambient lighting.	Artificial Light Sources	<i>Attendance</i>	Daily test

<i>Week-9</i>	2	<b>Apply Energy Codes:</b> Design lighting layouts that meet low-energy benchmarks.	Artificial Light Sources	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	<b>Simulate Lighting:</b> Utilize software (DIALux/Relux) for 3D luminance mapping.	Design Calculations	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	<b>Implement Controls:</b> Design lighting circuits with motion/daylight sensors.	Design Calculations	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	<b>Master Exterior Lighting:</b> Balance site safety with light pollution prevention.	Luminaires & Controls	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	<b>Detail RCPs:</b> Coordinate lighting with ceiling structure and HVAC ducts.	Luminaires & Controls	<i>Attendance</i>	Daily test
<i>Week-14</i>	2	<b>Design Special Spaces:</b> Tailor schemes for galleries, offices, and homes.	Lighting Integration	<i>Attendance</i>	Daily test
<i>Week-15</i>	2	<b>Compile Documents:</b> Generate technical lighting schedules and wiring diagrams.	Lighting Integration	<i>Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)

- **Lechner, N. (2014).** *Heating, Cooling, Lighting: Sustainable Design Methods for Architects*. (This is the industry-standard textbook; its sections on "Daylighting" and "Electric Lighting" are essential for architecture students).
- **Ching, F. D. K., & Winkel, S. R. (2016).** *Building Codes Illustrated*. (Essential for understanding the regulatory requirements for emergency lighting, egress illumination, and energy conservation codes).
- **Iraqi National Building Code for Electrical and Lighting Services.** (The mandatory local standard for electrical load calculations and minimum lux-level requirements for different building occupancies).

Main references (sources)

- **IESNA Lighting Handbook (Illuminating Engineering Society).** (The definitive technical source. It provides the "standard" lux levels (\$E\$) for every conceivable building type, from residential bedrooms to industrial workshops).
- **Steffy, G. R. (2002).** *Architectural Lighting Design*. (Focuses on the *application* of light: how to use contrast, focal points, and color temperature to enhance architecture).

	<ul style="list-style-type: none"> <li>• <b>Lam, W. M. C. (1992).</b> <i>Perception and Lighting as Formgivers for Architecture</i>. (A seminal text that teaches students to think about the <i>effect</i> of light on the occupant rather than just the math of the lamp).</li> </ul>
<p>Recommended books and references (scientific journals, reports...)</p>	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <i>Lighting Research &amp; Technology (Journal)</i>: A peer-reviewed scientific journal focusing on the physical, biological, and psychological aspects of light.</li> <li>• <i>LEUKOS</i>: The journal of the IES, focusing on the science and application of lighting.</li> </ul> </li> <li>• <b>Scientific Reports:</b> <ul style="list-style-type: none"> <li>• <b>Department of Energy (DOE) - Solid-State Lighting Program Reports:</b> These provide the latest data on the energy efficiency and lifespan of LED technology, critical for contemporary design.</li> </ul> </li> <li>• <b>Design Focus:</b> <ul style="list-style-type: none"> <li>• <b>Brandston, H. (2008).</b> <i>Learning to See</i>. (A highly recommended, more philosophical approach to lighting design by one of the world's masters).</li> </ul> </li> </ul>
<p>Electronic References, Websites</p>	<ul style="list-style-type: none"> <li>• <b><a href="http://dialux.com">DIALux (dialux.com)</a>:</b> The global standard for lighting simulation software. Students should use the free version to run 3D light-level simulations of their design studio projects.</li> <li>• <b><a href="http://irc.rpi.edu">The Lighting Research Center (irc.rpi.edu)</a>:</b> The world's leading university-based research center for lighting. Their "Lighting Answers" series is perfect for students looking for evidence-based design data.</li> <li>• <b><a href="http://philips.com/signify">Philips Lighting (Signify) University</a>:</b> Excellent for technical "White Papers" on new lighting technologies, including tunable white lighting and human-centric circadian design.</li> <li>• <b><a href="http://ies.org">IES (ies.org)</a>:</b> The main professional society. Their website provides the most up-to-date standards on light pollution, sustainability, and energy codes</li> </ul>

## Course Description Form

13.	Course Name:
Structure III	
14.	Course Code:
ARCH 323	
15.	Semester / Year:
Second Semester / 2025–2026	
16.	Description Preparation Date:
01/02/2026	
17.	Available Attendance Forms:
Attendance	
18.	Number of Credit Hours (Total) / Number of Units (Total)
30 hours	
19.	Course administrator's name (mention all, if more than one name)
Name: MS.c - Zahraa Tawfiq Naeem Email: <a href="mailto:Zahraa.tn@mu.edu.iq">Zahraa.tn@mu.edu.iq</a>	
20.	Course Objectives
<ul style="list-style-type: none"> <li>• <b>Analyze Load Path and Transfer:</b> Master the conceptual and mathematical tracing of loads (dead, live, and environmental) from slabs to beams, columns, and ultimately to the foundations.</li> <li>• <b>Master Reinforced Concrete Theory:</b> Understand the composite behavior of concrete and steel, specifically the Limit State Design (LSD) and Working Stress Design (WSD) philosophies used in modern Iraqi building codes.</li> <li>• <b>Design for Flexure (Beams):</b> Calculate and specify the required longitudinal reinforcement for rectangular and T-beams to resist bending moments.</li> <li>• <b>Execute Shear and Torsion Design:</b> Design stirrups and transverse reinforcement to prevent diagonal tension failures in structural members.</li> <li>• <b>Evaluate Column Behavior:</b> Analyze and design short and slender reinforced concrete columns under axial loads and uniaxial/biaxial bending.</li> <li>• <b>Analyze Slab Systems:</b> Differentiate between one-way and two-way slab systems, calculating reinforcement for various edge support conditions (fixed, continuous, or simply supported).</li> <li>• <b>Integrate Structure with Form:</b> Develop the ability to select the most appropriate structural system (frames, shear walls, or flat slabs) that aligns with the architectural intent of a 3rd-stage design project.</li> </ul>	Course Objectives

- **Introduction to Steel Member Design:** Understand the fundamental behavior of structural steel, focusing on the design of tension members and simple beams using AISC standards.
- **Interpret Structural Drawings:** Gain proficiency in reading and producing detailed structural reinforcement schedules and shop drawings to bridge the gap between design and construction.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 21. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 22. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	<i>Fundamentals of R.C.</i>	<i>Loads (Dead/Live), Safety Factors, and the Strength Design Method (LRFD).</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-2</i>	2	<i>Fundamentals of R.C.</i>	<i>Loads (Dead/Live), Safety Factors, and the Strength Design Method (LRFD).</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-3</i>	2	<i>Flexural Design of Beams</i>	<i>Rectangular and T-Beams; Singularity vs. Doubly reinforced sections.</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-4</i>	2	<i>Flexural Design of Beams</i>	<i>Rectangular and T-Beams; Singularity vs. Doubly reinforced sections.</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-5</i>	2	<i>Flexural Design of Beams</i>	<i>Rectangular and T-Beams; Singularity vs. Doubly reinforced sections.</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-6</i>	2	<i>Flexural Design of Beams</i>	<i>Rectangular and T-Beams; Singularity vs. Doubly reinforced sections.</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-7</i>	2	<i>Shear and Serviceability</i>	<i>Stirrup design, diagonal tension, and deflection/crack control.</i>	<i>Attendance</i>	<i>Daily test</i>

Week-8	2	Shear and Serviceability	Stirrup design, diagonal tension, and deflection/crack control.	Attendance	Daily test
Week-9	2	Slab Systems	One-way and Two-way solid slabs; introduction to Ribbed/Joist slabs.	Attendance	Daily test
Week-10	2	Slab Systems	One-way and Two-way solid slabs; introduction to Ribbed/Joist slabs.	Attendance	Daily test
Week-11	2	Slab Systems	One-way and Two-way solid slabs; introduction to Ribbed/Joist slabs.	Attendance	Daily test
Week-12	2	Vertical Members	Short and Slender Columns; Tied vs. Spiral reinforcement.	Attendance	Daily test
Week-13	2	Vertical Members	Short and Slender Columns; Tied vs. Spiral reinforcement.	Attendance	Daily test
Week-14	2	Steel & Integration	Steel tension/compression members and coordinating grids in Studio.	Attendance	Daily test
Week-15	2	Steel & Integration	Steel tension/compression members and coordinating grids in Studio.	Attendance	Daily test

### 23. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

### 24. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ul style="list-style-type: none"> <li>• <b>Schueller, W. (1977).</b> <i>High-Rise Building Structures</i>. (The definitive textbook for understanding the behavior of tall buildings under lateral wind and seismic loads).</li> <li>• <b>Nilson, A. H., Darwin, D., &amp; Dolan, C. W. (2016).</b> <i>Design of Concrete Structures</i>. (The primary reference for advanced reinforced concrete design, including two-way slabs, shear walls, and prestressed elements).</li> <li>• <b>Salvadori, M., &amp; Heller, R. (1986).</b> <i>Structure in Architecture: The Building of Form</i>. (A fundamental text that explains complex structural behavior qualitatively, essential for 5th-stage design synthesis).</li> </ul>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Engel, H. (2007).</b> <i>Structure Systems</i>. (A visual encyclopedia of structural systems—form-active, vector-active, and surface-active—crucial for large-span projects).</li> <li>• <b>ACI Committee 318.</b> <i>Building Code Requirements for Structural Concrete</i>. (The American Concrete Institute code, which is the technical basis for most Iraqi structural engineering standards).</li> <li>• <b>Taranath, B. S. (2016).</b> <i>Structural Analysis and Design of Tall Buildings: Steel and Composite Construction</i>. (A deep</li> </ul>

	<p>dive into the bracing systems and core-and-outrigger designs used in modern skyscrapers).</p>
<p>Recommended books and references (scientific journals, reports...)</p>	<ul style="list-style-type: none"> <li>• <b>Macdonald, A. J. (2001).</b> <i>Structure and Architecture</i>. (Focuses on the relationship between structural logic and architectural expression).</li> <li>• <b>Sandaker, B. N., Eggen, A. P., &amp; Cruickshank, I. R. (2011).</b> <i>The Structural Basis of Architecture</i>. (Excellent for analyzing the aesthetics of exposed structures in contemporary architecture).</li> <li>• <b>Scientific Journals:</b> * <i>Engineering Structures</i> (Elsevier). <ul style="list-style-type: none"> <li>• <i>Journal of the International Association for Shell and Spatial Structures (IASS)</i>.</li> <li>• <i>ASCE Journal of Structural Engineering</i>.</li> </ul> </li> </ul>
<p>Electronic References, Websites</p>	<ul style="list-style-type: none"> <li>• <b><a href="#">Sky-Skan / Council on Tall Buildings and Urban Habitat (CTBUH)</a></b>: The global authority on high-rise data technical papers on damping systems, and structural innovations.</li> <li>• <b><a href="#">SkyCiv Structural Analysis Software - Documentation</a></b>: An excellent resource for understanding the behavior of trusses, frames, and plates through interactive modules.</li> <li>• <b><a href="#">Structure Magazine</a></b>: An industry-leading publication that covers unique case studies of complex structural failures and successes.</li> <li>• <b><a href="#">Iraqi Central Organization for Standardization and Quality Control (COSQC)</a></b>: For accessing the latest versions of the Iraqi Building Code (Structural sections).</li> </ul>

## Course Description Form

13.	Course Name:	
		Computer Applications II
14.	Course Code:	
		ARCH 324
15.	Semester / Year:	
		Second Semester / 2025–2026
16.	Description Preparation Date:	
		01/02/2026
17.	Available Attendance Forms:	
		Attendance
18.	Number of Credit Hours (Total) / Number of Units (Total)	
		45 hours
19.	Course administrator's name (mention all, if more than one name)	
	Name: MS.c- Ali Saad Al-Rubay	
	Email: <a href="mailto:alisaad@mu.edu.iq">alisaad@mu.edu.iq</a>	
20.	Course Objectives	
	<ul style="list-style-type: none"> <li>• <b>Master BIM Fundamentals:</b> Understand the paradigm shift from traditional CAD (line-based) to Building Information Modeling (object-based) and its role in integrated project delivery.</li> <li>• <b>Execute Parametric Family Creation:</b> Design custom, parametric Revit families (furniture, architectural components, and mechanical fixtures) that react to project-specific constraints.</li> <li>• <b>Implement Advanced Massing &amp; Adaptive Components:</b> Create complex architectural forms through massing studies and adaptive components to bridge the gap between conceptual design and construction.</li> <li>• <b>Coordinate Multi-Disciplinary Models:</b> Link structural, mechanical, and architectural models to perform collision detection and resolve spatial clashes before construction begins.</li> <li>• <b>Master Automated Documentation:</b> Generate construction-ready documentation (floor plans, sections, elevations, and schedules) that updates automatically with design changes.</li> <li>• <b>Analyze Project Data &amp; Quantities:</b> Extract detailed Material Take-Offs (MTO) and schedules directly from the model to improve cost estimation and project management accuracy.</li> <li>• <b>Optimize Visualization Workflows:</b> Utilize built-in rendering and cloud-based visualization tools to present design intent effectively to stakeholders.</li> </ul>	Course Objectives

- **Apply Phasing & Design Options:** Manage building lifecycles by utilizing Revit's "Phasing" tool for renovation projects and "Design Options" for comparing multiple architectural solutions.
- **Standardize Project Templates:** Develop and manage a project template (VPT) that enforces office standards for line weights, naming conventions, and shared parameters.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 21. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 22. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	3	<b>Interpret BIM Principles:</b> Differentiate between traditional CAD workflows and Building Information Modeling (BIM), understanding the role of data-rich models in the design and construction lifecycle.	BIM Fundamentals	<i>Attendance</i>	Daily test
<i>Week-2</i>	3	<b>Navigate the BIM Environment:</b> Efficiently navigate the Revit interface, manage project browsers, and customize workspace settings for optimal productivity.	BIM Fundamentals	<i>Attendance</i>	Daily test
<i>Week-3</i>	3	<b>Establish Project Foundations:</b> Set up project templates, including levels, grids, and project north/true north orientation, to ensure consistency across multidisciplinary models.	Modeling Elements	<i>Attendance</i>	Daily test
<i>Week-4</i>	3	<b>Develop Intelligent Models:</b> Construct	Modeling Elements	<i>Attendance</i>	Daily test

		comprehensive 3D architectural models using system families (walls, floors, ceilings, roofs, stairs) that maintain data integrity.			
<i>Week-5</i>	3	<b>Create Parametric Families:</b> Design and modify custom, parametric families (doors, windows, furniture) that react adaptively to design changes using constraints and formulas.	Modeling Elements	<i>Attendance</i>	Daily test
<i>Week-6</i>	3	<b>Manage Data and Parameters:</b> Implement instance and type parameters, custom tags, and shared parameters to organize project data effectively.	Advanced Families	<i>Attendance</i>	Daily test
<i>Week-7</i>	3	<b>Generate Automated Documentation:</b> Produce construction-ready 2D documentation (plans, sections, elevations) directly from the 3D model, ensuring bidirectional associativity.	Advanced Families	<i>Attendance</i>	Daily test
<i>Week-8</i>	3	<b>Utilize Scheduling Tools:</b> Generate automated material take-offs (MTO), door/window schedules, and room area reports to support cost estimation and project management.	Documentation	<i>Attendance</i>	Daily test
<i>Week-9</i>	3	<b>Coordinate Multidisciplinary Models:</b> Link architectural, structural, and MEP models to perform clash detection and coordination reviews between various project teams.	Documentation	<i>Attendance</i>	Daily test
<i>Week-10</i>	3	<b>Perform Massing Studies:</b> Conduct conceptual design and volumetric analysis using massing tools, transforming conceptual forms into functional building elements.	Documentation	<i>Attendance</i>	Daily test
<i>Week-11</i>	3	<b>Apply Phasing and Design Options:</b> Utilize Revit's phasing and design options to manage renovation	Coordination & Collaboration	<i>Attendance</i>	Daily test

		projects and evaluate multiple design alternatives within a single file.			
<i>Week-12</i>	3	<b>Manage Information Interoperability:</b> Export and import models using industry-standard formats like IFC, DWG, and PDF to ensure seamless communication with external consultants and contractors.	Coordination & Collaboration	<i>Attendance</i>	Daily test
<i>Week-13</i>	3	<b>Create High-Quality Visualizations:</b> Apply materials, lighting, and camera settings to produce professional-grade renderings and animations that clearly communicate design intent.	Coordination & Collaboration	<i>Attendance</i>	Daily test
<i>Week-14</i>	3	<b>Implement Worksharing:</b> Collaborate with other team members in a cloud-based environment using worksets, demonstrating professional project management in a BIM workflow.	Presentation & Data	<i>Attendance</i>	Daily test
<i>Week-15</i>	3	<b>Ensure Standards Compliance:</b> Adhere to established project standards, file naming conventions, and annotation styles to prepare documentation ready for professional tender and construction.	Presentation & Data	<i>Attendance</i>	Daily test

### 23. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

### 24. Learning and Teaching Resources

Required textbooks (curricular books, if any)

- **Makhmalbaf, A. (2022).** *Building Information Modeling using Revit for Architects and Engineers.* (An excellent open-access resource that combines chapters on Revit instructions with video-based multimedia learning).
- **Steele, M. (2025).** *BIM & Revit Handbook: A Practical Guide for Architects, Engineers, and Designers.* (A comprehensive guide covering foundational concepts through advanced workflows like Dynamo and BIM 360).

	<ul style="list-style-type: none"> <li>• <b>Mordue, S., Swaddle, P., &amp; Philp, D.</b> <i>Building Information Modeling For Dummies</i>. (A highly accessible entry-point for understanding BIM philosophy, terminology, and collaborative data management).</li> </ul>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Autodesk University (Online Library):</b> A vital source for technical white papers and "Essential Elements for Revit Workflows," particularly regarding BIM standards, file naming, and browser organization.</li> <li>• <b>Garber, R. (2014).</b> <i>BIM Design: Realising the Creative Potential of Building Information Modelling</i>. (Focuses on moving BIM beyond mere construction documentation into a tool for creative architectural design).</li> <li>• <b>BIMForum LOD (Level of Development) Specification:</b> The industry standard for defining the level of detail/information required for models at different project stages.</li> </ul>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <i>Journal of Information Technology in Construction (ITcon):</i> Features systematic reviews on BIM curriculum design in AEC education.</li> <li>• <i>Computer-Aided Design &amp; Applications:</i> Useful for studying the integration of BIM with emerging technologies like GIS and computational design.</li> </ul> </li> <li>• <b>Scientific Reports:</b> <ul style="list-style-type: none"> <li>• <b>Abdirad, H., &amp; Dossick, C. S. (2016).</b> <i>BIM curriculum design in architecture, engineering, and construction education: a systematic review</i>. (Essential reading for educators aiming to align BIM curricula with industry needs).</li> </ul> </li> <li>• <b>Design Focus:</b> <ul style="list-style-type: none"> <li>• <b>Briscoe, D. (2019).</b> <i>Beyond BIM: Architecture Information Modelling</i>. (Discusses the vast design potential of BIM through investigations of built work and interviews with practitioners).</li> </ul> </li> </ul>
Electronic References, Websites	<ul style="list-style-type: none"> <li>• <b><a href="#">BIM Pure</a>:</b> One of the most highly regarded platforms for mastering Revit and BIM workflows, offering expert-led tutorials, family collections, and tips on streamlining processes.</li> <li>• <b><a href="#">Autodesk Knowledge Network</a>:</b> The primary official source for software documentation, tutorials, and troubleshooting for all Revit features.</li> <li>• <b><a href="#">ArchDaily Urbanism &amp; Architecture</a>:</b> A great source for observing how professional firms apply</li> </ul>

BIM to real-world architectural design, helping students visualize project outputs.

- **BuildingSMART Alliance**: The authoritative body for OpenBIM standards; crucial for students to understand data interoperability (IFC formats).

## Course Description Form

25.	Course Name:	
		Architecture and Environment
26.	Course Code:	
		ARCH 325
27.	Semester / Year:	
		Second Semester / 2025–2026
28.	Description Preparation Date:	
		01/02/2026
29.	Available Attendance Forms:	
		Attendance
30.	Number of Credit Hours (Total) / Number of Units (Total)	
		30 hours
31.	Course administrator's name (mention all, if more than one name)	
	Name: PhD - Mustafa Hussain Abualwez Email: <a href="mailto:mustafa.hussein@mu.edu.iq">mustafa.hussein@mu.edu.iq</a>	
32.	Course Objectives	
	<ul style="list-style-type: none"> <li>• <b>Analyze Environmental Context:</b> Master the interpretation of climate data (dry-bulb/wet-bulb temperatures, humidity, and solar radiation) specific to the Al-Muthanna region to determine cooling loads.</li> <li>• <b>Master Heat Transfer Fundamentals:</b> Understand the principles of conduction, convection, and radiation in building envelopes to effectively reduce cooling demand through passive design.</li> <li>• <b>Evaluate HVAC System Typologies:</b> Distinguish between various mechanical cooling systems—such as Split Units, VRF (Variable Refrigerant Flow), Chilled Water Systems, and Air Handling Units (AHU)—and select the appropriate system for specific building scales.</li> <li>• <b>Design for Spatial Integration:</b> Coordinate the spatial requirements of HVAC equipment (ductwork, piping, diffusers, and mechanical rooms) within the structural plenum to ensure design integrity.</li> <li>• <b>Calculate Cooling Loads:</b> Perform basic heat-gain calculations (from occupants, lighting, equipment, and building envelope) to size air conditioning equipment appropriately.</li> <li>• <b>Apply Energy Efficiency Standards:</b> Implement sustainable HVAC strategies, such as heat recovery ventilation and energy-efficient zoning, to comply with modern energy-saving codes.</li> <li>• <b>Master Air Distribution Design:</b> Design efficient air distribution layouts (diffuser placement, return air grilles) to ensure thermal comfort and avoid "dead zones" in interior spaces.</li> </ul>	Course Objectives

- **Understand Controls and Automation:** Evaluate modern Building Management Systems (BMS) that utilize sensors and smart controls to optimize air conditioning usage based on occupancy.
- **Produce Integrated MEP Drawings:** Generate professional-grade mechanical layouts and reflected ceiling plans (RCPs) that clearly communicate system integration for construction tender sets.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

### 33. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

### 34. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	3	<b>Understand Thermodynamic Fundamentals:</b> Define the core principles of heat transfer (conduction, convection, and radiation) and their role in building envelope performance.	Fundamentals & Physics	<i>Attendance</i>	Daily test
<i>Week-2</i>	3	<b>Master Psychrometric Analysis:</b> Interpret the psychrometric chart to understand the properties of air (dry-bulb temperature, wet-bulb temperature, relative humidity, and enthalpy) and how they influence thermal comfort.	Fundamentals & Physics	<i>Attendance</i>	Daily test
<i>Week-3</i>	3	<b>Evaluate Indoor Thermal Comfort:</b> Analyze the factors contributing to human thermal comfort (ASHRAE Standard 55) and apply these metrics to interior spatial design.	Fundamentals & Physics	<i>Attendance</i>	Daily test
<i>Week-4</i>	3	<b>Perform Cooling Load Calculations:</b> Calculate building heat gain from various sources, including envelope transmission, solar radiation through glazing, occupancy, lighting, and equipment.	Thermal Comfort	<i>Attendance</i>	Daily test

<i>Week-5</i>	3	<b>Differentiate HVAC System Typologies:</b> Categorize and compare active mechanical systems, such as Split Units, VRF (Variable Refrigerant Flow), Chilled Water Systems (AHUs/FCUs), and packaged units based on their suitability for different building scales.	Thermal Comfort	<i>Attendance</i>	Daily test
<i>Week-6</i>	3	<b>Integrate HVAC Spatial Requirements:</b> Determine the spatial requirements for mechanical equipment (air handling units, chillers, and mechanical rooms) and incorporate them into early-stage architectural planning.	Cooling Load Analysis	<i>Attendance</i>	Daily test
<i>Week-7</i>	3	<b>Optimize Air Distribution Layouts:</b> Design efficient air distribution systems, including the selection and placement of diffusers, grilles, and return air paths to ensure uniform thermal distribution and avoid "dead zones."	Cooling Load Analysis	<i>Attendance</i>	Daily test
<i>Week-8</i>	3	<b>Apply Energy-Efficient Strategies:</b> Implement passive design techniques—such as orientation, shading, and natural ventilation—to reduce the overall mechanical cooling load.	Cooling Load Analysis	<i>Attendance</i>	Daily test
<i>Week-9</i>	3	<b>Coordinate with Structural Systems:</b> Resolve potential conflicts between HVAC ductwork/piping and structural elements (beams, columns, slabs) by designing appropriate plenum depths.	HVAC System Selection	<i>Attendance</i>	Daily test
<i>Week-10</i>	3	<b>Analyze Building Management Systems (BMS):</b> Explain how sensors, automation, and smart controls can optimize HVAC energy consumption based on real-time occupancy and environmental conditions.	HVAC System Selection	<i>Attendance</i>	Daily test
<i>Week-11</i>	3	<b>Apply International and Local Codes:</b> Adhere to building codes (such as ASHRAE 90.1 or local Iraqi standards) regarding energy efficiency, ventilation rates (ASHRAE 62.1), and fire safety.	Spatial & Structural Integration	<i>Attendance</i>	Daily test
<i>Week-12</i>	3	<b>Specify HVAC Equipment:</b> Select equipment based on performance criteria, energy efficiency ratings (EER), and suitability for the specific climate and building function.	Spatial & Structural Integration	<i>Attendance</i>	Daily test
<i>Week-13</i>	3	<b>Design for Acoustics and Noise Control:</b> Incorporate noise attenuation strategies to mitigate the sound of mechanical	Spatial & Structural Integration	<i>Attendance</i>	Daily test

		equipment and airflow within occupied spaces.			
<i>Week-14</i>	3	<b>Document Mechanical Systems:</b> Produce accurate mechanical layout drawings, including ducting, piping, and Reflected Ceiling Plans (RCPs), suitable for technical tender sets.	Energy & Sustainability	<i>Attendance</i>	Daily test
<i>Week-15</i>	3	<b>Collaborate with Multidisciplinary Teams:</b> Develop the communication skills necessary to consult with mechanical engineers, ensuring that HVAC integration is harmonious with the architectural vision.	Energy & Sustainability	<i>Attendance</i>	Daily test

### 35. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

### 36. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ul style="list-style-type: none"> <li>• <b>Lechner, N. (2014).</b> <i>Heating, Cooling, Lighting: Sustainable Design Methods for Architects.</i> (This is the industry standard. Its sections on psychrometrics, heat transfer, and mechanical system integration are foundational for architectural students).</li> <li>• <b>Ching, F. D. K., &amp; Winkel, S. R. (2016).</b> <i>Building Codes Illustrated.</i> (Crucial for understanding life-safety requirements, fire-rated duct shafts, and egress standards that dictate HVAC layout).</li> <li>• <b>Iraqi National Building Code for Mechanical and HVAC Services.</b> (The mandatory local legal framework, essential for understanding regional standards for equipment sizing and ventilation requirements in Iraq).</li> </ul>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>ASHRAE Handbook (Fundamentals and HVAC Systems &amp; Equipment volumes).</b> (The global authority. Students should focus on the chapters regarding thermal comfort, psychrometrics, and HVAC system selection).</li> <li>• <b>Allen, E., &amp; Iano, J. (2019).</b> <i>The Architect's Studio Companion.</i> (The "bible" for early-stage MEP integration; it teaches students to size mechanical rooms and plenum heights <i>before</i> the structural design is finalized).</li> <li>• <b>Stein, B., &amp; Reynolds, J. S. (2009).</b> <i>Mechanical and Electrical Equipment for Buildings.</i> (A highly detailed reference for understanding the operation of different systems, from VRF to central Chilled Water plants).</li> </ul>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <b>Journals:</b> <ul style="list-style-type: none"> <li>• <i>ASHRAE Journal:</i> The primary source for industry-leading articles on HVAC efficiency and indoor environmental quality.</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• <i>Journal of Building Engineering</i>: Excellent for research on passive-mechanical hybrid systems in desert climates.</li> <li>• <b>Reports:</b> <ul style="list-style-type: none"> <li>• <b>UNEP (United Nations Environment Programme):</b> <i>District Cooling in Cities</i> (Relevant for understanding large-scale urban cooling strategies in Middle Eastern urban centers).</li> </ul> </li> <li>• <b>Scientific Focus:</b> <ul style="list-style-type: none"> <li>• <b>Hyde, R. (2000).</b> <i>Climate Responsive Design: A Study of Buildings in Moderate and Hot Humid Climates</i>. (Essential for Al-Muthanna’s specific desert context).</li> </ul> </li> </ul>
Electronic References, Websites	<ul style="list-style-type: none"> <li>• <b><u><a href="#">CIBSE (Chartered Institution of Building Services Engineers) Knowledge Portal</a></u></b>: Offers world-class technical guides on energy-efficient building services.</li> <li>• <b><u><a href="#">EnergyPlus (energyplus.net)</a></u></b>: A building energy simulation program that students can use to model the cooling loads of their studio projects.</li> <li>• <b><u><a href="#">Trane/Carrier Design Software</a></u></b>: Exploring these industry-leading commercial tools helps students understand how professional mechanical engineers calculate cooling loads.</li> <li>• <b><u><a href="#">ArchDaily MEP Category</a></u></b>: Provides a wealth of case studies showing how leading firms integrate mechanical ducts and equipment into complex architectural spaces.</li> </ul>

## Course Description Form

<b>1-Course Name:</b>	
Interior design	
<b>2-Course Code:</b>	
ARCH 326	
<b>3-Semester / Year:</b>	
Second Semester / 2025–2026	
<b>4-Description Preparation Date:</b>	
01/02/2026	
<b>5-Available Attendance Forms:</b>	
Attendance	
<b>6-Number of Credit Hours (Total) / Number of Units (Total)</b>	
75	
<b>7-Course administrator's name (mention all, if more than one name)</b>	
Name: saad hussain Email: <a href="mailto:saad@mu.edu.iq">saad@mu.edu.iq</a>	
<b>8-Course Objectives</b>	
<p><b>Course Objectives</b></p> <ol style="list-style-type: none"> <li>1. To introduce students to the fundamental concepts and theories of interior space design.</li> <li>2. To develop students' understanding of the relationship between interior spaces and human behavior, psychology and perception.</li> <li>3. To explore the principles of spatial organization, circulation, and zoning in interior environments.</li> <li>4. To examine the role of materials, colors, textures, and lighting in shaping interior spaces.</li> <li>5. To analyze historical and contemporary trends in interior design across different building types.</li> <li>6. To equip students with the skills to develop comprehensive interior design solutions for various functions.</li> </ol> <p>The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.</p>	<p><b>Course Objectives</b></p>
<b>9-Teaching and Learning Strategies</b>	

<b>Strategy</b>	<ol style="list-style-type: none"> <li>1. Theory Lectures Supported by Media: Utilizing presentations, images, and video clips to explain interior design concepts and precedents.</li> <li>2. Case Study Analysis: Analyzing exemplary interior projects to understand design strategies and solutions.</li> <li>3. Design Workshops: Hands-on sessions for students to develop interior design proposals and receive feedback.</li> <li>4. Material Library Exploration: Introducing students to actual material samples and their applications.</li> <li>5. Site Visits: Field visits to significant interior projects (residential, commercial, cultural) to observe real-world applications.</li> <li>6. Problem-Based Learning: Presenting students with interior design challenges and guiding them to develop creative solutions</li> </ol>
-----------------	---

### 10-Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	5	Introduction to Interior design	Introduction: Definition of interior design, scope of practice, and relationship with architecture	<i>Attendance</i>	<i>Daily test</i>
<i>Week-2</i>	5	Historical Context	History of Interior Design: From ancient civilizations to modern movements	<i>Attendance</i>	<i>Daily test</i>
<i>Week-3</i>	5	Contemporary Interior Design	Modern & Postmodern Interiors: 20th and 21st century trends and movements	<i>Attendance</i>	<i>Daily test</i>
<i>Week-4</i>	5	Human Factors	Ergonomics and Anthropometrics: Human scale, proportions, and accessibility in interior spaces	<i>Attendance</i>	<i>Daily test</i>
<i>Week-5</i>	5	Psychology of Space	Environmental Psychology: Perception, behavior, and emotional response to interior environments	<i>Attendance</i>	<i>Daily test</i>
<i>Week-6</i>	5	Spatial Organization	Spatial Planning: Zoning, circulation, and functional relationships	<i>Attendance</i>	<i>Daily test</i>
<i>Week-7</i>	5	Color Theory	Color in Interior Design: Psychology of color, color schemes, and application strategies	<i>Attendance</i>	<i>Daily test</i>
<i>Week-8</i>	5	Lighting Design	Interior Lighting: Natural and artificial lighting, layers of light, and lighting fixtures	<i>Attendance</i>	<i>Daily test</i>

<i>Week-9</i>	5	Materials and Finishes	Materiality: Flooring, wall finishes, ceiling treatments, and material selection criteria	<i>Attendance</i>	<i>Daily test</i>
<i>Week-10</i>	5	Furniture and Furnishings	Furniture Design: Furniture styles, selection, arrangement, and custom design	<i>Attendance</i>	<i>Daily test</i>
<i>Week-11</i>	5	Textiles and Accessories	Soft Furnishings: Fabrics, window treatments, rugs, and accessories	<i>Attendance</i>	<i>Daily test</i>
<i>Week-12</i>	5	Residential Interiors	Housing Design: Apartments, villas, and small residential units	<i>Attendance</i>	<i>Daily test</i>
<i>Week-13</i>	5	Commercial Interiors	Commercial Spaces: Offices, retail, restaurants, and hospitality	<i>Attendance</i>	<i>Daily test</i>
<i>Week-14</i>	5	Cultural and Public Interiors	Public Spaces: Museums, galleries, theaters, and institutional interiors	<i>Attendance</i>	<i>Daily test</i>
<i>Week-15</i>	5	Final Review	Reports and Discussions on Interior Space Concepts	<i>Attendance</i>	<i>Daily test</i>

### 11–Course Structure/ Lab

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>					
<i>Week-2</i>					
<i>Week-3</i>					
<i>Week-4</i>					
<i>Week-5</i>					
<i>Week-6</i>					
<i>Week-7</i>					
<i>Week-8</i>					
<i>Week-9</i>					
<i>Week-10</i>					
<i>Week-11</i>					
<i>Week-12</i>					
<i>Week-13</i>					
<i>Week-14</i>					
<i>Week-15</i>					

### 12–Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

### 13–Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ol style="list-style-type: none"> <li>1. Ching, Francis D.K. &amp; Binggeli, Corky (2022). Interior Design Illustrated. 4th ed. Hoboken: Wiley.</li> <li>2. Pile, John F. &amp; Gura, Judith (2021). History of Interior Design. 5th ed. Hoboken: Wiley.</li> </ol>
Main references (sources)	<ol style="list-style-type: none"> <li>1. Brooker, Graeme &amp; Stone, Sally (2019). Rereadings: Interior Architecture and the Design Principles of Remodelling Existing Buildings. London: RIBA Publishing.</li> <li>2. Caan, Shashi (2020). Rethinking Design and Interiors: Human Beings in the Built Environment. London: Laurence King Publishing.</li> </ol>
Recommended books and references (scientific journals, reports...)	<ol style="list-style-type: none"> <li>1-Journal of Interior Design (published by the Interior Design Education Council)</li> <li>2. Interior Design Magazine</li> </ol>
Electronic References, Websites	<ol style="list-style-type: none"> <li>1- Arch Daily - Interiors Section: <a href="https://www.archdaily.com/search/projects/categories/interiors">https://www.archdaily.com/search/projects/categories/interiors</a></li> <li>2. Dezeen - Interiors Section: <a href="https://www.dezeen.com/interiors">https://www.dezeen.com/interiors</a></li> <li>3. Interior Design Magazine Online: <a href="https://www.interiordesign">https://www.interiordesign</a></li> <li>4. Architectural Digest Online: <a href="https://www.architecturaldigest.com">https://www.architecturaldigest.com</a></li> </ol>

4th stage

## Course Description Form

<b>1.Course Name:</b>	
Architectural design IV	
<b>2.Course Code:</b>	
ARCH 401	
<b>3.Semester / Year:</b>	
First Semester / 2025–2026	
<b>4.Description Preparation Date:</b>	
01/09/2025	
<b>5.Available Attendance Forms:</b>	
Attendance	
<b>6.Number of Credit Hours (Total) / Number of Units (Total)</b>	
150	
<b>.7.Course administrator's name (mention all, if more than one name)</b>	
Name: PhD-Mohammed Bally Mahdi Email: <a href="mailto:engmohbaly@mu.edu.iq">engmohbaly@mu.edu.iq</a>	
<b>8.Course Objectives</b>	
<b>Course Objectives</b>	This course aims to introduce students to the fundamentals and concepts of urban design and housing in a practical way, through the application of theoretical concepts covered in previous courses. The course considers the efficient functional organization of activities and the optimal distribution of urban masses and spaces. The first semester includes a project. The course consists of two semesters; the first semester involves the redevelopment of an old residential area, while the second semester focuses on a housing project.
<b>9.Teaching and Learning Strategies</b>	
<b>Strategy</b>	<ol style="list-style-type: none"> <li>1. The student will learn the fundamentals and concepts of urban design.</li> <li>2. The student will learn the stages of redevelopment, including case studies.</li> <li>3. The student will learn how to design an urban design project.</li> <li>4. The student will learn how to design a residential project.</li> </ol>

## 10.Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	<i>2</i>	<i>General Definitions</i>	<i>A comprehensive overview of the history of Islamic architecture</i>	<i>collective criticism</i>	<i>Daily test</i>
<i>Week-2</i>	<i>2</i>	<i>Dwelling Analysis</i>	<i>The early centuries of the emergence of Islamic cities</i>	<i>collective criticism</i>	<i>Daily test</i>
<i>Week-3</i>	<i>2</i>	<i>Building Density and Coverage Ratio</i>	<i>Characteristics and features of Islamic cities</i>	<i>collective criticism</i>	<i>Daily test</i>
<i>Week-4</i>	<i>2</i>	<i>Housing Demographics</i>	<i>Scientific characteristics and importance of each city</i>	<i>collective criticism</i>	<i>Daily test</i>
<i>Week-5</i>	<i>2</i>	<i>Residential Complex.</i>	<i>Land use in the Islamic city</i>	<i>collective criticism</i>	<i>Daily test</i>
<i>Week-6</i>	<i>2</i>	<i>Field Visit to a Residential Complex.</i>	<i>Renaissance architecture</i>	<i>collective criticism</i>	<i>Daily test</i>
<i>Week-7</i>	<i>2</i>	<i>Residence Unit Standards.</i>	<i>Caravanserai architecture</i>	<i>collective criticism</i>	<i>Daily test</i>
<i>Week-8</i>	<i>2</i>	<i>Neighborhood Unit Concepts.</i>	<i>Sabil architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-9</i>	<i>2</i>	<i>Public Service Standards.</i>	<i>Military cities</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-10</i>	<i>2</i>	<i>Residential patterns.</i>	<i>Economic cities</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-11</i>	<i>2</i>	<i>Sustainable housing.</i>	<i>Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-12</i>	<i>2</i>	<i>Design characteristics of a residential street.</i>	<i>19th-Century Urban Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-13</i>	<i>2</i>	<i>Public and private duality in the residential unit.</i>	<i>Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-14</i>	<i>2</i>	<i>Theories of flexibility in the housing unit.</i>	<i>Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-15</i>	<i>2</i>	<i>Reports and discussions on the concepts of residential communities.</i>	<i>The Philosophy of Timeless Construction</i>	<i>Attendance</i>	<i>Daily test</i>

## 11.Course Structure/ Lab

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	<i>10</i>	<i>How to conduct studies for the project</i>	<i>Project handover - Project explanation - Forming study phase groups</i>	collective criticism	Ongoing assessment
<i>Week-2</i>	<i>10</i>	<i>Current situation studies, land uses, facades, urban landscape, viewing angles, elevations, current situation model</i>	<i>Studies – Initial Presentation</i>	collective criticism	Ongoing assessment
<i>Week-3</i>	<i>10</i>	<i>Current situation studies, land uses, facades, urban landscape, viewing angles, elevations, current situation model</i>	<i>Studies – Final Presentation</i>	collective criticism	Ongoing assessment
<i>Week-4</i>	<i>10</i>	<i>A summary of what the group presented in one painting</i>	<i>Studies – Poster Presentation</i>	collective criticism	Ongoing assessment
<i>Week-5</i>	<i>10</i>	<i>Land use, distribution of activities, pedestrian and vehicular traffic systems</i>	<i>Initial idea</i>	collective criticism	Ongoing assessment
<i>Week-6</i>	<i>10</i>	<i>Land use, layout of activities, pedestrian and vehicular traffic systems, a model illustrating the design concept</i>	<i>Urban Designs Initial Presentation Site 1:1000</i>	collective criticism	Ongoing assessment
<i>Week-7</i>	<i>10</i>	<i>Spatial organization, spatial relationships, elevations, the relationship</i>	<i>Secondary site presentation 1:500</i>	individual critique	Ongoing assessment

		<i>between mass and space</i>			
<i>Week-8</i>	<i>10</i>	<i>Spatial organization, spatial relationships, elevations, the relationship between mass and space</i>	<i>Pre-final presentation 1:500</i>	individual critique	Ongoing assessment
<i>Week-9</i>	<i>10</i>	<i>Designing a small urban project within a specific timeframe</i>	<i>classroom exercise</i>	individual critique	Ongoing assessment
<i>Week-10</i>	<i>10</i>	<i>Spatial organization, spatial relationships, project entrances, parking areas, services</i>	<i>Design concept for part of the project – Floor plans</i>	individual critique	Ongoing assessment
<i>Week-11</i>	<i>10</i>	<i>Spatial organization, spatial relationships, project entrances, parking areas, services, the relationship between mass and space</i>	<i>Initial presentation, horizontal diagrams</i>	collective criticism	Ongoing assessment
<i>Week-12</i>	<i>10</i>	<i>Spatial organization, spatial relationships, project entrances, parking areas, services, the relationship between mass and space, and facade treatment in harmony with local identity.</i>	<i>Providing detailed plans</i>	individual critique	Ongoing assessment
<i>Week-13</i>	<i>10</i>	<i>Spatial organization, spatial relationships, project entrances, parking areas, services, the</i>	<i>Secondary presentation, Landscape plans + Elevations + Sections</i>	individual critique	Ongoing assessment

		<i>relationship between mass and space, and section treatment in accordance with the building codes of the studied area.</i>			
<i>Week-14</i>	<i>10</i>	<i>Spatial organization, spatial relationships, project entrances, parking areas, services, the relationship between mass and space, treatment of sections in accordance with structural laws.</i>	<i>Pre-final submission of architectural designs</i>	collective criticism	Ongoing assessment
<i>Week-15</i>	<i>10</i>	<i>Spatial organization, spatial relationships, project entrances, parking areas, services, the relationship between mass and space, and section treatment in accordance with the building codes of the studied area.</i>	<i>Final urban and architectural designs presented</i>	individual critique	Ongoing assessment

## 12.Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 13.Learning and Teaching Resources

Required textbooks (curricular books, if any)

- 1- Architectural Design: A Conceptual Primer – Robert McCarter
- 2- Architecture: Form, Space & Order – Francis D.K. Ching

Main references (sources)	1- Architectural Graphics – Francis D.K. Ching 2- Design with Climate – Victor Olgyay 3- Complexity and Contradiction in Architecture – Robert Venturi
Recommended books and references (scientific journals, reports...)	1- Toward an Architecture – Le Corbusier 2- Journal of Urban Design
Electronic References, Websites	1- ArchDaily – Architecture Projects & Design <a href="https://www.archdaily.com">https://www.archdaily.com</a> 2- Dezeen – Architecture & Design <a href="https://www.dezeen.com/architecture">https://www.dezeen.com/architecture</a> 3- Designboom – Architecture <a href="https://www.designboom.com/architecture">https://www.designboom.com/architecture</a>

## Course Description Form

<b>1-Course Name:</b>	
Interior design	
<b>2-Course Code:</b>	
ARCH 402	
<b>3-Semester / Year:</b>	
First Semester / 2025–2026	
<b>4-Description Preparation Date:</b>	
01/09/2025	
<b>5-Available Attendance Forms:</b>	
Attendance	
<b>6-Number of Credit Hours (Total) / Number of Units (Total)</b>	
75	
<b>7-Course administrator's name (mention all, if more than one name)</b>	
Name: saad hussain Email: <a href="mailto:saad@mu.edu.iq">saad@mu.edu.iq</a>	
<b>8–Course Objectives</b>	
<b>Course Objectives</b>	<p>To introduce students to the fundamental concepts and theories of interior space design.</p> <p>2. To develop students' understanding of the relationship between interior spaces and human behavior, psychology, and perception.</p> <p>3. To explore the principles of spatial organization, circulation, and zoning in interior environments.</p> <p>4. To examine the role of materials, colors, textures, and lighting in shaping interior spaces.</p> <p>5. To analyze historical and contemporary trends in interior design across different building types.</p> <p>6. To equip students with the skills to develop comprehensive interior design solutions for various functions.</p>
<b>9–Teaching and Learning Strategies</b>	
<b>Strategy</b>	<p>1. Theory Lectures Supported by Media: Utilizing presentations, images, and video clips to explain interior design concepts and precedents.</p> <p>2. Case Study Analysis: Analyzing exemplary interior projects to understand design strategies and solutions.</p>

	<p>3. Design Workshops: Hands-on sessions for students to develop interior design proposals and receive feedback.</p> <p>4. Material Library Exploration: Introducing students to actual material samples and their applications.</p> <p>5. Site Visits: Field visits to significant interior projects (residential, commercial, cultural) to observe real-world applications.</p> <p>6. Problem-Based Learning: Presenting students with interior design challenges and guiding them to develop creative solutions</p>
--	---

10-Course Structure					
<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	5	Introduction to Interior design	Introduction: Definition of interior design, scope of practice, and relationship with architecture	<i>Attendance</i>	Daily test
<i>Week-2</i>	5	Historical Context	History of Interior Design: From ancient civilizations to modern movements	<i>Attendance</i>	<i>Daily test</i>
<i>Week-3</i>	5	Contemporary Interior Design	Modern & Postmodern Interiors: 20th and 21st century trends and movements	<i>Attendance</i>	<i>Daily test</i>
<i>Week-4</i>	5	Human Factors	Ergonomics and Anthropometrics: Human scale, proportions, and accessibility in interior spaces	<i>Attendance</i>	<i>Daily test</i>
<i>Week-5</i>	5	Psychology of Space	Environmental Psychology: Perception, behavior, and emotional response to interior environments	<i>Attendance</i>	<i>Daily test</i>

<i>Week-6</i>	5	Spatial Organization	Spatial Planning: Zoning, circulation, and functional relationships	<i>Attendance</i>	<i>Daily test</i>
<i>Week-7</i>	5	Color Theory	Color in Interior Design: Psychology of color, color schemes, and application strategies	<i>Attendance</i>	<i>Daily test</i>
<i>Week-8</i>	5	Lighting Design	Interior Lighting: Natural and artificial lighting, layers of light, and lighting fixtures	<i>Attendance</i>	<i>Daily test</i>
<i>Week-9</i>	5	Materials and Finishes	Materiality: Flooring, wall finishes, ceiling treatments, and material selection criteria	<i>Attendance</i>	<i>Daily test</i>
<i>Week-10</i>	5	Furniture and Furnishings	Furniture Design: Furniture styles, selection, arrangement, and custom design	<i>Attendance</i>	<i>Daily test</i>
<i>Week-11</i>	5	Textiles and Accessories	Soft Furnishings: Fabrics, window treatments, rugs, and accessories	<i>Attendance</i>	<i>Daily test</i>
<i>Week-12</i>	5	Residential Interiors	Housing Design: Apartments, villas, and small residential units	<i>Attendance</i>	<i>Daily test</i>
<i>Week-13</i>	5	Commercial Interiors	Commercial Spaces: Offices, retail, restaurants, and hospitality	<i>Attendance</i>	<i>Daily test</i>
<i>Week-14</i>	5	Cultural and Public Interiors	Public Spaces: Museums, galleries, theaters, and institutional interiors	<i>Attendance</i>	<i>Daily test</i>
<i>Week-15</i>	5	Final Review	Reports and Discussions on Interior Space Concepts	<i>Attendance</i>	<i>Daily test</i>

## 11–Course Structure/ Lab

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>					
<i>Week-2</i>					
<i>Week-3</i>					
<i>Week-4</i>					
<i>Week-5</i>					
<i>Week-6</i>					
<i>Week-7</i>					
<i>Week-8</i>					
<i>Week-9</i>					
<i>Week-10</i>					
<i>Week-11</i>					
<i>Week-12</i>					
<i>Week-13</i>					
<i>Week-14</i>					
<i>Week-15</i>					

## 12–Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc

## 13–Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ol style="list-style-type: none"> <li>1. Ching, Francis D.K. &amp; Binggeli, Corky (2022). Interior Design Illustrated. 4th ed. Hoboken: Wiley.</li> <li>2. Pile, John F. &amp; Gura, Judith (2021). History of Interior Design. 5th ed. Hoboken: Wiley.</li> </ol>
Main references (sources)	<ol style="list-style-type: none"> <li>1. Brooker, Graeme &amp; Stone, Sally (2019). Rereadings: Interior Architecture and the Design Principles of Remodelling Existing Buildings. London: RIBA Publishing.</li> <li>2. Caan, Shashi (2020). Rethinking Design and Interiors: Human Beings in the Built Environment. London: Laurence King Publishing.</li> </ol>
Recommended books and references (scientific journals, reports...)	<ol style="list-style-type: none"> <li>1-Journal of Interior Design (published by the Interior Design Educators Council)</li> <li>2. Interior Design Magazine</li> </ol>
Electronic References, Websites	<ol style="list-style-type: none"> <li>1- Arch Daily - Interiors Section: <a href="https://www.archdaily.com/search/projects/categories/interiors">https://www.archdaily.com/search/projects/categories/interiors</a></li> <li>2. Dezeen - Interiors Section: <a href="https://www.dezeen.com/interiors">https://www.dezeen.com/interiors</a></li> <li>3. Interior Design Magazine Online: <a href="https://www.interiordesign">https://www.interiordesign</a></li> <li>4. Architectural Digest Online: <a href="https://www.architecturaldigest.com">https://www.architecturaldigest.com</a></li> </ol>

## Course Description Form

1. Course Name:	
Advanced Building Technology	
2. Course Code:	
ARCH 403	
3. Semester / Year:	
First Semester	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hrs.	
7. Course administrator's name (mention all, if more than one name)	
Name: Ali Faleh Maziad Email: <a href="mailto:ali.faleh@mu.edu.iq">ali.faleh@mu.edu.iq</a>	
8. Course Objectives	
Course Objectives	<p>Explore and understand all the following systems, including their structure, construction, and world-renowned buildings built using these methods.</p> <ul style="list-style-type: none"> <li>• Form active systems               <ol style="list-style-type: none"> <li>1. Cable structures</li> <li>2. Tent structures</li> <li>3. Pneumatic structures</li> <li>4. Arch structures</li> </ol> </li> <li>• Vector systems               <ol style="list-style-type: none"> <li>1. Flat trusses</li> <li>2. Curved trusses</li> <li>3. Space trusses</li> </ol> </li> <li>• Section systems               <ol style="list-style-type: none"> <li>1. Beam structures</li> <li>2. Frame structures</li> <li>3. Slab structures</li> </ol> </li> <li>• Surface systems               <ol style="list-style-type: none"> <li>1. Plate structures</li> <li>2. Folded structures</li> <li>3. Shell structures</li> </ol> </li> </ul>

#### 4. Wall structures

#### 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>This course aims to provide students with a fundamental understanding of modern structural engineering techniques. It will cover the classification of structural systems, identifying their primary and secondary categories, and examining each system individually, including its construction, implementation, characteristics, advantages, disadvantages, and real-world examples of internationally renowned buildings constructed using each system. Through tests and assignments, students will have the opportunity to demonstrate their understanding and mastery of the topics covered. Their grades, active participation, and overall comprehension will collectively determine their level of knowledge in this field.</p>
-----------------	--

#### 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	<i>Give a general introduction to the topic of advanced building technologies and approved sources.</i>	<i>Introduction</i>	<i>Attendance</i>	<i>Homework assignments, descriptive tests, and exams</i>
<i>Week-2</i>	2	<i>Identifying the classifications of primary and secondary structural buildings</i>	<i>Classification of Structural Systems</i>	<i>Attendance</i>	<i>Homework assignments, descriptive tests, and exams</i>
<i>Week-3</i>	2	<i>Understanding this type of structure in terms of its composition and construction, and examples of world-famous buildings.</i>	<i>Cable structures</i>	<i>Attendance</i>	<i>Homework assignments, descriptive tests, and exams</i>
<i>Week-4</i>	2	<i>Understanding this type of structure in terms of its composition and construction, and examples of</i>	<i>Tent structures</i>	<i>Attendance</i>	<i>Homework assignments, descriptive tests, and exams</i>

		<i>world-famous buildings.</i>			
<i>Week-5</i>	<i>2</i>	<i>Understanding this type of structure in terms of its composition and construction, and examples of world-famous buildings.</i>	<i>Pneumatic structures</i>	<i>Attendance</i>	<i>Homework assignments, descriptive tests, and exams</i>
<i>Week-6</i>	<i>2</i>	<i>Understanding this type of structure in terms of its composition and construction, and examples of world-famous buildings.</i>	<i>Arch structures</i>	<i>Attendance</i>	<i>Homework assignments, descriptive tests, and exams</i>
<i>Week-7</i>	<i>2</i>	<i>Understanding this type of structure in terms of its composition and construction, and examples of world-famous buildings.</i>	<i>Trusses: flat, curved, space</i>	<i>Attendance</i>	<i>Homework assignments, descriptive tests, and exams</i>
<i>Week-8</i>	<i>2</i>	<i>Understanding this type of structure in terms of its composition and construction, and examples of world-famous buildings.</i>	<i>Beam structures</i>	<i>Attendance</i>	<i>Homework assignments, descriptive tests, and exams</i>
<i>Week-9</i>	<i>2</i>	<i>Understanding this type of structure in terms of its composition and construction, and examples of world-famous buildings.</i>	<i>Frame structures</i>	<i>Attendance</i>	<i>Homework assignments, descriptive tests, and exams</i>
<i>Week-10</i>	<i>2</i>	<i>Understanding this type of structure in terms of its composition and construction, and examples of world-famous buildings.</i>	<i>Slab structures</i>	<i>Attendance</i>	<i>Homework assignments, descriptive tests, and exams</i>

<i>Week-11</i>	<i>2</i>	<i>Understanding this type of structure in terms of its composition and construction, and examples of world-famous buildings.</i>	<i>Plate structures</i>	<i>Attendance</i>	<i>Homework assignments, descriptive tests, and exams</i>
<i>Week-12</i>	<i>2</i>	<i>Understanding this type of structure in terms of its composition and construction, and examples of world-famous buildings.</i>	<i>Folded structures</i>	<i>Attendance</i>	<i>Homework assignments, descriptive tests, and exams</i>
<i>Week-13</i>	<i>2</i>	<i>Understanding this type of structure in terms of its composition and construction, and examples of world-famous buildings.</i>	<i>Shell structures</i>	<i>Attendance</i>	<i>Homework assignments, descriptive tests, and exams</i>
<i>Week-14</i>	<i>2</i>	<i>Understanding this type of structure in terms of its composition and construction, and examples of world-famous buildings.</i>	<i>Wall structures</i>	<i>Attendance</i>	<i>Homework assignments, descriptive tests, and exams</i>
<i>Week-15</i>	<i>2</i>	<i>Final review of all topics and concepts studied in the course</i>	<i>Review</i>	<i>Attendance</i>	<i>Homework assignments, descriptive tests, and exams</i>

### 11.Course Structure/ Lab

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>					
<i>Week-2</i>					
<i>Week-3</i>					
<i>Week-4</i>					
<i>Week-5</i>					
<i>Week-6</i>					
<i>Week-7</i>					
<i>Week-8</i>					

<i>Week-9</i>					
<i>Week-10</i>					
<i>Week-11</i>					
<i>Week-12</i>					
<i>Week-13</i>					
<i>Week-14</i>					
<i>Week-15</i>					

## 12. Course Evaluation

- 1- Quizzes (30%)
- 2- Final exam (70%)

## 13. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ul style="list-style-type: none"> <li>• Structure systems, by Heino Engel,</li> <li>• Published by Deutsche Verlags-Anstalt, 1967.</li> </ul>
Main references (sources)	Structure systems, by Heino Engel, Published by Deutsche Verlags-Anstalt, 1967.
Recommended books and references (scientific journals, reports...)	Structures métalliques, Collectif Eyrolles, ISBN13: 978-2-212-13660-9.
Electronic References, Websites	Some specialized engineering websites

## Course Description Form

<b>1-Course Name:</b>	
Housing Planning	
<b>2-Course Code:</b>	
ARCH 404	
<b>3-Semester / Year:</b>	
second Semester / 2025-2026	
<b>4-Description Preparation Date:</b>	
01/09/2025	
<b>5-Available Attendance Forms:</b>	
Attendance	
<b>6-Number of Credit Hours (Total) / Number of Units (Total)</b>	
30	
<b>7-Course administrator's name (mention all, if more than one name)</b>	
Name: PhD-Mohammed Bally Mahdi Email: <a href="mailto:engmohbaly@mu.edu.iq">engmohbaly@mu.edu.iq</a>	
<b>8-Course Objectives</b>	
<b>Course Objectives</b>	<ol style="list-style-type: none"> <li>1. To achieve the university's objectives within the field of Architecture, with particular emphasis on the specialization of Housing.</li> <li>2. To provide sound academic instruction in contemporary housing theories and their application in urban contexts.</li> <li>3. To develop students' intellectual and analytical skills in evaluating housing projects and policies.</li> <li>4. To ensure the continuous graduation of highly qualified and competent professionals in housing design.</li> <li>5. To deliver education aligned with labour market needs and coordinated with the Engineers Association.</li> <li>6. To explore advanced concepts in housing design including mixed-use development, affordable housing, and housing for special needs</li> </ol>
<b>9-Teaching and Learning Strategies</b>	

<b>Strategy</b>	<ol style="list-style-type: none"> <li>1. Theory Lectures Supported by Media: Utilizing presentations, interactive media and video clips to reinforce conceptual explanations and link theory to practice</li> <li>2. Case Study Analysis: In-depth analysis of local and international housing projects to understand design strategies and solutions.</li> <li>3. Problem-Based Learning (PBL): Encouraging students to engage with real-world housing design problems to develop analytical and solution-oriented skills</li> <li>4. Field Visits: Site visits to diverse housing projects to observe real-world applications and learn from existing examples.</li> <li>5. Design Workshops: Collaborative sessions for developing housing design proposals.</li> <li>6. Guest Lectures: Inviting practicing architects and housing specialists to share professional experiences.</li> </ol>
-----------------	---

10-Course Structure					
<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	Review and Introduction	Introduction to Second Course: Review of first course concepts and introduction to advanced housing topics	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	Housing Typologies	Housing Types: Low-rise, medium-rise, high-rise housing - characteristics, advantages, and limitations	<i>Attendance</i>	<i>Daily test</i>
<i>Week-3</i>	2	Mixed-Use Development	Mixed-Use Housing: Integrating residential with commercial, office, and public functions	<i>Attendance</i>	<i>Daily test</i>
<i>Week-4</i>	2	Affordable Housing	Affordable Housing Strategies: Design approaches, cost reduction techniques, and	<i>Attendance</i>	<i>Daily test</i>

			policy frameworks		
<i>Week-5</i>	2	Housing for Special Needs	Inclusive Housing: Design for elderly, people with disabilities, and special user groups	<i>Attendance</i>	<i>Daily test</i>
<i>Week-6</i>	2	Field Visit	Site Visit to Affordable Housing Project	<i>Attendance</i>	<i>Daily test</i>
<i>Week-7</i>	2	Housing and Community	Community Development: Social sustainability, sense of community, and participatory design	<i>Attendance</i>	<i>Daily test</i>
<i>Week-8</i>	2	Housing and Culture	Cultural Context: Housing design responding to cultural values, traditions, and lifestyles	<i>Attendance</i>	<i>Daily test</i>
<i>Week-9</i>	2	Housing and Climate	Climate-Responsive Housing: Design strategies for different climatic zones	<i>Attendance</i>	<i>Daily test</i>
<i>Week-10</i>	2	Housing Rehabilitation	Housing Renovation: Adaptive reuse, rehabilitation of existing housing stock, and urban regeneration	<i>Attendance</i>	<i>Daily test</i>
<i>Week-11</i>	2	Co-housing and Collective Living	Alternative Housing Models: Co-housing, collective housing, and collaborative living concepts	<i>Attendance</i>	<i>Daily test</i>
<i>Week-12</i>	2	Housing and Technology	Smart Housing: Technology integration, home automation, and	<i>Attendance</i>	<i>Daily test</i>

			smart building systems		
<i>Week-13</i>	2	Housing Policies	Housing Policy and Regulation: Zoning, building codes, and housing laws	<i>Attendance</i>	<i>Daily test</i>
<i>Week-14</i>	2	Housing Economics	Housing Economics: Market analysis, feasibility studies, and housing finance	<i>Attendance</i>	<i>Daily test</i>
<i>Week-15</i>	2	Final Review	Reports and Discussions on Advanced Housing Concepts	<i>Attendance</i>	<i>Daily test</i>

### 11-Course Structure/ Lab

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>					
<i>Week-2</i>					
<i>Week-3</i>					
<i>Week-4</i>					
<i>Week-5</i>					
<i>Week-6</i>					
<i>Week-7</i>					
<i>Week-8</i>					
<i>Week-9</i>					
<i>Week-10</i>					
<i>Week-11</i>					
<i>Week-12</i>					
<i>Week-13</i>					
<i>Week-14</i>					
<i>Week-15</i>					

### 12-Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc

### 13-Learning and Teaching Resources

Required textbooks (curricular books any)

	<p>1- Christopher Charles Benninger – “Housing and Residential Planning”</p> <p>2- Michael J. Crosbie – “Residential Architecture: Design &amp; Deliver”</p>
Main references (sources)	<p>4- METRIC HANDBOOK PLANNING AND DESIGN DATA. David Adler. Architectural Press, Second edition, 1999</p> <p>5- G. H. W. Joseph – “Housing Design: A Manual”</p> <p>6- Hassan Fathy – “Architecture for the Poor / Building for the Future”</p>
Recommended books and references (scientific journals, reports...)	<p>3- Journal of Housing and the Built Environment.</p> <p>4- Journal of Urban Design</p>
Electronic References, Websites	<p>1- <a href="https://www.archdaily.com/search/projects/categories/housing">https://www.archdaily.com/search/projects/categories/housing</a></p> <p>2- UN-Habitat (تقارير عالمية عن الإسكان والحضر) <a href="https://unhabitat.org">https://unhabitat.org</a></p> <p>3- Dezeen – Architecture &amp; Housing</p> <p><a href="https://www.dezeen.com/architecture/housing/">https://www.dezeen.com/architecture/housing/</a></p>

## Course Description Form

<b>1-Course Name:</b>	
Architectural Theories I	
<b>2-Course Code:</b>	
ARCH 405	
<b>3-Semester / Year:</b>	
First Semester / 2025–2026	
<b>4-Description Preparation Date:</b>	
01/09/2025	
<b>5-Available Attendance Forms:</b>	
Attendance	
<b>6-Number of Credit Hours (Total) / Number of Units (Total)</b>	
30	
<b>7-Course administrator's name (mention all, if more than one name)</b>	
Name: PhD- Ahmed A. Rashid Kbah Email: <a href="mailto:ahmed.architect@mu.edu.iq">ahmed.architect@mu.edu.iq</a>	
<b>8-Course Objectives</b>	
<b>Course Objectives</b>	<p>1. To introduce students to the fundamental concepts of architectural theory, criticism, and philosophy.</p> <p>To explore the evolution of architectural thought and its relationship with human sciences.</p> <p>To develop students' critical thinking and analytical skills in evaluating architectural works.</p> <p>To examine structural and post-structural theories and their impact on contemporary architecture.</p> <p>To connect theoretical knowledge with design practice and sensory cognition</p>

## 9–Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem–Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.</p>
-----------------	---

## 10–Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	Introduction to Theory	<i>Theory / Theory of Criticism / Philosophy / Theory of Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-2</i>	2	Design and Criticism	<i>Design, Criticism / Act of Choice</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-3</i>	2	<i>Sensory Cognition</i>	<i>The Act of Receiving – The Most Prominent Theory of Sensory Cognition</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-4</i>	2	<i>Human Sciences Impact</i>	<i>The Impact of Human Sciences on the Orientations of Architecture Theory</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-5</i>	2	<i>Structural Theory</i>	<i>Structural Theory in Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-6</i>	2	<i>Post-Structural Theory</i>	<i>Post-Structural Theory in Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-7</i>	2	<i>Theory and Practice</i>	<i>Applying Theory to Design</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-8</i>	2	<i>Review and Discussion</i>	<i>Mid-Semester Review</i>	<i>Attendance</i>	<i>Oral participation</i>
<i>Week-9</i>	2	<i>Development in Architecture</i>	<i>Development / Folding in</i>	<i>Attendance</i>	<i>Daily test</i>

			<i>Architecture Specifically</i>		
<i>Week-10</i>	<i>2</i>	<i>Architecture and Philosophy</i>	<i>Philosophy of Space and Form</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-11</i>	<i>2</i>	<i>Theory of Criticism</i>	<i>Critical Approaches in Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-12</i>	<i>2</i>	<i>Sensory Perception Revisited</i>	<i>Revisiting Sensory Cognition in Design</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-13</i>	<i>2</i>	<i>Structuralism Revisited</i>	<i>Structuralism and Its Legacy</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-14</i>	<i>2</i>	<i>Post-Structuralism Revisited</i>	<i>Post-Structuralism and Deconstruction</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-15</i>	<i>2</i>	<i>Final Review</i>	<i>The Philosophy of Timeless Construction</i>	<i>Attendance</i>	<i>Final Assessment</i>

### 11–Course Structure/ Lab

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>					
<i>Week-2</i>					
<i>Week-3</i>					
<i>Week-4</i>					
<i>Week-5</i>					
<i>Week-6</i>					
<i>Week-7</i>					
<i>Week-8</i>					
<i>Week-9</i>					
<i>Week-10</i>					
<i>Week-11</i>					
<i>Week-12</i>					
<i>Week-13</i>					
<i>Week-14</i>					
<i>Week-15</i>					

### 1. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 2. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<p>1-Hays, K. Michael, ed. (2023). Architecture Theory since 1968. 2nd ed. New York: Columbia Books on Architecture and the City.</p> <p>2. Sykes, A. Krista, ed. (2022). The Architecture Reader: Essential Writings from Vitruvius to the Present. New York: George Braziller.</p> <p>3. Mallgrave, Harry Francis &amp; Goodman, David (2021). An Introduction to Architectural Theory: 1968 to the Present. 2nd ed. Chichester: Wiley-Blackwell.</p>
Main references (sources)	<p>1-Picon, Antoine (2021). The Materiality of Architecture. Minneapolis: University of Minnesota Press.</p> <p>2. Martin, Reinhold (2022). Knowledge Worlds: Media, Materiality, and the Making of the Modern University. New York: Columbia University Press.</p>
Recommended books and references (scientific journals, reports...)	<p>1-The Journal of Architecture Royal Institute of British Architects - RIBA)</p> <p>2. Architectural Theory Review</p>
Electronic References, Websites	<p>1-Arch Daily: <a href="https://www.archdaily.com">https://www.archdaily.com</a></p> <p>2. Dezeen: <a href="https://www.dezeen.com">https://www.dezeen.com</a></p>

## Course Description Form

<b>1. Course Name:</b>	
Islamic Arab Architecture I	
<b>2. Course Code:</b>	
ARCH 406	
<b>3. Semester / Year:</b>	
First Semester / 2025–2026	
<b>4. Description Preparation Date:</b>	
01/09/2025	
<b>5. Available Attendance Forms:</b>	
Attendance	
<b>6. Number of Credit Hours (Total) / Number of Units (Total)</b>	
30	
<b>7. Course administrator's name (mention all, if more than one name)</b>	
Name: PhD-anwar kareem najeem Email: anwar.kareem@mu.edu.iq	
<b>8. Course Objectives</b>	
<b>Course Objectives</b>	The objectives of the course are to understand the basic concepts of Islamic architecture, to study the cultural history of Islamic buildings, and how they were designed and utilized.
<b>9. Teaching and Learning Strategies</b>	
<b>Strategy</b>	Teaching strategies include in-person lectures, classroom assignments, student discussion groups, exams, and presentations.

10. Course Structure					
<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	<i>6</i>	<i>A comprehensive overview of the history of Islamic architecture</i>	<i>A comprehensive overview of the history of Islamic architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-2</i>	<i>6</i>	<i>The early centuries of the</i>	<i>The early centuries of the</i>	<i>Attendance</i>	<i>Daily test</i>

		<i>emergence of Islamic cities</i>	<i>emergence of Islamic cities</i>		
<i>Week-3</i>	<i>6</i>	<i>Characteristics and features of Islamic cities</i>	<i>Characteristics and features of Islamic cities</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-4</i>	<i>6</i>	<i>Scientific characteristics and importance of each city</i>	<i>Scientific characteristics and importance of each city</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-5</i>	<i>6</i>	<i>Land use in the Islamic city</i>	<i>Land use in the Islamic city</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-6</i>	<i>6</i>	<i>Renaissance architecture</i>	<i>Renaissance architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-7</i>	<i>6</i>	<i>Caravanserai architecture</i>	<i>Caravanserai architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-8</i>	<i>6</i>	<i>Sabil architecture</i>	<i>Sabil architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-9</i>	<i>6</i>	<i>Military cities</i>	<i>Military cities</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-10</i>	<i>6</i>	<i>Economic cities</i>	<i>Economic cities</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-11</i>	<i>6</i>	<i>Architecture</i>	<i>Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-12</i>	<i>6</i>	<i>19th-Century Urban Architecture</i>	<i>19th-Century Urban Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-13</i>	<i>6</i>	<i>Architecture</i>	<i>Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-14</i>	<i>6</i>	<i>Architecture</i>	<i>Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-15</i>	<i>6</i>	<i>The Philosophy of Timeless Construction</i>	<i>The Philosophy of Timeless Construction</i>	<i>Attendance</i>	<i>Daily test</i>

## 11. Course Structure/ Lab

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>					
<i>Week-2</i>					
<i>Week-3</i>					
<i>Week-4</i>					
<i>Week-5</i>					
<i>Week-6</i>					
<i>Week-7</i>					
<i>Week-8</i>					
<i>Week-9</i>					
<i>Week-10</i>					
<i>Week-11</i>					
<i>Week-12</i>					
<i>Week-13</i>					
<i>Week-14</i>					
<i>Week-15</i>					

## 12. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc

## 13. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ol style="list-style-type: none"> <li>1. Encyclopedia of Elements of Islamic Architecture, Yahya Waziri</li> <li>2. Islamic Architecture, Nabil Amer Al-Sarraf</li> <li>3. Arab Islamic Architecture, Abdul Qader Al-Rihawi</li> </ol>
Main references (sources)	<ol style="list-style-type: none"> <li>1. History of Architecture and Arts</li> <li>2. Islamic Architecture: Art and Creativity</li> <li>3. Urban Planning in Islamic Architecture</li> <li>4. Islamic Architecture and the Environment</li> </ol>
Recommended books and references (scientific journals, reports...)	<ol style="list-style-type: none"> <li>1. Arab Journal of Research on Islamic and Contemporary Cities</li> <li>2. Arab Studies Journal – featuring research on the history of Islamic cities</li> <li>3. Reports on the Origins of Cities in the Islamic State</li> </ol>
Electronic References, Websites	<p>archi-academy.com: The most powerful professional Arabic platform. It offers highly specialized paid courses in software (Revit, Rhino, Render) and not just articles.</p> <p>2. Bonyaan (www.bonyaan.net): Your first choice Arabic content. It focuses on projects in Saudi Arabia, Egypt, and Jordan in pure Arabic.</p> <p>3. Architect (Architect.com): Global, but distinguished by being a social network for architects (forums and job postings).</p> <p>4. Zaha Hadid Architects (www.zaha-hadid.com): professional interactive archive for studying the history of an architect's firm, not just a single project.</p>

## Course Description Form

<b>1.Course Name:</b>	
Architecture and Climate	
<b>2. Course Code:</b>	
ARCH 407	
<b>3.Semester / Year:</b>	
First Semester / 2025-2026	
<b>4.Description Preparation Date:</b>	
01/09/2025	
<b>5.Available Attendance Forms:</b>	
Attendance	
<b>6. Number of Credit Hours (Total) / Number of Units (Total)</b>	
30	
<b>7. Course administrator's name (mention all, if more than one name)</b>	
Name: Hadi Mohammed Shayal Email: <a href="mailto:hadi.mohammed@mu.edu.iq">hadi.mohammed@mu.edu.iq</a>	
<b>8. Course Objectives</b>	
<b>Course Objectives</b>	<p>: Development or transformation into competent architects and participants able to apply their intellectual, technical and administrative qualifications in planning, design, construction, maintenance, study, audit, calculation of the cost of urban and architectural environment projects and the rehabilitation of heritage buildings and addressing the problems of society on the urban and architectural sides.</p> <p>Use their skills in the study, analysis and design of buildings and identify the basics of guidance for architectural facades and design the functional spaces of each project individually and assess the cost of projects and use modern engineering tools and contribute to guiding the technical activities of architecture projects and related projects.</p> <p>To be able to actively participate in their communities and profession by developing oral, written and visual communication capabilities and schemes when working on the management of</p>

	<p>project engineering teams or participating in the preparation of general plans for their own projects and basic ideas.</p> <p>Launch a continuing education program that includes studies leading to obtaining work permits or obtaining a higher degree in engineering that provides continuous development of their technical abilities, management skills and professional experience.</p> <p>Improving graduates' understanding and understanding of professional requirements, ethics, quality of performance, safety, and sustainability that allows them to be architects aware of the problems of society and able to find appropriate solutions in the field of architecture.</p>
--	---

### 9. Teaching and Learning Strategies

<b>Strategy</b>	<ol style="list-style-type: none"> <li>1. Theory Lectures Supported by Media:</li> <li>2. Utilizing presentations, interactive maps, and video clips to reinforce conceptual explanations and link theory to practice.</li> <li>3. Problem-Based Learning (PBL): Encouraging students to engage with real-world urban design problems to develop analytical and solution-oriented skills.</li> </ol>
-----------------	--

### 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	<i>2</i>	<i>General Definitions</i>	Define concepts of climate, and natural environment & architecture	<i>Attendance</i>	<i>Daily test</i>
<i>Week-2</i>	<i>2</i>	<i>environmental architecture</i>	<i>Understand concepts of environmental architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-3</i>	<i>2</i>	<i>sustainability</i>	Define concepts of sustainability	<i>Attendance</i>	<i>Daily test</i>
<i>Week-4</i>	<i>2</i>	<i>sustainable architecture</i>	sustainable architecture	<i>Attendance</i>	<i>Daily test</i>

<i>Week-5</i>	2	lightings inside buildings and shadows	Calculate; lightings and shadows	<i>Attendance</i>	<i>Daily test</i>
<i>Week-6</i>	2	Exam	Exam	<i>Attendance</i>	Exam
<i>Week-7</i>	2	climatic factors, energy, and sustainability concepts	climatic factors, energy, and sustainability concepts	<i>Attendance</i>	<i>Daily test</i>
<i>Week-8</i>	2	principles of sustainability in architecture	Understand principles of sustainability in architecture	<i>Attendance</i>	<i>Daily test</i>
<i>Week-9</i>	2	designed buildings which adapted with natural environment	<i>Adapting buildings to the natural environment</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-10</i>	2	<i>Residential patterns.</i>	<i>Economic cities</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-11</i>	2	Analyze and design form, functions	<i>Be able to analyze and design form, functions, interiors of environmental buildings in hot arid regions.</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-12</i>	2	<i>engineering and technology to sustainable buildings</i>	able to apply modern knowledge, science, engineering and technology to sustainable buildings.	<i>Attendance</i>	<i>Daily test</i>
<i>Week-13</i>	2	<i>Insulation in buildings</i>	<i>Thermal and acoustic insulation in buildings</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-14</i>	2	<i>Permeability and thermal conductivity</i>	<i>Selection of building materials based on their thermal conductivity</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-15</i>	2	Exam	Exam	<i>Attendance</i>	Exam

## 11.Course Structure/ Lab

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>					
<i>Week-2</i>					
<i>Week-3</i>					
<i>Week-4</i>					
<i>Week-5</i>					
<i>Week-6</i>					
<i>Week-7</i>					
<i>Week-8</i>					
<i>Week-9</i>					
<i>Week-10</i>					
<i>Week-11</i>					
<i>Week-12</i>					
<i>Week-13</i>					
<i>Week-14</i>					
<i>Week-15</i>					

### 12.Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

### 13.Learning and Teaching Resources

Required textbooks (curricular books any)	1- Climate and architecture of hot regions
Main references (sources)	7- Architecture in a Climate of Change 8- Modern Architecture and Climate

## Course Description Form

1. Course Name:	
Surveying I	
2. Course Code:	
ARCH 408	
3. Semester / Year:	
First Semester / 2025-2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
45	
7. Course administrator's name (mention all, if more than one name)	
Name: Lecturer Hadi Mohammed Email: <a href="mailto:hadi.mohammed@mu.edu.iq">hadi.mohammed@mu.edu.iq</a>	
8. Course Objectives	
<b>Course Objectives</b>	This unit aims to provide an understanding of surveying by defining its scope, exploring its types, and addressing error management. It includes linear measurements such as distances, right angles, and obstacle handling. Key concepts like heights, datum, and benchmarks are distinguished, while levelling equipment and field procedures are applied to determine reduced levels and address errors. Profile levelling is practiced, and calculations extend to estimating areas of cross sections, irregular shapes, and polygons as well as calculating volumes.
9. Teaching and Learning Strategies	
<b>Strategy</b>	The main strategy that will be adopted in delivering this module is to encourage students' participation theoretically and practically, while at the same time refining and expanding their critical thinking skills. This will be achieved through lectures, interactive tutorials, and by considering fieldwork. Lectures are provided first as a pdf (e.g., in Google class), before being explained in the class. Then, students are given some examples to work on with some help

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	<i>1</i>	<i>General overview</i>	General Introduction and Definition of Engineering Surveying	<i>Attendance</i>	Daily Quiz
<i>Week-2</i>	<i>1</i>	Fundamentals of Surveying	Fundamentals of Surveying	<i>Attendance</i>	Discussion
<i>Week-3</i>	<i>1</i>	<i>Learning Linear Measurements</i>	Linear Measurements and Theory of Errors	<i>Attendance</i>	Daily Quiz and Report
<i>Week-4</i>	<i>1</i>	Overcoming obstacles	Overcoming obstacles in linear measurements	<i>Attendance</i>	Daily Quiz
<i>Week-5</i>	<i>1</i>	Leveling	Leveling	<i>Attendance</i>	Daily Quiz
<i>Week-6</i>	<i>1</i>	Errors of leveling	Errors of leveling	<i>Attendance</i>	Reports
<i>Week-7</i>	<i>1</i>	Exam	Exam	<i>Attendance</i>	Exam
<i>Week-8</i>	<i>1</i>	Closed leveling and adjustment	Closed leveling and adjustment	<i>Attendance</i>	Discussion
<i>Week-9</i>	<i>1</i>	Profile leveling	Profile leveling	<i>Attendance</i>	Daily Quiz and Report
<i>Week-10</i>	<i>1</i>	Area and Cross-section	Area and Cross-section I	<i>Attendance</i>	Daily Quiz
<i>Week-11</i>	<i>1</i>	Area and Cross-section	Area and Cross-section II	<i>Attendance</i>	Discussion
<i>Week-12</i>	<i>1</i>	Volume calculation	Volume calculation	<i>Attendance</i>	Reports
<i>Week-13</i>	<i>1</i>	Topographic maps, DSM, and DEM	Topographic maps, DSM, and DEM	<i>Attendance</i>	Daily Quiz
<i>Week-14</i>	<i>1</i>	<i>Exam</i>	<i>Exam</i>	<i>Attendance</i>	Exam
<i>Week-15</i>	<i>1</i>	<i>review</i>	<i>review</i>	<i>Attendance</i>	Discussion

## 11. Course Structure/ Lab

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	<i>2</i>	A lecture on fieldwork and necessary supplies	fieldwork and necessary supplies	<i>Attendance</i>	Discussion
<i>Week-2</i>	<i>2</i>	Learn about direct measurement tools and how to use them	direct measurement tools and how to use them	<i>Attendance</i>	<i>Reports+Daily Quiz</i>
<i>Week-3</i>	<i>2</i>	Fieldwork exercise in using measuring tapes	using measuring tapes	<i>Attendance</i>	Discussion
<i>Week-4</i>	<i>2</i>	Fieldwork exercise in using measuring tapes	using measuring tapes	<i>Attendance</i>	Daily Quiz and Report
<i>Week-5</i>	<i>2</i>	Field work exercise: surveying with a measuring tape, creating polygons	surveying with a measuring tape, creating polygons	<i>Attendance</i>	Discussion

<i>Week-6</i>	2	<i>Exam</i>	<i>Exam</i>	<i>Attendance</i>	
<i>Week-7</i>	2	leveling device, practice using the device, practice reading the leveling staff	leveling device, practice reading the leveling staff	<i>Attendance</i>	Discussion
<i>Week-8</i>	2	Practice reading the leveling staff and calculating points elevations	calculating points elevations	<i>Attendance</i>	Reports
<i>Week-9</i>	2	Using series leveling to calculate the levels of points	calculate the levels of points	<i>Attendance</i>	Reports
<i>Week-10</i>	2	Using closed leveling to calculate elevations of points and close at the starting point	closed leveling	<i>Attendance</i>	Reports
<i>Week-11</i>	2	Using closed leveling to calculate elevations of points and close at the starting point	closed leveling	<i>Attendance</i>	Daily Quiz
<i>Week-12</i>	2	profile and cross sections	profile and cross sections	<i>Attendance</i>	Reports
<i>Week-13</i>	2	profile and cross sections and Calculating quantities	Calculating quantities	<i>Attendance</i>	Reports
<i>Week-14</i>	2	Applying mapping methods to calculate distances and areas on maps	calculate distances and areas on maps	<i>Attendance</i>	Reports
<i>Week-15</i>	2	<i>Exam</i>	<i>Exam</i>	<i>Attendance</i>	

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Walker, J., & Awange, J. (2017). Surveying for Civil and M Engineers: Theory, Workshops, Practicals. Springer.
Main references (sources)	Uren and Price (2010), Surveying Engineers, Fourth edition, Palgr Macmillan.
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

## Course Description Form

1. Course Name:	
English Language III	
2. Course Code:	
UNI 006	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hrs	
7. Course administrator's name (mention all, if more than one name)	
Name: Ahmed Raad Email: <a href="mailto:ahmad_al_iraqi2000@mu.edu.iq">ahmad_al_iraqi2000@mu.edu.iq</a>	
8. Course Objectives	
<b>Course Objectives</b>	<b>This course aims to develop students' skills in speaking English, reading, listening, and writing articles, report, and learning Grammar</b>
9. Teaching and Learning Strategies	
<b>Strategy</b>	<b>An ability to apply knowledge of English Language; Reading, Writing, Speaking and Listening</b>

10. Course Structure					
<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	<i>D4, D3, D2, D1</i>	Tenses		Quiz
<i>Week-2</i>	2	<i>D4, D3, D2, D1</i>	Present Simple		Report
<i>Week-3</i>	2	<i>D4, D3, D2, D1</i>	Past Simple		Seminar
<i>Week-4</i>	2	<i>D4, D3, D2, D1</i>	Past Tenses		Exam
<i>Week-5</i>	2	<i>D4, D3, D2, D1</i>	Have to		Quiz
<i>Week-6</i>	2	<i>D4, D3, D2, D1</i>	<i>Future Form</i>		Report
<i>Week-7</i>	2	<i>D4, D3, D2, D1</i>	Information Questions		Seminar
<i>Week-8</i>	2	<i>D4, D3, D2, D1</i>	The Present Perfect		Exam
<i>Week-9</i>	2	<i>D4, D3, D2, D1</i>	The Present Perfect		Quiz
<i>Week-10</i>	2	<i>D4, D3, D2, D1</i>	articles		Report
<i>Week-11</i>	2	<i>D4, D3, D2, D1</i>	Writing emails		Seminar

<i>Week-12</i>	<i>2</i>	<i>D4, D3, D2, D1</i>	<i>Conditional</i>		<i>Exam</i>
<i>Week-13</i>	<i>2</i>	<i>D4, D3, D2, D1</i>	<i>Conditional</i>		<i>Quiz</i>
<i>Week-14</i>	<i>2</i>	<i>D4, D3, D2, D1</i>	<i>Model Verbs</i>		<i>Report</i>
<i>Week-15</i>	<i>2</i>	<i>D4, D3, D2, D1</i>	<i>Midterm</i>		<i>Exam</i>

### 11. Course Structure/ Lab

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>					
<i>Week-2</i>					
<i>Week-3</i>					
<i>Week-4</i>					
<i>Week-5</i>					
<i>Week-6</i>					
<i>Week-7</i>					
<i>Week-8</i>					
<i>Week-9</i>					
<i>Week-10</i>					
<i>Week-11</i>					
<i>Week-12</i>					
<i>Week-13</i>					
<i>Week-14</i>					
<i>Week-15</i>					

### 12. Course Evaluation

Quiz; 15 Mark, Report; 10 Mark, Exam; 10 Mark, Seminal; 5 Marks

### 13. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<b>New Headway post intermediate</b>
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

## Course Description Form

<b>1.Course Name:</b>	
Architectural design VI	
<b>2.Course Code:</b>	
ARCH 409	
<b>3.Semester / Year:</b>	
First Semester / 2025–2026	
<b>4.Description Preparation Date:</b>	
01/09/2025	
<b>5.Available Attendance Forms:</b>	
Attendance	
<b>6.Number of Credit Hours (Total) / Number of Units (Total)</b>	
150	
<b>.7.Course administrator's name (mention all, if more than one name)</b>	
Name: PhD-Mohammed Bally Mahdi Email: <a href="mailto:engmohbaly@mu.edu.iq">engmohbaly@mu.edu.iq</a>	
<b>8.Course Objectives</b>	
<b>Course Objectives</b>	This course aims to introduce students to the fundamentals and concepts of urban design and housing in a practical way, through the application of theoretical concepts covered in previous courses. The course considers the efficient functional organization activities and the optimal distribution of urban masses and spaces. The first semester includes a project. The course consists of two semesters; the first semester involves the redevelopment of an old residential area, while the second semester focuses on a housing project.
<b>9.Teaching and Learning Strategies</b>	
<b>Strategy</b>	<ol style="list-style-type: none"> <li>1. The student will learn the fundamentals and concepts of urban design.</li> <li>2. The student will learn the stages of redevelopment, including case studies.</li> <li>3. The student will learn how to design an urban design project.</li> <li>4. The student will learn how to design a residential project.</li> </ol>

## 10.Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	<i>2</i>	<i>General Definitions</i>	<i>A comprehensive overview of the history of Islamic architecture</i>	<i>collective criticism</i>	<i>Daily test</i>
<i>Week-2</i>	<i>2</i>	<i>Dwelling Analysis</i>	<i>The early centuries of the emergence of Islamic cities</i>	<i>collective criticism</i>	<i>Daily test</i>
<i>Week-3</i>	<i>2</i>	<i>Building Density and Coverage Ratio</i>	<i>Characteristics and features of Islamic cities</i>	<i>collective criticism</i>	<i>Daily test</i>
<i>Week-4</i>	<i>2</i>	<i>Housing Demographics</i>	<i>Scientific characteristics and importance of each city</i>	<i>collective criticism</i>	<i>Daily test</i>
<i>Week-5</i>	<i>2</i>	<i>Residential Complex.</i>	<i>Land use in the Islamic city</i>	<i>collective criticism</i>	<i>Daily test</i>
<i>Week-6</i>	<i>2</i>	<i>Field Visit to a Residential Complex.</i>	<i>Renaissance architecture</i>	<i>collective criticism</i>	<i>Daily test</i>
<i>Week-7</i>	<i>2</i>	<i>Residence Unit Standards.</i>	<i>Caravanserai architecture</i>	<i>collective criticism</i>	<i>Daily test</i>
<i>Week-8</i>	<i>2</i>	<i>Neighborhood Unit Concepts.</i>	<i>Sabil architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-9</i>	<i>2</i>	<i>Public Service Standards.</i>	<i>Military cities</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-10</i>	<i>2</i>	<i>Residential patterns.</i>	<i>Economic cities</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-11</i>	<i>2</i>	<i>Sustainable housing.</i>	<i>Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-12</i>	<i>2</i>	<i>Design characteristics of a residential street.</i>	<i>19th-Century Urban Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-13</i>	<i>2</i>	<i>Public and private duality in the residential unit.</i>	<i>Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-14</i>	<i>2</i>	<i>Theories of flexibility in the housing unit.</i>	<i>Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-15</i>	<i>2</i>	<i>Reports and discussions on the concepts of residential communities.</i>	<i>The Philosophy of Timeless Construction</i>	<i>Attendance</i>	<i>Daily test</i>

## 11.Course Structure/ Lab

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	<i>10</i>	<i>How to conduct studies for the project</i>	<i>Project handover - Project explanation - Forming study phase groups</i>	collective criticism	Ongoing assessment
<i>Week-2</i>	<i>10</i>	<i>Current situation studies, land uses, facades, urban landscape, viewing angles, elevations, current situation model</i>	<i>Studies – Initial Presentation</i>	collective criticism	Ongoing assessment
<i>Week-3</i>	<i>10</i>	<i>Current situation studies, land uses, facades, urban landscape, viewing angles, elevations, current situation model</i>	<i>Studies – Final Presentation</i>	collective criticism	Ongoing assessment
<i>Week-4</i>	<i>10</i>	<i>A summary of what the group presented in one painting</i>	<i>Studies – Poster Presentation</i>	collective criticism	Ongoing assessment
<i>Week-5</i>	<i>10</i>	<i>Land use, distribution of activities, pedestrian and vehicular traffic systems</i>	<i>Initial idea</i>	collective criticism	Ongoing assessment
<i>Week-6</i>	<i>10</i>	<i>Land use, layout of activities, pedestrian and vehicular traffic systems, a model illustrating the design concept</i>	<i>Urban Designs Initial Presentation Site 1:1000</i>	collective criticism	Ongoing assessment
<i>Week-7</i>	<i>10</i>	<i>Spatial organization, spatial relationships, elevations, the relationship</i>	<i>Secondary site presentation 1:500</i>	individual critique	Ongoing assessment

		<i>between mass and space</i>			
<i>Week-8</i>	<i>10</i>	<i>Spatial organization, spatial relationships, elevations, the relationship between mass and space</i>	<i>Pre-final presentation 1:500</i>	individual critique	Ongoing assessment
<i>Week-9</i>	<i>10</i>	<i>Designing a small urban project within a specific timeframe</i>	<i>classroom exercise</i>	individual critique	Ongoing assessment
<i>Week-10</i>	<i>10</i>	<i>Spatial organization, spatial relationships, project entrances, parking areas, services</i>	<i>Design concept for part of the project – Floor plans</i>	individual critique	Ongoing assessment
<i>Week-11</i>	<i>10</i>	<i>Spatial organization, spatial relationships, project entrances, parking areas, services, the relationship between mass and space</i>	<i>Initial presentation, horizontal diagrams</i>	collective criticism	Ongoing assessment
<i>Week-12</i>	<i>10</i>	<i>Spatial organization, spatial relationships, project entrances, parking areas, services, the relationship between mass and space, and facade treatment in harmony with local identity.</i>	<i>Providing detailed plans</i>	individual critique	Ongoing assessment
<i>Week-13</i>	<i>10</i>	<i>Spatial organization, spatial relationships, project entrances, parking areas, services, the</i>	<i>Secondary presentation, Landscape plans + Elevations + Sections</i>	individual critique	Ongoing assessment

		<i>relationship between mass and space, and section treatment in accordance with the building codes of the studied area.</i>			
<i>Week-14</i>	<i>10</i>	<i>Spatial organization, spatial relationships, project entrances, parking areas, services, the relationship between mass and space, treatment of sections in accordance with structural laws.</i>	<i>Pre-final submission of architectural designs</i>	collective criticism	Ongoing assessment
<i>Week-15</i>	<i>10</i>	<i>Spatial organization, spatial relationships, project entrances, parking areas, services, the relationship between mass and space, and section treatment in accordance with the building codes of the studied area.</i>	<i>Final urban and architectural designs presented</i>	individual critique	Ongoing assessment

## 12.Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 13.Learning and Teaching Resources

Required textbooks (curricular books, if any)

- 1- Architectural Design: A Conceptual Primer – Robert McCarter
- 2- Architecture: Form, Space & Order – Francis D.K. Ching

Main references (sources)	<p>9- Architectural Graphics – Francis D.K. Ching</p> <p>10- Design with Climate – Victor Olgyay</p> <p>11- Complexity and Contradiction in Architecture – Robert Venturi</p>
Recommended books and references (scientific journals, reports...)	<p>5- Toward an Architecture – Le Corbusier</p> <p>6- Journal of Urban Design</p>
Electronic References, Websites	<p>4- ArchDaily – Architecture Projects &amp; Design</p> <p><a href="https://www.archdaily.com">https://www.archdaily.com</a></p> <p>5- Dezeen – Architecture &amp; Design</p> <p><a href="https://www.dezeen.com/architecture">https://www.dezeen.com/architecture</a></p> <p>6- Designboom – Architecture</p> <p><a href="https://www.designboom.com/architecture">https://www.designboom.com/architecture</a></p>

## Course Description Form

3. Course Name:	
Landscape Design	
4. Course Code:	
ARCH 410	
5. Semester / Year:	
Second Semester / 2025–2026	
6. Description Preparation Date:	
01/02/2026	
7. Available Attendance Forms:	
Attendance	
8. Number of Credit Hours (Total) / Number of Units (Total)	
75	
9. Course administrator's name (mention all, if more than one name)	
Name: saad hussain Email: <a href="mailto:saad@mu.edu.iq">saad@mu.edu.iq</a>	
10. Course Objectives	
<p><b>Course Objectives</b></p>	<p>To introduce students to the fundamental concepts and theories of exterior space design and landscape architecture.</p> <p>2. To develop students' understanding of the relationship between exterior spaces and human behavior, psychology, and perception.</p> <p>3. To explore the principles of spatial organization, circulation, and zoning in exterior environments.</p> <p>4. To examine the role of hardscape materials, softscape elements, water features, and lighting in shaping exterior spaces.</p> <p>5. To analyze historical and contemporary trends in landscape design across different project types.</p> <p>6. To equip students with the skills to develop comprehensive exterior space design solutions for various functions.</p>

## 11. Teaching and Learning Strategies

<b>Strategy</b>	<ol style="list-style-type: none"> <li>1. Theory Lectures Supported by Media: Utilizing presentations, images, and video clips to explain exterior design concepts and precedents.</li> <li>2. Case Study Analysis: Analyzing exemplary landscape and exterior space projects to understand design strategies and solutions.</li> <li>3. Design Workshops: Hands-on sessions for students to develop exterior space design proposals and receive feedback.</li> <li>4. Site Analysis Exercises: Teaching students to analyze site conditions, topography, climate, and context.</li> <li>5. Site Visits: Field visits to significant exterior space projects (parks, plazas, gardens, campuses) to observe real-world applications.</li> <li>6. Problem-Based Learning: Presenting students with exterior space design challenges and guiding them to develop creative solutions.</li> </ol>
-----------------	--

## 12. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	Introduction to Exterior design	Introduction: Definition of exterior space design, landscape architecture scope, and relationship with architecture and urban design	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	Historical Context	History of Landscape Design: From ancient gardens (Persian, Roman, Islamic) to Renaissance and formal gardens	<i>Attendance</i>	<i>Daily test</i>
<i>Week-3</i>	2	Contemporary Landscape Design	Modern & Postmodern Landscapes: 20th and 21st century trends, movements, and influential landscape architects	<i>Attendance</i>	<i>Daily test</i>
<i>Week-4</i>	2	Site Analysis and Planning	Site Analysis: Topography,	<i>Attendance</i>	<i>Daily test</i>

			climate, microclimate, soil, vegetation, and contextual factors		
<i>Week-5</i>	2	Human Factors in Exterior Spaces	Environmental Psychology Outdoors: Perception, behavior, and emotional response to exterior environments	<i>Attendance</i>	<i>Daily test</i>
<i>Week-6</i>	2	Spatial Organization Outdoors	Exterior Spatial Planning: Zoning, circulation paths, nodes, edges, and functional relationships in exterior spaces	<i>Attendance</i>	<i>Daily test</i>
<i>Week-7</i>	2	Hardscape Materials	Hardscape Design: Pavements, walls, steps, ramps, and site furniture - materials, details, and applications	<i>Attendance</i>	<i>Daily test</i>
<i>Week-8</i>	2	Softscape Elements	Planting Design: Trees, shrubs, groundcover, planting strategies, seasonal considerations, and plant selection criteria	<i>Attendance</i>	<i>Daily test</i>
<i>Week-9</i>	2	Water Features	Water in Landscape: Fountains, pools, canals, water walls, and ecological water management	<i>Attendance</i>	<i>Daily test</i>
<i>Week-10</i>	2	Exterior Lighting	Outdoor Lighting: Functional, aesthetic, and security lighting - fixtures,	<i>Attendance</i>	<i>Daily test</i>

			techniques, and design strategies		
<i>Week-11</i>	2	Urban Public Spaces	Plazas and Squares: Design principles, activity generation, and successful urban space criteria	<i>Attendance</i>	<i>Daily test</i>
<i>Week-12</i>	2	Parks and Gardens	Park Design: Public parks, botanical gardens, and recreational open spaces	<i>Attendance</i>	<i>Daily test</i>
<i>Week-13</i>	2	Streetscapes and Pedestrian Spaces	Streetscape Design: Pedestrian zones, sidewalks, street furniture, and urban greening	<i>Attendance</i>	<i>Daily test</i>
<i>Week-14</i>	2	Sustainable Landscape Design	Ecological Design: Sustainable landscaping, rain gardens, green infrastructure, and native planting	<i>Attendance</i>	<i>Daily test</i>
<i>Week-15</i>	2	Final Review	Reports and Discussions on Exterior Space Concepts	<i>Attendance</i>	<i>Daily test</i>

### 13. Course Structure/ Lab

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>					
<i>Week-2</i>					
<i>Week-3</i>					
<i>Week-4</i>					
<i>Week-5</i>					
<i>Week-6</i>					
<i>Week-7</i>					
<i>Week-8</i>					
<i>Week-9</i>					
<i>Week-10</i>					
<i>Week-11</i>					
<i>Week-12</i>					
<i>Week-13</i>					

<i>Week-14</i>					
<i>Week-15</i>					

<b>14. Course Evaluation</b>	
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc	
<b>15. Learning and Teaching Resources</b>	
Required textbooks (curricular books any)	<ol style="list-style-type: none"> <li>1. Booth, Norman K. (2021). Basic Elements of Landscape Architectural Design. Long Grove: Waveland Press.</li> <li>2. Simonds, John Ormsbee &amp; Starke, Barry (2020). Landscape Architecture: A Manual of Environmental Planning and Design. 6th ed. New York: McGraw-Hill.</li> </ol>
Main references (sources)	<ol style="list-style-type: none"> <li>1. Jellicoe, Geoffrey &amp; Jellicoe, Susan (2018). The Landscape of Man: Shaping the Environment from Prehistory to the Present Day. 4th ed. London: Thames &amp; Hudson.</li> <li>2. Thompson, Ian (2022). Landscape Architecture: A Very Short Introduction. Oxford: Oxford University Press.</li> </ol>
Recommended books and references (scientific journals, reports...)	<ol style="list-style-type: none"> <li>1. Landscape Architecture Magazine (published by the American Society of Landscape Architects - ASLA)</li> <li>2. Topos: The International Review of Landscape Architecture and Urban Design</li> <li>3. Journal of Landscape Architecture (JoLA)</li> </ol>
Electronic References, Websites	<ol style="list-style-type: none"> <li>1. ArchDaily - Landscape Section: <a href="https://www.archdaily.com/search/projects/categories/landscape-architecture">https://www.archdaily.com/search/projects/categories/landscape-architecture</a></li> <li>2. Dezeen - Landscape Section: <a href="https://www.dezeen.com/tag/landscape">https://www.dezeen.com/tag/landscape</a></li> <li>3. American Society of Landscape Architects (ASLA): <a href="https://www.asla.org">https://www.asla.org</a></li> </ol>

## Course Description Form

<b>1. Course Name:</b>	
Architectural Theories II	
<b>2. Course Code:</b>	
ARCH 411	
<b>3. Semester / Year:</b>	
Second Semester / 2025–2026	
<b>4. Description Preparation Date:</b>	
01/02/2026	
<b>5. Available Attendance Forms:</b>	
Attendance	
<b>6. Number of Credit Hours (Total) / Number of Units (Total)</b>	
30	
<b>7. Course administrator's name (mention all, if more than one name)</b>	
Name: PhD-Ahmed Abdil-ali Rasheed Email: <a href="mailto:ahmed.architect@mu.edu.iq">ahmed.architect@mu.edu.iq</a>	
<b>8. Course Objectives</b>	
<b>Course Objectives</b>	<p>1. To introduce students to the fundamental concepts of architectural theory, criticism, and philosophy.</p> <p>To explore the evolution of architectural thought and its relationship with human science.</p> <p>To develop students' critical thinking and analytical skills in evaluating architectural work.</p> <p>To examine structural and post-structural theories and their impact on contemporary architecture.</p> <p>To connect theoretical knowledge with design practice and sensory cognition.</p>
<b>9. Teaching and Learning Strategies</b>	
<b>Strategy</b>	Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.

	<p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.</p>
--	--

10. Course Structure					
<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	Review and Introduction	Introduction to Second Course: Review of first course concepts and introduction to advanced theoretical frameworks	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	Phenomenology in Architecture	Phenomenology: The philosophy of perception, place, and genius loci - Norberg-Schulz, Pallasmaa, and Holl	<i>Attendance</i>	<i>Daily test</i>
<i>Week-3</i>	2	Semiotics and Architecture	Semiotics: Language, signs, symbols, and meaning in architecture - Eco, Broadbent, and Jencks	<i>Attendance</i>	<i>Daily test</i>
<i>Week-4</i>	2	Critical Regionalism	Critical Regionalism: Kenneth Frampton and the resistance to universal civilization	<i>Attendance</i>	<i>Daily test</i>
<i>Week-5</i>	2	Deconstructivism	Deconstruction in Architecture: Derrida, Eisenman, Tschumi, and the	<i>Attendance</i>	<i>Daily test</i>

			philosophy of difference		
<i>Week-6</i>	2	Postmodernism Revisited	Postmodern Architecture: Venturi, Moore, Graves, and the return of symbolism and ornament	<i>Attendance</i>	<i>Daily test</i>
<i>Week-7</i>	2	Feminism and Architecture	Feminist Theory: Gender, space, and the critique of patriarchal structures in architecture	<i>Attendance</i>	<i>Daily test</i>
<i>Week-8</i>	2	Review and Discussion	Mid-Semester Review	<i>Attendance</i>	<i>Oral participation</i>
<i>Week-9</i>	2	Architecture and Digital Culture	Digital Theory: Cybernetics, virtual space, and the impact of digital technologies on architectural thought	<i>Attendance</i>	<i>Daily test</i>
<i>Week-10</i>	2	Sustainability and Ethics	Ecological Theory: Environmental ethics, sustainable design theory, and deep ecology	<i>Attendance</i>	<i>Daily test</i>
<i>Week-11</i>	2	Architecture and Power	Critical Theory: Foucault, Lefebvre, and the politics of space and knowledge	<i>Attendance</i>	<i>Daily test</i>
<i>Week-12</i>	2	Actor-Network Theory		<i>Attendance</i>	<i>Daily test</i>
<i>Week-13</i>	2	Post-Colonial Theory	Post-Colonial Architecture: Identity, hybridity, and architecture in the global South	<i>Attendance</i>	<i>Daily test</i>
<i>Week-14</i>	2	Contemporary Debates	Current Theoretical Debates: The Anthropocene, non-human agencies, and materiality	<i>Attendance</i>	<i>Daily test</i>

<i>Week-15</i>	<i>2</i>	Final Review	Reports and Discussions on Contemporary Architectural Theory	<i>Attendance</i>	<i>Final Assessment</i>
----------------	----------	--------------	--	-------------------	-------------------------

### 11. Course Structure/ Lab

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>					
<i>Week-2</i>					
<i>Week-3</i>					
<i>Week-4</i>					
<i>Week-5</i>					
<i>Week-6</i>					
<i>Week-7</i>					
<i>Week-8</i>					
<i>Week-9</i>					
<i>Week-10</i>					
<i>Week-11</i>					
<i>Week-12</i>					
<i>Week-13</i>					
<i>Week-14</i>					
<i>Week-15</i>					

### 12. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

### 13. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<p>1-Hays, K. Michael, ed. (2023). Architecture Theory since 1968. 2nd ed. New York: Columbia Books on Architecture and the City.</p> <p>2. Sykes, A. Krista, ed. (2022). The Architecture Reader: Essential Writings from Vitruvius to the Present. New York: George Braziller.</p> <p>3. Mallgrave, Harry Francis &amp; Goodman, David (2021). An Introduction to Architectural Theory: 1968 to the Present. 2nd ed. Chichester: Wiley-Blackwell.</p>
Main references (sources)	<p>1-Picon, Antoine (2021). The Materiality of Architecture. Minneapolis: University of Minnesota Press.</p>

	2. Martin, Reinhold (2022). Knowledge Worlds: Media, Materiality, and the Making of the Modern University. New York: Columbia University Press.
Recommended books and references (scientific journals, reports...)	1-The Journal of Architecture Royal Institute of British Architects - RIBA) 2. Architectural Theory Review
Electronic References, Websites	1-Arch Daily: <a href="https://www.archdaily.com">https://www.archdaily.com</a>  2. Dezeen: <a href="https://www.dezeen.com">https://www.dezeen.com</a>

## Course Description Form

<b>1-Course Name:</b>	
Architecture Acoustics	
<b>2-Course Code:</b>	
ARCH 412	
<b>3-Semester / Year:</b>	
Second Semester / 2025–2026	
<b>4-Description Preparation Date:</b>	
01/02/2026	
<b>5-Available Attendance Forms:</b>	
Attendance	
<b>6-Number of Credit Hours (Total) / Number of Units (Total)</b>	
30	
<b>7-Course administrator's name (mention all, if more than one name)</b>	
Name: Dr. Mustafa Hussein Abo alwez Email: <a href="mailto:Mustafa.Hussein@mu.edu.iq">Mustafa.Hussein@mu.edu.iq</a>	
<b>8–Course Objectives</b>	
<b>Course Objectives</b>	Provide students with fundamental knowledge of architectural acoustics principles, enabling them to analyze sound behavior in spaces and design acoustically comfortable and efficient buildings.
<b>9–Teaching and Learning Strategies</b>	
<b>Strategy</b>	<ol style="list-style-type: none"> <li>1. Theoretical lecture</li> <li>2. Student search and reports</li> <li>3. Practical projects</li> </ol>

10–Course Structure					
<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	<i>2</i>	<i>Waves into.</i>	<i>Wave properties basics</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-2</i>	<i>2</i>	<i>Introduction</i>	<i>Sound fundamentals overview</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-3</i>	<i>2</i>	<i>Rooms Acoustics</i>	<i>Sound behavior indoors</i>	<i>Attendance</i>	<i>Daily test</i>

<i>Week-4</i>	<i>2</i>	<i>Room Acoustics</i>	<i>Reverberation calculations</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-5</i>	<i>2</i>	<i>Building Acoustics</i>	<i>Noise transmission principles</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-6</i>	<i>2</i>	<i>Building Acoustics</i>	<i>Vibration control basics</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-7</i>	<i>2</i>	<i>Sound insulation</i>	<i>STC and materials</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-8</i>	<i>2</i>	<i>Noise</i>	<i>Noise types effects</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-9</i>	<i>2</i>	<i>Measurement</i>	<i>SPL measurement methods</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-10</i>	<i>2</i>	<i>Residential</i>	<i>Housing acoustic design</i>	<i>Attendance</i>	<i>Project report</i>
<i>Week-11</i>	<i>2</i>	<i>Theaters</i>	<i>Auditorium acoustic criteria</i>	<i>Attendance</i>	<i>Project report</i>
<i>Week-12</i>	<i>2</i>	<i>Hospitals</i>	<i>Healthcare noise control</i>	<i>Attendance</i>	<i>Project report</i>
<i>Week-13</i>	<i>2</i>	<i>Libraries</i>	<i>Quiet space standards</i>	<i>Attendance</i>	<i>Project report</i>
<i>Week-14</i>	<i>2</i>	<i>Schools , colleges</i>	<i>Classroom acoustic requirements</i>	<i>Attendance</i>	<i>Project report</i>
<i>Week-15</i>	<i>2</i>	<i>Final exams</i>	<i>Comprehensive course assessment</i>	<i>Attendance</i>	<i>Daily test</i>

### 11–Course Structure/ Lab

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>					
<i>Week-2</i>					
<i>Week-3</i>					
<i>Week-4</i>					
<i>Week-5</i>					
<i>Week-6</i>					
<i>Week-7</i>					
<i>Week-8</i>					
<i>Week-9</i>					
<i>Week-10</i>					
<i>Week-11</i>					
<i>Week-12</i>					
<i>Week-13</i>					
<i>Week-14</i>					
<i>Week-15</i>					

## 12–Course Evaluation

20% exams , project report 10% final exam 70%

## 13–Learning and Teaching Resources

Required textbooks (curricular books, if any)	Architectural Acoustics – M. David Egan Acoustics and Noise Control – Michael Rettinge
Main references (sources)	Master Handbook of Acoustics – F. Alton Everest & Ken Pohlmann
Recommended books and references (scientific journals, reports...)	Building Acoustics – Tor Erik Vigran
Electronic References, Websites	Acoustical Society of America – <a href="http://www.acousticalsociety.org">www.acousticalsociety.org</a> International Organization for Standardization - <a href="http://www.iso.org">www.iso.org</a>

## Course Description Form

<b>1.Course Name:</b>	
Housing	
<b>2.Course Code:</b>	
ARCH 413	
<b>3. Semester / Year:</b>	
Second Semester / 2025–2026	
<b>4.Description Preparation Date:</b>	
01/02/2026	
<b>5.Available Attendance Forms:</b>	
Attendance	
<b>6.Number of Credit Hours (Total) / Number of Units (Total)</b>	
30	
<b>7.Course administrator's name (mention all, if more than one name)</b>	
Name: PhD-Mohammed Bally Mahdi Email: <a href="mailto:engmohbaly@mu.edu.iq">engmohbaly@mu.edu.iq</a>	
<b>8.Course Objectives</b>	
<b>Course Objectives</b>	<ol style="list-style-type: none"> <li>1. To achieve the university’s objectives within the field of Architecture, with particular emphasis on the specialization of Housing.</li> <li>2. To provide sound academic instruction in the major theories that have influenced urban design in cities.</li> <li>3. To develop the intellectual and analytical skills of architects, urban designers, and planners.</li> <li>4. To ensure the continuous graduation of highly qualified and competent professionals.</li> <li>5. To deliver education aligned with labor market needs and coordinated with the Engineers Association.</li> </ol>
<b>9.Teaching and Learning Strategies</b>	
<b>Strategy</b>	<ol style="list-style-type: none"> <li>1. Theory Lectures Supported by Media:</li> <li>2. Utilizing presentations, interactive maps, and video clips to reinforce conceptual explanations and link theory to practice.</li> <li>3. Problem–Based Learning (PBL): Encouraging students to engage with real–world urban design problems to develop analytical and solution–oriented skills.</li> </ol>

## 10.Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	<i>2</i>	<i>General Definitions</i>	<i>A comprehensive overview of the history of Islamic architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-2</i>	<i>2</i>	<i>Dwelling Analysis</i>	<i>The early centuries of the emergence of Islamic cities</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-3</i>	<i>2</i>	<i>Building Density and Coverage Ratio</i>	<i>Characteristics and features of Islamic cities</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-4</i>	<i>2</i>	<i>Housing Demographics</i>	<i>Scientific characteristics and importance of each city</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-5</i>	<i>2</i>	<i>Residential Complex.</i>	<i>Land use in the Islamic city</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-6</i>	<i>2</i>	<i>Field Visit to a Residential Complex.</i>	<i>Renaissance architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-7</i>	<i>2</i>	<i>Residence Unit Standards.</i>	<i>Caravanserai architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-8</i>	<i>2</i>	<i>Neighborhood Unit Concepts.</i>	<i>Sabil architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-9</i>	<i>2</i>	<i>Public Service Standards.</i>	<i>Military cities</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-10</i>	<i>2</i>	<i>Residential patterns.</i>	<i>Economic cities</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-11</i>	<i>2</i>	<i>Sustainable housing.</i>	<i>Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-12</i>	<i>2</i>	<i>Design characteristics of a residential street.</i>	<i>19th-Century Urban Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-13</i>	<i>2</i>	<i>Public and private duality in the residential unit.</i>	<i>Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-14</i>	<i>2</i>	<i>Theories of flexibility in the housing unit.</i>	<i>Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-15</i>	<i>2</i>	<i>Reports and discussions on the concepts of residential communities.</i>	<i>The Philosophy of Timeless Construction</i>	<i>Attendance</i>	<i>Daily test</i>

## 11.Course Structure/ Lab

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>					
<i>Week-2</i>					
<i>Week-3</i>					
<i>Week-4</i>					
<i>Week-5</i>					
<i>Week-6</i>					
<i>Week-7</i>					
<i>Week-8</i>					
<i>Week-9</i>					
<i>Week-10</i>					
<i>Week-11</i>					
<i>Week-12</i>					
<i>Week-13</i>					
<i>Week-14</i>					
<i>Week-15</i>					

## 12.Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc

## 13.Learning and Teaching Resources

Required textbooks (curricular books any)	1- Christopher Charles Benninger – “Housing and Residential Planning” 2- Michael J. Crosbie – “Residential Architecture: Design & Deliver”
Main references (sources)	12- METRIC HANDBOOK PLANNING AND DESIGN DATA. David Adler. Architectural Press, Second edition, 1999 13- G. H. W. Joseph – “Housing Design: A Manual” 14- Hassan Fathy – “Architecture for the Poor / Building for the Future”
Recommended books and references (scientific journals, reports...)	7- Journal of Housing and the Built Environment. 8- Journal of Urban Design
Electronic References, Websites	4- <a href="https://www.archdaily.com/search/projects/categories/housing">https://www.archdaily.com/search/projects/categories/housing</a>

5- UN-Habitat (تقارير عالمية عن الإسكان والحضر) <https://unhabitat.org>

6- Dezeen – Architecture & Housing

<https://www.dezeen.com/architecture/housing/>

## Course Description Form

<b>1. Course Name:</b>	
Islamic Arab Architecture II	
<b>2. Course Code:</b>	
ARCH 414	
<b>3. Semester / Year:</b>	
Second Semester / 2025–2026	
<b>4. Description Preparation Date:</b>	
01/02/2026	
<b>5. Available Attendance Forms:</b>	
Attendance	
<b>6. Number of Credit Hours (Total) / Number of Units (Total)</b>	
30	
<b>7. Course administrator's name (mention all, if more than one name)</b>	
Name: PhD-anwar kareem najeem Email: <a href="mailto:anwar.kareem@mu.edu.iq">anwar.kareem@mu.edu.iq</a>	
<b>8. Course Objectives</b>	
<b>Course Objectives</b>	The objectives of the course are to understand the basic concepts of Islamic architecture, to study the cultural history of Islamic buildings, and how they were designed and utilized.
<b>9. Teaching and Learning Strategies</b>	
<b>Strategy</b>	Teaching strategies include in-person lectures, classroom assignments, student discussion groups, exams, and presentations.

10. Course Structure					
<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	6	<i>A comprehensive overview of the history of Islamic architecture</i>	<i>A comprehensive overview of the history of Islamic architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-2</i>	6	<i>The early centuries of the</i>	<i>The early centuries of the</i>	<i>Attendance</i>	<i>Daily test</i>

		<i>emergence of Islamic cities</i>	<i>emergence of Islamic cities</i>		
<i>Week-3</i>	<i>6</i>	<i>Characteristics and features of Islamic cities</i>	<i>Characteristics and features of Islamic cities</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-4</i>	<i>6</i>	<i>Scientific characteristics and importance of each city</i>	<i>Scientific characteristics and importance of each city</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-5</i>	<i>6</i>	<i>Land use in the Islamic city</i>	<i>Land use in the Islamic city</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-6</i>	<i>6</i>	<i>Renaissance architecture</i>	<i>Renaissance architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-7</i>	<i>6</i>	<i>Caravanserai architecture</i>	<i>Caravanserai architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-8</i>	<i>6</i>	<i>Sabil architecture</i>	<i>Sabil architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-9</i>	<i>6</i>	<i>Military cities</i>	<i>Military cities</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-10</i>	<i>6</i>	<i>Economic cities</i>	<i>Economic cities</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-11</i>	<i>6</i>	<i>Architecture</i>	<i>Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-12</i>	<i>6</i>	<i>19th-Century Urban Architecture</i>	<i>19th-Century Urban Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-13</i>	<i>6</i>	<i>Architecture</i>	<i>Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-14</i>	<i>6</i>	<i>Architecture</i>	<i>Architecture</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-15</i>	<i>6</i>	<i>The Philosophy of Timeless Construction</i>	<i>The Philosophy of Timeless Construction</i>	<i>Attendance</i>	<i>Daily test</i>

## 11. Course Structure/ Lab

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>					
<i>Week-2</i>					
<i>Week-3</i>					
<i>Week-4</i>					
<i>Week-5</i>					
<i>Week-6</i>					
<i>Week-7</i>					
<i>Week-8</i>					
<i>Week-9</i>					
<i>Week-10</i>					
<i>Week-11</i>					
<i>Week-12</i>					
<i>Week-13</i>					
<i>Week-14</i>					
<i>Week-15</i>					

## 12. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc

## 13. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ol style="list-style-type: none"> <li>1. Encyclopedia of Elements of Islamic Architecture, Yahya Waziri</li> <li>2. Islamic Architecture, Nabil Amer Al-Sarraf</li> <li>3. Arab Islamic Architecture, Abdul Qader Al-Rihawi</li> </ol>
Main references (sources)	<ol style="list-style-type: none"> <li>1. History of Architecture and Arts</li> <li>2. Islamic Architecture: Art and Creativity</li> <li>3. Urban Planning in Islamic Architecture</li> <li>4. Islamic Architecture and the Environment</li> </ol>
Recommended books and references (scientific journals, reports...)	<ol style="list-style-type: none"> <li>1. Arab Journal of Research on Islamic and Contemporary Cities</li> <li>2. Arab Studies Journal – featuring research on the history of Islamic cities</li> <li>3. Reports on the Origins of Cities in the Islamic State</li> </ol>
Electronic References, Websites	<p>archi-academy.com: The most powerful professional Arabic platform. It offers highly specialized paid courses in software (Revit, Rhino, Render) and not just articles.</p> <p>2. Bonyaan (www.bonyaan.net): Your first choice Arabic content. It focuses on projects in Saudi Arabia, Egypt, and Jordan in pure Arabic.</p> <p>3. Architect (Architect.com): Global, but distinguished by being a social network for architects (forums and job postings).</p> <p>4. Zaha Hadid Architects (www.zaha-hadid.com): professional interactive archive for studying the history of an architect's firm, not just a single project.</p>

## Course Description Form

1. Course Name:	
Urban Design Theories	
2. Course Code:	
ARC 415	
3. Semester / Year:	
Second Semester / 2025–2026	
4. Description Preparation Date:	
01/02/2026	
5. Available Attendance Forms:	
<b>In-person + Online</b>	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30	
7. Course administrator's name (mention all, if more than one name)	
Name: Assistant Lecturer Zainab Mohamed Hassan Email: <a href="mailto:zainb.mohammed@mu.edu.iq">zainb.mohammed@mu.edu.iq</a>	
8. Course Objectives	
Course Objectives	Introducing the student to the concepts and theories of urban design in order to enable them understand the relationship between the planning level and the architectural level of the city
9. Teaching and Learning Strategies	
<b>Strategy</b>	<ol style="list-style-type: none"> <li>1. <b>Theoretical lectures supported by multimedia:</b> Utilizing presentations, interactive maps, and video materials to reinforce conceptual explanations and to bridge theory with practical application.</li> <li>2. <b>Problem-based learning.</b></li> <li>3. <b>Active learning:</b> Students are encouraged to engage continuously through classroom discussions, case studies, and the analysis of real-world examples drawn from the local context.</li> <li>4. <b>Project-based learning:</b> The program is based on the implementation of individual and group planning projects that enhance analytical skills, critical thinking, and integrated design capabilities.</li> </ol>

5. **Posing deep and impactful questions** regarding the project concept and its practical application.
6. **Fostering a spirit of constructive criticism** among students.
7. **Guiding students to analyze ideas** and to understand the differences between theoretical concepts and their practical approaches in real-world contexts.

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	۲	Urban Space	Urban Space	<i>Attendance</i>	<b>Discussion</b>
<i>Week-2</i>	۲	Urban Design and Urban Structure	Urban Design and Urban Structure	<i>Attendance</i>	<b>Daily Quiz and Report</b>
<i>Week-3</i>	۲	Urban Regeneration Approaches	Urban Regeneration Approaches	<i>Attendance</i>	<b>Daily Quiz</b>
<i>Week-4</i>	۲	Streets within the Residential Neighborhood	Streets within the Residential Neighborhood	<i>Attendance</i>	<b>Seminar</b>
<i>Week-5</i>	۲	Sustainable Urban Design	Sustainable Urban Design	<i>Attendance</i>	<b>Reports</b>
<i>Week-6</i>	۲	Complete Streets	Complete Streets	<i>Attendance</i>	<b>Reports</b>
<i>Week-7</i>	۲	Social Determinants of the City	Social Determinants of the City	<i>Attendance</i>	<b>Daily Quiz</b>
<i>Week-8</i>	۲	The City and Urban Growth	The City and Urban Growth	<i>Attendance</i>	<b>Discussion</b>
<i>Week-9</i>	۲	City Morphology	City Morphology	<i>Attendance</i>	<b>Report</b>
<i>Week-10</i>	۲	The Concept of Phenomenology in Urban Design	The Concept of Phenomenology in Urban Design	<i>Attendance</i>	<b>Discussion</b>
<i>Week-11</i>	۲	Urban Infill Development	Urban Infill Development	<i>Attendance</i>	<b>Daily Quiz</b>
<i>Week-12</i>	۲	Theories of Urban Form Perception and Studies of Urban Landscape Perception	Theories of Urban Form Perception and Studies of Urban Landscape Perception	<i>Attendance</i>	<b>Report</b>
<i>Week-13</i>	۲	Cognitive Sciences and Their Relationship to Urban Design Theories	Cognitive Sciences and Their Relationship to Urban Design Theories	<i>Attendance</i>	<b>Daily Quiz</b>
<i>Week-14</i>	۲	Formal Characteristics of Open Spaces and Their Primary and Secondary Components	Formal Characteristics of Open Spaces and Their Primary and Secondary Components	<i>Attendance</i>	<b>Discussion</b>
<i>Week-15</i>	۲	Figure–Ground Theory and Linkage Theory / Place Theory	Figure–Ground Theory and Linkage Theory / Place Theory	<i>Attendance</i>	<b>Discussion</b>

## 11.Course Structure/ Lab

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>					
<i>Week-2</i>					
<i>Week-3</i>					
<i>Week-4</i>					
<i>Week-5</i>					
<i>Week-6</i>					
<i>Week-7</i>					
<i>Week-8</i>					
<i>Week-9</i>					
<i>Week-10</i>					
<i>Week-11</i>					
<i>Week-12</i>					
<i>Week-13</i>					
<i>Week-14</i>					
<i>Week-15</i>					

## 12.Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 13.Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ul style="list-style-type: none"> <li>Urban Design – Foundations and Concepts by Abdel-Baqi Ibrahim</li> <li>Urban Spaces – Formation and Design</li> </ul>
Main references (sources)	<ul style="list-style-type: none"> <li>Urbanism in Contemporary Thought – Book</li> <li>The Urban Environment: Between Planning and Design – Book</li> </ul>
Recommended books and references (scientific journals, reports...)	<b>The Concise Townscape</b> – Gordon Cullen <b>Image of the City</b> – Kevin Lynch <b>Public Places Urban Spaces</b> – Matthew Carmona
Electronic References, Websites	<a href="https://www.altes-neuland-frankfurt.com/ar/altes-neuland-weltweit/singapur">https://www.altes-neuland-frankfurt.com/ar/altes-neuland-weltweit/singapur</a> The Singaporean Experience  <a href="https://en.wikipedia.org/wiki/Complete_streets">https://en.wikipedia.org/wiki/Complete_streets</a> <a href="https://blog.bentley.com/benefits-of-a-complete-streets-design-model/">https://blog.bentley.com/benefits-of-a-complete-streets-design-model/</a> <a href="#">Redefining “Complete Streets”   HR Green, Inc.</a> <a href="#">Complete Streets: Updated Engineering Standards &amp; Guidelines (nanaimo.ca)</a> Complete street design – ITDP – SMART CITY

## Course Description Form

<b>1-Course Name:</b>	
Technical Construction	
<b>2-Course Code:</b>	
ARCH 416	
<b>3-Semester / Year:</b>	
Second Semester / 2025–2026	
<b>4-Description Preparation Date:</b>	
01/02/2026	
<b>5-Available Attendance Forms:</b>	
Attendance	
<b>6-Number of Credit Hours (Total) / Number of Units (Total)</b>	
30	
<b>7-Course administrator's name (mention all, if more than one name)</b>	
Name: Husham muhammed Email: <a href="mailto:Husham.muhammed@mu.edu.iq">Husham.muhammed@mu.edu.iq</a>	
<b>8–Course Objectives</b>	
<b>Course Objectives</b>	<ol style="list-style-type: none"> <li>1–To provide students with advanced knowledge of building construction systems and technologies.</li> <li>2. To develop students' understanding of the relationship between architectural design and construction methods.</li> <li>3. To introduce students to modern and innovative construction materials and techniques.</li> <li>4. To enhance students' ability to solve technical problems related to building implementation.</li> <li>5. To prepare students for the integration of building services (mechanical, electrical, plumbing) within the construction system.</li> <li>6. To connect theoretical knowledge with practical applications through case studies and project analysis.</li> </ol>
<b>9–Teaching and Learning Strategies</b>	
<b>Strategy</b>	<ol style="list-style-type: none"> <li>1.Theory Lectures Supported by Media: Utilizing presentations, 3D models, and video clips to explain construction systems and details.</li> <li>2. Technical Drawing Workshops: Hands–on sessions for students to practice drawing construction details and sections.</li> <li>3. Case Study Analysis: Analyzing existing buildings to understand their construction systems and techniques.</li> </ol>

	<p>4. Site Visits: Field visits to construction sites to observe real-world application of construction technologies.</p> <p>5. Problem-Based Learning: Presenting students with technical construction problems and guiding them to develop solutions.</p>
--	---

<b>10-Course Structure</b>					
<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	<i>Introduction to Technical Construction</i>	<i>Introduction: Definition, importance, and relationship with architectural design</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-2</i>	2	<i>Understanding Building Systems</i>	<i>Building Systems Overview: Structural, envelope, interior, and service systems</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-3</i>	2	<i>Advanced Structural Systems</i>	<i>Structural Systems: Skeleton frames, load-bearing walls, and form-active structures</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-4</i>	2	<i>Long-Span Structures</i>	<i>Long-Span Construction: Trusses, space frames, shells, and tensile structures</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-5</i>	2	<i>High-Rise Construction</i>	<i>High-Rise Building Systems: Core structures, outrigger systems, and tube structures</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-6</i>	2	<i>Site Visit</i>	<i>Field Visit to a High-Rise Construction Site</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-7</i>	2	<i>Building Envelope Systems</i>	<i>Advanced Envelope Systems: Curtain walls, cladding systems, and</i>	<i>Attendance</i>	<i>Daily test</i>

			<i>double-skin facades</i>		
<i>Week-8</i>	<i>2</i>	<i>Roofing Systems</i>	<i>Advanced Roofing: Green roofs, roof gardens, and complex roof geometries</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-9</i>	<i>2</i>	<i>Flooring Systems</i>	<i>Floor Construction: Raised floors, composite floors, and floor finishes</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-10</i>	<i>2</i>	<i>Staircases and Circulation</i>	<i>Vertical Circulation: Staircase design, escalators, and elevator systems</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-11</i>	<i>2</i>	<i>Building Services Integration</i>	<i>MEP Integration: Coordination of mechanical, electrical, and plumbing services</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-12</i>	<i>2</i>	<i>Sustainable Construction</i>	<i>Green Building Technologies: Sustainable materials, passive design, and energy efficiency</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-13</i>	<i>2</i>	<i>Construction Details</i>	<i>Detail Design: Waterproofing, thermal bridges, and movement joints</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-14</i>	<i>2</i>	<i>Construction Project Management</i>	<i>Project Management: Construction planning, sequencing, and site organization</i>	<i>Attendance</i>	<i>Daily test</i>
<i>Week-15</i>	<i>2</i>	<i>. Final Review</i>	<i>Reports and Discussions on Technical Construction Concepts</i>	<i>Attendance</i>	<i>Daily test</i>

### 11–Course Structure/ Lab

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
-------------	--------------	-----------------------------------	-----------------------------	------------------------	--------------------------

Week-1					
Week-2					
Week-3					
Week-4					
Week-5					
Week-6					
Week-7					
Week-8					
Week-9					
Week-10					
Week-11					
Week-12					
Week-13					
Week-14					
Week-15					

### 12–Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

### 13–Learning and Teaching Resources

Required textbooks (curriculum books, if any)	<ol style="list-style-type: none"> <li>1-Deplazes, Andrea, ed. (2022). Constructing Architecture: Materials, Processes, Structures. 5th ed. Basel: Birkhäuser.</li> <li>2. Ford, Edward R. (2019). The Architectural Detail. New York: Princeton Architectural Press.</li> <li>3. Herzog, Thomas; Krippner, Roland; &amp; Lang, Werner (2020). Facade Construction Manual. 2nd ed. Munich: Detail Business Information GmbH.</li> </ol>
Main references (sources)	<ol style="list-style-type: none"> <li>15- Deplazes, Andrea, ed. (2022). Constructing Architecture: Materials, Processes, Structures. 5th ed. Basel: Birkhäuser.</li> <li>16- 2. Ford, Edward R. (2019). The Architectural Detail. New York: Princeton Architectural Press.</li> </ol>
Recommended books and references (scientific journals, reports...)	<ol style="list-style-type: none"> <li>9- Detail: Journal of Architecture and Construction Details (published by Detail Business Information GmbH)</li> <li>ϣ. The Architectural Review (AR) - Construction Section</li> <li>10- ϣ. Architectural Record - Continuing Education Center</li> <li>11- ξ. Journal of Building Engineering (Elsevier)</li> </ol>
Electronic References, Websites	<ol style="list-style-type: none"> <li>1-ArchDaily - Construction Archive: <a href="https://www.archdaily.com/search/projects/categories/construction">https://www.archdaily.com/search/projects/categories/construction</a></li> <li>2. Detail Online: <a href="https://www.detail-online.com">https://www.detail-online.com</a></li> <li>3. Dezeen - Technology Section: <a href="https://www.dezeen.com/technology">https://www.dezeen.com/technology</a></li> <li>4. Construction Specifier: <a href="https://www.constructionspecifier.com">https://www.constructionspecifier.com</a></li> </ol>

	5. MIT OpenCourseWare - Building Technology: <a href="https://ocw.mit.edu/courses/architecture/4-401-introduction-to-building-technology-spring-2006/">https://ocw.mit.edu/courses/architecture/4-401-introduction-to-building-technology-spring-2006/</a>
--	---

5th stage

## Course Description Form

<b>1. Course Name:</b>	
Architectural Design V	
<b>2. Course Code:</b>	
ARCH 501	
<b>3. Semester / Year:</b>	
First Semester / 2025–2026	
<b>4. Description Preparation Date:</b>	
01/09/2025	
<b>5. Available Attendance Forms:</b>	
Attendance	
<b>6. Number of Credit Hours (Total) / Number of Units (Total)</b>	
180 hours	
<b>7. Course administrator's name (mention all, if more than one name)</b>	
Name: PhD- Ahmed A. Rashid Kbah Email: ahmed.architect@mu.edu.iq	
<b>8. Course Objectives</b>	
<ul style="list-style-type: none"> <li>● Understand the concept of design and its importance to architecture.</li> <li>● Understand the different units used in architecture (e.g., meters , centimeters , millimeters and their equivalents in other international standard systems).</li> <li>● Introduce students to complex and multifunctional projects for their various major and secondary spaces as well as service spaces.</li> <li>● Introducing students to the appropriate functional basis for distributing architectural spaces that serve the building in its main and service types.</li> <li>● Introduce students to the appropriate structural foundation for the selection of architectural structural systems as well as construction details, where construction decisions and implementation technology are at the forefront of the design proposal.</li> <li>● Introduce students to the different types of materials and their applications in exterior façade design , structural element installation , interior design as well as landscape</li> </ul>	Course Objectives

design leading to a BOQ (Quantities Calculation ) for all project materials.

- Introducing students to sustainability, green architecture, and smart architecture and ways to apply them in the building to serve the functional effectiveness of the building.
- Introduce students in the second semester to a multi-storey project, to learn through design principles for functional requirements of a typical repetitive nature, such as educational, administrative, residential, and commercial buildings.
- Introducing the student to some of the structural details directed to this purpose, as well as the possibility of applying what the student has learned in the subject of health services and the air conditioning and lighting services provided to him in the first and second semesters.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	12	<i>The field study of the real condition through the field measurements and photographing and freehand drawing and reviewing the valid rules and limitations.</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>

<i>Week-2</i>	12	<i>The field study of the real condition through the field measurements and photographing and freehand drawing and reviewing the valid rules and limitations.</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-3</i>	12	<i>Presenting the preliminary planning and developing concepts through the field study and limitations of the site.</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-4</i>	12	<i>Presenting the preliminary planning and developing concepts through the field study and limitations of the site.</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-5</i>	12	<i>Presenting a suggested basic plan of the developmental alternative that supports the well established intellectual base.</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-6</i>	12	<i>Presenting a suggested basic plan of the developmental alternative that supports the well established intellectual base.</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-7</i>	12	<i>The final presentation of the suggested alternative (a 3d model with a suitable measure and basic plans of all the project which clarify the general application and the distribution of the adopted functions)</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-8</i>	12	<i>The final presentation of the suggested alternative (a 3d model with a suitable measure and basic plans of all the project which clarify the general application and the distribution of the adopted functions)</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-9</i>	12	<i>The final presentation of the suggested alternative (a 3d model with a suitable measure and basic plans of all the project which clarify the general application and the distribution of the adopted functions)</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-10</i>	12	<i>Presenting architectural details and important parts in the site which are divided on the student individually.</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-11</i>	12	<i>Presenting architectural details and important parts in the site which are divided on the student individually.</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-12</i>	12	<i>Presenting architectural details and important parts in the site which are divided on the student individually.</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-13</i>	12	<i>Day sketches during the semester</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test

<i>Week-14</i>	12	<i>Day sketches during the semester</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test
<i>Week-15</i>	12	<i>Day sketches during the semester</i>	<i>1<sup>st</sup> project</i>	<i>collective criticism + Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ol style="list-style-type: none"> <li>1. Neufert</li> <li>2. Time Saver Standards for Architectural Design Data Green Building Conditions and Specifications</li> </ol>
Main references (sources)	<p><a href="https://issuu.com/twentytwo22magazine">https://issuu.com/twentytwo22magazine</a> A monthly electronic magazine issued by the A non-governmental volunteer specialized in the field of architecture and architects' affairs through education, training and rehabilitation</p> <p><a href="http://www.architectureweek.com">http://www.architectureweek.com</a> A specialized magazine that presents a wide range of articles and designs that are of interest to the students of the Department of Architecture</p>
Recommended books and references (scientific journals, reports...)	<p><a href="https://www.diwanarch.com/">https://www.diwanarch.com/</a> An important site for architects that organizes competitions and architectural works</p> <p><a href="https://big.dk/">https://big.dk/</a> The most important sites that contain various projects and architectural ideas</p> <p><a href="https://www.asla.org/">https://www.asla.org/</a> An important site for the design of outdoor spaces and gardens</p> <p><a href="https://divisare.com/">https://divisare.com/</a> An important location that contains architectural projects Section -diagram -plans- renders-</p> <p><a href="https://www.arch-news.net/">https://www.arch-news.net/</a> Arab Architectural News Portal</p> <p><a href="https://www.cpas-egypt.com/">https://www.cpas-egypt.com/</a> A famous and distinctive Arabic engineering site, it is considered a planning studies center that publishes architectural topics and projects continuously</p>
Electronic References, Websites	<ol style="list-style-type: none"> <li>1-Arch Daily: <a href="https://www.archdaily.com">https://www.archdaily.com</a></li> <li>2. Dezeen: <a href="https://www.dezeen.COM">https://www.dezeen.COM</a></li> </ol>

## Course Description Form

1. Course Name:	
Thesis	
2. Course Code:	
ARCH 502	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
120 hours	
7. Course administrator's name (mention all, if more than one name)	
<p>Name: PhD- Ahmed A. Rashid Kbah            Email: <a href="mailto:ahmed.architect@mu.edu.iq">ahmed.architect@mu.edu.iq</a></p> <p>Name: PhD- Hadel Saad Al-Mur'ib's            Email: <a href="mailto:hadel.arch@mu.edu.iq">hadel.arch@mu.edu.iq</a></p> <p>Name: MS.C- Ali Saad Al-Rubay            Email: <a href="mailto:alisaad@mu.edu.iq">alisaad@mu.edu.iq</a></p>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>● Understand the concept of design and its importance to architecture.</li> <li>● Understand the different units used in architecture (e.g., meters , centimeters , millimeters and their equivalents in other international standard systems).</li> <li>● Introduce students to complex and multifunctional projects for their various major and secondary spaces as well as service spaces.</li> <li>● Introducing students to the appropriate functional basis for distributing architectural spaces that serve the building in its main and service types.</li> <li>● Introduce students to the appropriate structural foundation for the selection of architectural structural systems as well as construction details, where construction decisions and</li> </ul>	<p>Course Objectives</p>

implementation technology are at the forefront of the design proposal.

- Introduce students to the different types of materials and their applications in exterior façade design , structural element installation , interior design as well as landscape design leading to a BOQ (Quantities Calculation ) for all project materials.
- Introducing students to sustainability, green architecture, and smart architecture and ways to apply them in the building to serve the functional effectiveness of the building.
- Introduce students in the second semester to a multi-storey project, to learn through design principles for functional requirements of a typical repetitive nature, such as educational, administrative, residential, and commercial buildings.
- Introducing the student to some of the structural details directed to this purpose, as well as the possibility of applying what the student has learned in the subject of health services and the air conditioning and lighting services provided to him in the first and second semesters.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem–Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	<i>7</i>	<i>The field study of the real condition through the field measurements and photographing and freehand drawing</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>

		<i>and reviewing the valid rules and limitations.</i>			
<i>Week-2</i>	<i>7</i>	<i>The field study of the real condition through the field measurements and photographing and freehand drawing and reviewing the valid rules and limitations.</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-3</i>	<i>7</i>	<i>Presenting the preliminary planning and developing concepts through the field study and limitations of the site.</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-4</i>	<i>7</i>	<i>Presenting the preliminary planning and developing concepts through the field study and limitations of the site.</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-5</i>	<i>7</i>	<i>Presenting a suggested basic plan of the developmental alternative that supports the well established intellectual base.</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-6</i>	<i>7</i>	<i>Presenting a suggested basic plan of the developmental alternative that supports the well established intellectual base.</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-7</i>	<i>7</i>	<i>The final presentation of the suggested alternative (a 3d model with a suitable measure and basic plans of all the project which clarify the general application and the distribution of the adopted functions)</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-8</i>	<i>7</i>	<i>The final presentation of the suggested alternative (a 3d model with a suitable measure and basic plans of all the project which clarify the general application and the distribution of the adopted functions)</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-9</i>	<i>7</i>	<i>The final presentation of the suggested alternative (a 3d model with a suitable measure and basic plans of all the project which clarify the general application and the distribution of the adopted functions)</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-10</i>	<i>7</i>	<i>Presenting architectural details and important parts in the site which are divided on the student individually.</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-11</i>	<i>7</i>	<i>Presenting architectural details and important parts in the site which are divided on the student individually.</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-12</i>	<i>7</i>	<i>Presenting architectural details and important parts in the site which are divided on the student individually.</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-13</i>	<i>7</i>	<i>Day sketches during the semester</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>

Week-14	7	Day sketches during the semester	Graduation project	collective criticism + Attendance	Daily test
Week-15	7	Day sketches during the semester	Graduation project	collective criticism + Attendance	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	3. Neufert 4. Time Saver Standards for Architectural Design Data Green Building Conditions and Specifications
Main references (sources)	<a href="https://issuu.com/twentytwo22magazine">https://issuu.com/twentytwo22magazine</a> A monthly electronic magazine issued by the A non-governmental volunteer specialized in the field of architecture and architects' affairs through education, training and rehabilitation <a href="http://www.architectureweek.com">http://www.architectureweek.com</a> A specialized magazine that presents a wide range of articles and designs that are of interest to the students of the Department of Architecture
Recommended books and references (scientific journals, reports...)	<a href="https://www.diwanarch.com/">https://www.diwanarch.com/</a> An important site for architects that organizes competitions and architectural works <a href="https://big.dk/">https://big.dk/</a> The most important sites that contain various projects and architectural ideas <a href="https://www.asla.org/">https://www.asla.org/</a> An important site for the design of outdoor spaces and gardens <a href="https://divisare.com/">https://divisare.com/</a> An important location that contains architectural projects Section -diagram -plans- renders- <a href="https://www.arch-news.net/">https://www.arch-news.net/</a> Arab Architectural News Portal <a href="https://www.cpas-egypt.com/">https://www.cpas-egypt.com/</a> A famous and distinctive Arabic engineering site, it is considered a planning studies center that publishes architectural topics and projects continuously
Electronic References, Websites	1-Arch Daily: <a href="https://www.archdaily.com">https://www.archdaily.com</a> 2. Dezeen: <a href="https://www.dezeen.com">https://www.dezeen.com</a>

## Course Description Form

1. Course Name:	
Specifications and Estimation	
2. Course Code:	
ARCH 503	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: PhD- Hussein Kareem Sultan Email: <a href="mailto:hussain.ksz@mu.edu.iq">hussain.ksz@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>Master Technical Documentation: Develop the ability to write precise, legally binding technical specifications for diverse construction materials and methods, ensuring they align with both local and international standards.</li> <li>Conduct Precision Take-offs: Master the art of "quantity surveying" by accurately extracting measurements and material volumes from complex 2D architectural sets and 3D BIM models.</li> <li>Construct Professional BOQs: Formulate comprehensive Bills of Quantities (BOQ) that systematically categorize work items, ensuring no hidden costs or missing components are left for the contractor to find later.</li> <li>Analyze Unit Rates: Deconstruct the cost of a single work item by factoring in current material market prices, labor wages, equipment depreciation, and contractor overhead/profit.</li> <li>Apply Local Iraqi Standards: Integrate the Iraqi Standard Specifications (ISS) and local market dynamics specific to Al-Muthanna and the surrounding regions into every project document.</li> <li>Navigate Contractual Links: Evaluate how specifications interact with architectural drawings and legal contracts to</li> </ul>	Course Objectives

<p>minimize project disputes, "change orders," and site-side headaches.</p> <ul style="list-style-type: none"> <li>• Leverage Digital Tools: Transition from manual calculations to digital efficiency by using Excel or specialized estimation software to manage large-scale project budgets and data.</li> <li>• Execute Lifecycle Budgeting: Differentiate between "preliminary estimates" during the design phase and "final tender estimates," helping clients manage their finances from the first sketch to the final brick.</li> <li>• Uphold Professional Ethics: Cultivate a standard of integrity regarding cost reporting and material quality, ensuring that students enter the Iraqi engineering workforce as honest and transparent professionals.</li> </ul> <p>The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.</p>	
---	--

### 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

### 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	Define the relationship between drawings, specifications, and contracts in the Iraqi construction industry.	Introduction to Professional Practice	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	Distinguish between Performance, Descriptive, and Proprietary specifications and when to use each.	Types of Specifications	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	Navigate the standard indexing systems (CSI) and align them with the Ministry of Planning's technical requirements.	The CSI MasterFormat & Iraqi Standards	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	Write precise technical specs for excavation, soil treatment, and foundational earthworks.	Technical Writing: Civil Works	<i>Attendance</i>	Daily test

<i>Week-5</i>	2	Draft specifications for reinforced concrete, formwork, and reinforcement steel grades.	Technical Writing: Structural Works	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	Define quality standards for plastering, painting, and tiling (ceramic vs. granite).	Technical Writing: Finishing Works (Int.)	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	Specify materials for aluminum/UPVC windows, wooden doors, and specialized glazing.	Technical Writing: Openings & Carpentry	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	Apply the rules of measurement (Standard Method of Measurement) for different building elements.	Principles of Quantity Surveying (QS)	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	Calculate volumes for excavation, backfilling, and disposal of surplus materials.	Quantity Take-off: Earthworks	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	Estimate cubic meters of concrete and calculate the weight (tonnage) of reinforcement bars.	Quantity Take-off: Concrete & Steel	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	Calculate areas ( $m^2$ ) for brickwork, flooring, and wall finishes while accounting for deductions.	Quantity Take-off: Finishing & Masonry	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	Structure a professional BOQ including descriptions, units, quantities, rates, and totals.	The Bill of Quantities (BOQ)	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	Break down costs into labor, materials, equipment, overheads, and profit margins.	Unit Rate Analysis	<i>Attendance</i>	Daily test
<i>Week-14</i>	2	Understand the bidding process, "Instructions to Bidders," and how to evaluate a tender.	Tendering and Contract Documents	<i>Attendance</i>	Daily test
<i>Week-15</i>	2	Utilize Excel or BIM (Revit) for automated scheduling and cost estimation; Final project review.	Digital Estimation & Final Review	<i>Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	5. Neufert 6. Time Saver Standards for Architectural Design Data Green Building Conditions and Specifications
Main references (sources)	<a href="https://issuu.com/twentytwo22magazine">https://issuu.com/twentytwo22magazine</a> A monthly electronic magazine issued by the A non-governmental volunteer specialized in the field of architecture and architects' affairs through education, training and rehabilitation <a href="http://www.architectureweek.com">http://www.architectureweek.com</a> A specialized magazine that presents a wide range of articles and designs that are of interest to the students of the Department of Architecture
Recommended books and references (scientific journals, reports...)	<a href="https://www.diwanarch.com/">https://www.diwanarch.com/</a> An important site for architects that organizes competitions and architectural works <a href="https://big.dk/">https://big.dk/</a>

	<p>The most important sites that contain various projects and architectural ideas  <a href="https://www.asla.org/">https://www.asla.org/</a>  An important site for the design of outdoor spaces and gardens  <a href="https://divisare.com/">https://divisare.com/</a>  An important location that contains architectural projects  Section –diagram –plans- renders-  <a href="https://www.arch-news.net/">https://www.arch-news.net/</a>  Arab Architectural News Portal  <a href="https://www.cpas-egypt.com/">https://www.cpas-egypt.com/</a>  A famous and distinctive Arabic engineering site, it is considered a planning studies center that publishes architectural topics and projects continuously</p>
Electronic References, Websites	<p>1-Arch Daily: <a href="https://www.archdaily.com">https://www.archdaily.com</a>  2. Dezeen: <a href="https://www.dezeen.COM">https://www.dezeen.COM</a></p>

## Course Description Form

1. Course Name:	
Architectural design theories	
2. Course Code:	
ARCH 504	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: PhD- Ahmed A. Rashid Kbah Email: <a href="mailto:ahmed.architect@mu.edu.iq">ahmed.architect@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• Analyze Contemporary Paradigms: Critically evaluate major architectural movements from the late 20th century to the present (e.g., Deconstructivism, Parametricism, Regionalism), moving beyond aesthetics to understand their philosophical foundations.</li> <li>• Bridging Theory and the Graduation Project: Demonstrate the ability to translate abstract theoretical concepts into concrete design strategies specifically applicable to the student’s final-year thesis project. Contextualize Regional Identity: Formulate a theoretical framework that bridges global architectural trends with the local socio-cultural and environmental context of Iraq and the Al-Muthanna region.</li> <li>• Synthesize Sustainable Discourse: Analyze the evolution of "Green Theory" and sustainability, moving from technical checklists to a holistic philosophy that shapes the architectural form and urban fabric.</li> <li>• Evaluate Urban-Architectural Interdependence: Examine the theoretical relationship between individual buildings and the city, focusing on how architecture contributes to (or disrupts) urban continuity and public space.</li> </ul>	Course Objectives

- Master Research Methodologies: Develop the skills to conduct independent academic research, including literature reviews, case study analysis, and the synthesis of qualitative data to support a design thesis.
- Critique the "Star Architect" Phenomenon: Engage in debates regarding the role of the architect in society, contrasting the "starchitecture" model with socially responsible, community-driven design theories.
- Explore Phenomenology and Human Experience: Investigate theories of "place-making" and phenomenology to understand how materials, light, and space affect human psychology and sensory perception.
- Professional Ethics and Future Trends: Anticipate the impact of emerging technologies (AI in design, 3D printing, smart cities) on architectural theory and the ethical responsibilities of the future architect.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	Critique the transition from Modernism to Post-Modernism, identifying how "meaning" and "symbolism" replaced functionalist rigidity.	Phase 1: Contemporary Philosophical Context:- Post-Modernism & the Crisis of Meaning	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	Analyze the fragmentation of form and the philosophical influence of Jacques Derrida on architects like Hadid and Gehry.	Deconstructivism & Complexity	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	Evaluate the role of human sensory experience, atmosphere, and "the haptic"	Phenomenology in Architecture	<i>Attendance</i>	Daily test

		in design, moving beyond purely visual aesthetics.			
<i>Week-4</i>	2	Formulate design strategies that balance global technology with local Al-Muthanna climatic and cultural identities.	Phase 2: Sustainable & Regionalist Discourses: - Critical Regionalism	<i>Attendance</i>	Daily test
<i>Week-5</i>	2	Understand the theoretical shift from "styles" to "subsystems" where algorithms drive formal and structural logic.	Parametricism & Computational Theory	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	Differentiate between "Green/Sustainable" design and "Regenerative" systems that actively restore the local ecosystem.	Regenerative Design & Ecology	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	Apply principles of compact, transit-oriented development to the local Iraqi urban context to combat sprawl.	Phase 3: The Urban & Social Fabric :- The New Urbanism & Walkability	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	Assess how architectural barriers affect marginalized groups and design for universal accessibility and gender-neutral spaces.	Social Justice & Inclusive Design	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	Map the emotional and psychological impact of the urban environment on the inhabitants of Samawah (Al-Muthanna's capital).	Psychogeography & The Flâneur	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	Synthesize the relationship between structural honesty and the poetic expression of materials in high-tech architecture.	Phase 4: Technology & The Future :- Tectonics & Materiality	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	Predict how data-driven urbanism and responsive building skins will alter the future role of the architect.	Smart Cities & The Internet of Things (IoT)	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	Develop theoretical frameworks for preserving Iraqi heritage through modern functional interventions rather than mere imitation.	Adaptive Reuse & Heritage Conservation	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	Navigate the ethical dilemmas of the profession, focusing on the architect's duty to the public versus the client.	Phase 5: Synthesis & Professional Practice :- Ethics & Professional Responsibility	<i>Attendance</i>	Daily test
<i>Week-14</i>	2	Construct a formal written and verbal critique of a contemporary project using established theoretical frameworks.	Architectural Criticism & Discourse	<i>Attendance</i>	Daily test
<i>Week-15</i>	2	Synthesize a personal "Design Manifesto" that outlines the student's individual theoretical stance for their final thesis.	The Manifesto (Graduation Project Foundation)	<i>Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ol style="list-style-type: none"> <li>1. "Architecture: Form, Space, and Order" by Francis D.K. Ching</li> <li>2. "The Language of Architecture: 26 Principles Every Architect Should Know" by Andrea Simitch and Val Warke.</li> <li>3. "Modern Architecture Since 1900" by William J.R. Curtis</li> </ol>
Main references (sources)	<ol style="list-style-type: none"> <li>1. "Complexity and Contradiction in Architecture" by Robert Venturi</li> <li>2. "Thinking Architecture" by Peter Zumthor</li> <li>3. "Towards a New Architecture" (Vers une architecture) by Le Corbusier</li> </ol>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <i>The Metric Handbook</i>: The "gold standard" for technical planning and design data for complex building types (hospitals, airports, etc.).</li> <li>• <i>Neufert Architects' Data</i>: Required for 5th-year functional programming and space standards.</li> <li>• <i>rontiers of Architectural Research</i>: High-impact academic papers on contemporary design.</li> <li>• <i>Architectural Design (AD) Magazine</i>: Each issue focuses on a specific theoretical theme (e.g., Parametricism, Ecology).</li> <li>• <i>International Journal of Islamic Architecture (IJIA)</i>: Vital for local Iraqi context and integrating heritage with modern theory.</li> </ul>
Electronic References, Websites	<ul style="list-style-type: none"> <li>• <b>ArchDaily &amp; Dezeen</b>: The primary digital platforms for viewing contemporary case studies and reading interviews with theory-driven architects (e.g., BIG, Zaha Hadid Architects).</li> <li>• <b>JSTOR / ScienceDirect</b>: Access through university credentials for peer-reviewed papers on architectural philosophy and urban theory.</li> <li>• <b>The Architectural Review (AR)</b>: Excellent for long-form critical essays on the social and political impact of architecture.</li> <li>• <b>Archnet (archnet.org)</b>: A specialized digital library focused on the built environment of Muslim societies—perfect for Al-Muthanna students exploring local identity.</li> </ul>

## Course Description Form

1. Course Name:	
Contemporary Iraqi Architecture	
2. Course Code:	
ARCH 505	
3. Semester / Year:	
First Semester / 2025–2026	
4. Description Preparation Date:	
01/09/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: PhD- Hadel Saad Al-Mur'ib's Email: <a href="mailto:hadel.arch@mu.edu.iq">hadel.arch@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• Analysis of Pioneering Schools of Thought Students will critically analyze the "Four Schools of Modern Iraqi Architecture" (1937–1970). This involves evaluating how pioneers like Rifat Chaderji, Mohamed Makiya, and Hisham Munir balanced international modernism with traditional Iraqi motifs.</li> <li>• Synthesis of Local Identity and Global Modernity Develop the ability to synthesize local cultural values with contemporary global design trends. Students should be able to justify how their designs preserve the "Iraqi identity" while utilizing 21st-century materials and technologies.</li> <li>• Mastery of Climatological Adaptation Students must demonstrate an advanced understanding of the Iraqi ecosystem. Objective: To design contemporary structures that utilize traditional passive cooling strategies—such as modern interpretations of Shanashil, Badgeers (wind catchers), and courtyard systems—reimagined through modern thermal simulation.</li> <li>• Critical Evaluation of Post-2003 Urbanism</li> </ul>	Course Objectives

Analyze the architectural and urban transformations in Iraq following 2003. This includes studying the impact of "random thinking" in reconstruction, the emergence of gated communities, and the challenges of maintaining urban fabric continuity in cities like Baghdad and Samawah.

- **Theoretical Framework of "Architectural Alienation"**  
Investigate the phenomenon of "alienation" in the contemporary built environment. Students will learn to identify designs that are "alien" to the local context and develop strategies to reconnect the individual to the urban space-time continuum.
- **Application of Historical Typologies**  
Apply the concept of the "Historical Type" to contemporary design. Students will research pre-Islamic (Sumerian, Babylonian) and Islamic architectural types to extract organizational principles that can be used in modern institutional and residential projects.
- **Ethics of Urban Conservation and Resilience**  
Understand the ethical responsibility of the architect in preserving modern heritage. This objective focuses on the rehabilitation of 20th-century landmarks and the role of architecture in fostering social resilience in post-conflict urban settings.
- **Advanced Material Innovation**  
Explore the dialectic between traditional building materials (like Iraqi brickwork) and new technologies (BIM, 3D printing, and smart glass). Students will propose innovative ways to use local materials to meet contemporary performance standards.
- **Development of a Professional Critical Voice**  
Cultivate a personal "Architectural Manifesto." By the end of the course, each 5th-year student should be able to articulate a clear, research-based position on the future direction of Iraqi architecture, preparing them for their final thesis project.  
The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<p><b>Strategy</b></p>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
------------------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	Introduction to the "School of Baghdad" and early 20th-century shifts.	The Foundations (Pioneering Modernism) :-	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	The impact of Western-trained Iraqi architects on the local aesthetic.	The Foundations (Pioneering Modernism) :-	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	Case Study: The works of Rifat Chadirji and the concept of "Regional Internationalism."	The Foundations (Pioneering Modernism) :-	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	The role of the <i>Sahan</i> and courtyard typology in modern housing.	Critical Regionalism	<i>Attendance</i>	Daily test
<i>Week-5</i>	2	Materiality: Evolution of the Iraqi brick from tradition to structural experimentation.	Critical Regionalism	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	The influence of Islamic geometry in contemporary façade design.	Critical Regionalism	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	Mid-term Project Review: Comparative analysis of traditional vs. modern spatial organization.	Critical Regionalism	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	The impact of rapid urbanization and the loss of the <i>Mahalla</i> (neighborhood) structure.	Urban Transformation & Challenges	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	Political monuments and the architecture of power in Baghdad.	Urban Transformation & Challenges	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	Infrastructure and the "concrete jungle": Evaluating the mid-century expansion.	Urban Transformation & Challenges	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	Adaptive reuse: The struggle to preserve 20th-century heritage.	Urban Transformation & Challenges	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	Sustainable strategies: Passive cooling in the Iraqi climate.	The Path Forward	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	The role of digital design and global technologies in local firms.	The Path Forward	<i>Attendance</i>	Daily test
<i>Week-14</i>	2	Defining a "Contemporary Iraqi Identity": Theory and debate.	The Path Forward	<i>Attendance</i>	Daily test
<i>Week-15</i>	2	Final presentation of research and design proposals.	The Path Forward	<i>Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

<p>Required textbooks (curricular books, if any)</p>	<ol style="list-style-type: none"> <li>1. <b>City and Identity in Modern Iraq: Baghdad and Nation Building</b>" by Mustafa Obaid (2026, Routledge). This is an essential, up-to-date text on how Baghdad's urban fabric shaped national identity.</li> <li>2. <b>"Mohamed Makiya: A Modern Architect Renewing Islamic Tradition"</b> by Karen Dabrowska (2021, Saqi Books). A vital study of one of Iraq's most influential educators and architects.</li> <li>3. • <b>"Rifat Chadirji: Building Index"</b> by Akram Zaatari and Mark Wasiuta (2018, Kaph Books). This provides a primary-source catalog of Chadirji's works, essential for studying the "Regional Internationalism" of the mid-20th century.</li> </ol>
<p>Main references (sources)</p>	<ul style="list-style-type: none"> <li>• <b>"The Four Schools of Modern Iraqi Architecture (1937–1970): A Comparative Critical Study"</b> (Published in <i>Architectural Issues</i>). This is the definitive academic paper for categorizing the diverse design approaches of the pioneer generation.</li> <li>• <b>"Modern Architecture in Iraq"</b> (Chapter in <i>Innovative Approaches in Planning and Design</i>, Iksad Publications, 2026). Useful for understanding the intersection of modern heritage preservation and international guidelines (e.g., DOCOMOMO/UNESCO).</li> <li>• <b>"Knowledge Mobility and the Emergence of Contemporary Iraqi Architecture (1936–1958)"</b> (Published in <i>Buildings</i>, 2024). Explores the influence of Western-educated architects on the local Iraqi landscape.</li> </ul>
<p>Recommended books and references (scientific journals, reports...)</p>	<ul style="list-style-type: none"> <li>• <b>Iraqi Journal of Architecture and Planning</b> (University of Technology, Baghdad). This is the primary local journal for peer-reviewed studies on Iraqi architectural heritage, digital documentation, and design methodology.</li> <li>• <b>Journal of the University of Babylon for Engineering Sciences</b>. Features critical analysis on the role of academic architects in maintaining modern buildings.</li> <li>• <b>"Contemporary Architecture in the Arab States: Renaissance of a Region"</b> by Udo Kultermann (McGraw-Hill). Offers a broader regional comparative lens for Iraqi developments.</li> </ul>
<p>Electronic References, Websites</p>	<ul style="list-style-type: none"> <li>• <b>ArchDaily &amp; Dezeen</b>: The primary digital platforms for viewing contemporary case studies and reading interviews with theory-driven architects (e.g., BIG, Zaha Hadid Architects).</li> <li>• <b>JSTOR / ScienceDirect</b>: Access through university credentials for peer-reviewed papers on architectural philosophy and urban theory.</li> <li>• <b>The Architectural Review (AR)</b>: Excellent for long-form critical essays on the social and political impact of architecture.</li> <li>• <b>Archnet (archnet.org)</b>: A specialized digital library focused on the built environment of Muslim societies—perfect for Al-Muthanna students exploring local identity.</li> </ul>

## Course Description Form

1. Course Name:	
Theories of architectural criticism	
2. Course Code:	
ARCH 506	
3. Semester / Year:	
Second Semester / 2025–2026	
4. Description Preparation Date:	
01/02/2026	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: PhD- Ahmed A. Rashid Kbah Email: <a href="mailto:ahmed.architect@mu.edu.iq">ahmed.architect@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Define and Differentiate:</b> Formulate a comprehensive understanding of architectural criticism, distinguishing it from general design feedback and identifying its core role in the evolution of architectural discourse.</li> <li>• <b>Analyze Theoretical Frameworks:</b> Evaluate the primary methodologies of architectural criticism—including formal, historical, phenomenological, and socio-political frameworks—to assess their validity and application in contemporary contexts.</li> <li>• <b>Develop Critical Acumen:</b> Cultivate the ability to objectively judge the aesthetic, functional, and social values of architectural works through structured analysis and evidence-based reasoning.</li> <li>• <b>Contextualize Architectural Production:</b> Situate local and global architectural projects within their broader cultural, environmental, and temporal contexts, recognizing the dialectical relationship between theory and building.</li> <li>• <b>Engage in Peer Review:</b> Participate effectively in peer-to-peer critique sessions, fostering a culture of mutual learning where students provide and receive constructive, technically informed feedback.</li> <li>• <b>Refine Academic Discourse:</b> Produce clear, coherent, and persuasive critical essays that articulate a personal architectural stance, supported by rigorous citation and theoretical references.</li> </ul>	Course Objectives

- **Evaluate Design Intent:** Develop the capacity to decode an architect's underlying design hypothesis and critically assess how successfully that intent was manifested in the built product.
- **Bridge Theory and Practice:** Apply theoretical knowledge to the studio environment, using critical thinking as a diagnostic tool to enhance personal design processes and self-correction during project development.
- **Synthesize Diverse Perspectives:** Interpret architectural works from multiple disciplinary lenses (e.g., sociology, anthropology, sustainability), moving beyond purely visual appreciation to understand the complex layers of meaning in the built environment.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	<b>Distinguish Modes of Criticism:</b> Differentiate between normative, interpretative, and descriptive criticism.	Defining the critic's role; tools for objective analysis; rhetoric in writing.	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	<b>Analyze Philosophical Foundations:</b> Relate movements like Phenomenology and Structuralism to architectural theory.	Defining the critic's role; tools for objective analysis; rhetoric in writing.	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	<b>Evaluate Socio-Political Context:</b> Assess how power and social equity are embedded in the built environment.	Defining the critic's role; tools for objective analysis; rhetoric in writing.	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	<b>Critique Local Projects:</b> Apply global theories to evaluate recent interventions in the Iraqi context.	Phenomenological approaches to space;	<i>Attendance</i>	Daily test

			structuralism vs. post-structuralism; meaning in architectural form.		
<i>Week-5</i>	2	<b>Master Architectural Rhetoric:</b> Construct compelling, evidence-based academic arguments.	Phenomenological approaches to space; structuralism vs. post-structuralism; meaning in architectural form.	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	<b>Deconstruct Design Intent:</b> Analyze projects beyond aesthetics to evaluate ethical and programmatic strategies.	Phenomenological approaches to space; structuralism vs. post-structuralism; meaning in architectural form.	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	<b>Trace Typological Evolution:</b> Analyze the critical implications of shifts in building typologies over time.	Critical regionalism in the Arab world; globalism vs. local identity; examining post-war reconstruction in Iraq.	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	<b>Evaluate Sustainability:</b> Critique the "Green" movement beyond marketing to assess real environmental impact.	Critical regionalism in the Arab world; globalism vs. local identity; examining post-war reconstruction in Iraq.	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	<b>Apply Hermeneutics:</b> Interpret symbolic and cultural meanings within vernacular and contemporary structures.	Critical regionalism in the Arab world; globalism vs. local identity; examining post-war reconstruction in Iraq.	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	<b>Assess Urban Resilience:</b> Analyze designs based on their capacity to adapt to environmental/social shocks.	Critical regionalism in the Arab world; globalism vs. local identity; examining post-war reconstruction in Iraq.	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	<b>Reflect on Professional Ethics:</b> Examine the ethical responsibilities of architects in commercial environments.	Social justice in architecture; sustainability performance;	<i>Attendance</i>	Daily test

			ethics in the face of rapid urbanization.		
<i>Week-12</i>	2	<b>Utilize Multi-Media Documentation:</b> Document and critique architecture through diagrams, photography, and analysis.	Social justice in architecture; sustainability performance; ethics in the face of rapid urbanization.	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	<b>Participate in Peer Review:</b> Engage in constructive criticism of studio projects using theoretical frameworks.	Social justice in architecture; sustainability performance; ethics in the face of rapid urbanization.	<i>Attendance</i>	Daily test
<i>Week-14</i>	2	<b>Bridge Theory and Practice:</b> Demonstrate how theoretical discourse informs design decision-making.	Peer review workshops; final presentation of the "Architectural Manifesto."	<i>Attendance</i>	Daily test
<i>Week-15</i>	2	<b>Formulate a Personal Stance:</b> Synthesize learning to establish a personal philosophy of architectural practice.	Peer review workshops; final presentation of the "Architectural Manifesto."	<i>Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ol style="list-style-type: none"> <li>1. <b>"Critical Architecture"</b> by Jane Rendell, Jonathan Hill, Murray Fraser, and Mark Dorrian (Routledge).</li> <li>2. <b>"Writing about Architecture: Mastering the Language of Buildings and Cities"</b> by Alexandra Lange (Princeton Architectural Press).</li> <li>3. <b>"Theories and Manifestoes of Contemporary Architecture"</b> by Charles Jencks and Karl Kropf (Wiley).</li> </ol>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>"The Architecture of the City"</b> by Aldo Rossi: A foundational text for understanding urban morphology and the relationship between history and design.</li> <li>• <b>"Complexity and Contradiction in Architecture"</b> by Robert Venturi: A classic manifesto challenging modernist orthodoxy in favor of complexity and historical context.</li> <li>• <b>"The Aesthetics of Architecture"</b> by Roger Scruton: A deep philosophical inquiry into the meaning, function, and aesthetic quality of the built environment.</li> </ul>

Recommended books and references  
(scientific journals, reports...)

- **Archnet-IJAR: International Journal of Architectural Research:** Excellent for interdisciplinary studies and critical case studies.
- **The Journal of Architecture (RIBA):** Provides high-level, peer-reviewed critical inquiry into current theoretical debates.
- **Journal of Architectural/Planning Research and Studies (JARS):** Focuses on the integration of science, culture, and design.
- **"On the Duty and Power of Architectural Criticism"** (edited by Wilfried Wang): A modern collection of essays addressing the ethical and practical role of the critic today.
- **"Choosing Architecture: Criticism, History and Theory since the 19th Century"** by Christophe Van Gerrewey: A vital historical overview of how criticism has evolved as a vital academic field.

Electronic References, Websites

- **ArchDaily & Dezeen:** The primary digital platforms for viewing contemporary case studies and reading interviews with theory-driven architects (e.g., BIG, Zaha Hadid Architects).
- **JSTOR / ScienceDirect:** Access through university credentials for peer-reviewed papers on architectural philosophy and urban theory.
- **The Architectural Review (AR):** Excellent for long-form critical essays on the social and political impact of architecture.
- **Archnet (archnet.org):** A specialized digital library focused on the built environment of Muslim societies—perfect for Al-Muthanna students exploring local identity.

## Course Description Form

1. Course Name:	
Thesis	
2. Course Code:	
ARCH 502	
3. Semester / Year:	
Second Semester / 2025–2026	
4. Description Preparation Date:	
01/02/2026	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
270 hours	
7. Course administrator's name (mention all, if more than one name)	
<p>Name: PhD- Ahmed A. Rashid Kbah            Email: <a href="mailto:ahmed.architect@mu.edu.iq">ahmed.architect@mu.edu.iq</a></p> <p>Name: PhD- Hadel Saad Al-Mur'ib's            Email: <a href="mailto:hadel.arch@mu.edu.iq">hadel.arch@mu.edu.iq</a></p> <p>Name: MS.C- Ali Saad Al-Rubay            Email: <a href="mailto:alisaad@mu.edu.iq">alisaad@mu.edu.iq</a></p>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>● Understand the concept of design and its importance to architecture.</li> <li>● Understand the different units used in architecture (e.g., meters , centimeters , millimeters and their equivalents in other international standard systems).</li> <li>● Introduce students to complex and multifunctional projects for their various major and secondary spaces as well as service spaces.</li> <li>● Introducing students to the appropriate functional basis for distributing architectural spaces that serve the building in its main and service types.</li> <li>● Introduce students to the appropriate structural foundation for the selection of architectural structural systems as well as construction details, where construction decisions and</li> </ul>	<p>Course Objectives</p>

implementation technology are at the forefront of the design proposal.

- Introduce students to the different types of materials and their applications in exterior façade design , structural element installation , interior design as well as landscape design leading to a BOQ (Quantities Calculation ) for all project materials.
- Introducing students to sustainability, green architecture, and smart architecture and ways to apply them in the building to serve the functional effectiveness of the building.
- Introduce students in the second semester to a multi-storey project, to learn through design principles for functional requirements of a typical repetitive nature, such as educational, administrative, residential, and commercial buildings.
- Introducing the student to some of the structural details directed to this purpose, as well as the possibility of applying what the student has learned in the subject of health services and the air conditioning and lighting services provided to him in the first and second semesters.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem–Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	<i>7</i>	<i>The field study of the real condition through the field measurements and photographing and freehand drawing</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>

		<i>and reviewing the valid rules and limitations.</i>			
<i>Week-2</i>	<i>7</i>	<i>The field study of the real condition through the field measurements and photographing and freehand drawing and reviewing the valid rules and limitations.</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-3</i>	<i>7</i>	<i>Presenting the preliminary planning and developing concepts through the field study and limitations of the site.</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-4</i>	<i>7</i>	<i>Presenting the preliminary planning and developing concepts through the field study and limitations of the site.</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-5</i>	<i>7</i>	<i>Presenting a suggested basic plan of the developmental alternative that supports the well established intellectual base.</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-6</i>	<i>7</i>	<i>Presenting a suggested basic plan of the developmental alternative that supports the well established intellectual base.</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-7</i>	<i>7</i>	<i>The final presentation of the suggested alternative (a 3d model with a suitable measure and basic plans of all the project which clarify the general application and the distribution of the adopted functions)</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-8</i>	<i>7</i>	<i>The final presentation of the suggested alternative (a 3d model with a suitable measure and basic plans of all the project which clarify the general application and the distribution of the adopted functions)</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-9</i>	<i>7</i>	<i>The final presentation of the suggested alternative (a 3d model with a suitable measure and basic plans of all the project which clarify the general application and the distribution of the adopted functions)</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-10</i>	<i>7</i>	<i>Presenting architectural details and important parts in the site which are divided on the student individually.</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-11</i>	<i>7</i>	<i>Presenting architectural details and important parts in the site which are divided on the student individually.</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-12</i>	<i>7</i>	<i>Presenting architectural details and important parts in the site which are divided on the student individually.</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>
<i>Week-13</i>	<i>7</i>	<i>Day sketches during the semester</i>	<i>Graduation project</i>	<i>collective criticism + Attendance</i>	<i>Daily test</i>

Week-14	7	Day sketches during the semester	Graduation project	collective criticism + Attendance	Daily test
Week-15	7	Day sketches during the semester	Graduation project	collective criticism + Attendance	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ol style="list-style-type: none"> <li>1. Neufert</li> <li>2. Time Saver Standards for Architectural Design Data Green Building Conditions and Specifications</li> </ol>
Main references (sources)	<p><a href="https://issuu.com/twentytwo22magazine">https://issuu.com/twentytwo22magazine</a> A monthly electronic magazine issued by the A non-governmental volunteer specialized in the field of architecture and architects' affairs through education, training and rehabilitation</p> <p><a href="http://www.architectureweek.com">http://www.architectureweek.com</a> A specialized magazine that presents a wide range of articles and designs that are of interest to the students of the Department of Architecture</p>
Recommended books and references (scientific journals, reports...)	<p><a href="https://www.diwanarch.com/">https://www.diwanarch.com/</a> An important site for architects that organizes competitions and architectural works</p> <p><a href="https://big.dk/">https://big.dk/</a> The most important sites that contain various projects and architectural ideas</p> <p><a href="https://www.asla.org/">https://www.asla.org/</a> An important site for the design of outdoor spaces and gardens</p> <p><a href="https://divisare.com/">https://divisare.com/</a> An important location that contains architectural projects Section -diagram -plans- renders-</p> <p><a href="https://www.arch-news.net/">https://www.arch-news.net/</a> Arab Architectural News Portal</p> <p><a href="https://www.cpas-egypt.com/">https://www.cpas-egypt.com/</a> A famous and distinctive Arabic engineering site, it is considered a planning studies center that publishes architectural topics and projects continuously</p>
Electronic References, Websites	<ol style="list-style-type: none"> <li>1-Arch Daily: <a href="https://www.archdaily.com">https://www.archdaily.com</a></li> <li>2. Dezeen: <a href="https://www.dezeen.com">https://www.dezeen.com</a></li> </ol>

## Course Description Form

1. Course Name:	
Professional Practice	
2. Course Code:	
ARCH 507	
3. Semester / Year:	
Second Semester / 2025–2026	
4. Description Preparation Date:	
01/02/2026	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: MS.C - Ali Muhammad Ali Naji Email: <a href="mailto:alimnaji@mu.edu.iq">alimnaji@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Master Iraqi Building Codes:</b> Interpret and apply the Iraqi Building Code and local municipal regulations to ensure project compliance and safety.</li> <li>• <b>Execute Project Management:</b> Apply professional management techniques (scheduling, resource allocation, and budget control) to handle architectural projects from inception to completion.</li> <li>• <b>Manage Contracts and Procurement:</b> Comprehend the legal nuances of various construction contract types (e.g., FIDIC standards) and the tender process within the Iraqi construction sector.</li> <li>• <b>Uphold Professional Ethics:</b> Integrate the Iraqi Union of Engineers' code of ethics into decision-making processes, emphasizing social responsibility and environmental stewardship.</li> <li>• <b>Formulate Business Strategies:</b> Develop fundamental skills in architectural office administration, including marketing, proposal writing, and fee negotiation.</li> <li>• <b>Coordinate Multidisciplinary Teams:</b> Facilitate effective collaboration between architects, structural engineers, MEP</li> </ul>	Course Objectives

consultants, and contractors to ensure design intent is maintained during execution.

- **Manage Construction Administration:** Master the role of the architect during the construction phase, including site inspections, approval of materials, and conflict resolution.
- **Understand Liability and Risk:** Analyze the legal responsibilities of the architect, including professional indemnity, insurance, and the mitigation of construction risks.
- **Develop Professional Documentation:** Produce high-quality, legally robust technical specifications, Bill of Quantities (BoQ), and comprehensive site supervision reports.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	<b>Interpret Iraqi Building Law:</b> Analyze and apply local building codes, urban planning bylaws, and safety regulations.	Legal	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	<b>Navigate Professional Licensure:</b> Understand the requirements and responsibilities of membership within the Iraqi Engineers Union.	Legal	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	<b>Manage Project Life-Cycles:</b> Execute the phases of an architectural project from initial programming through post-occupancy evaluation.	Legal	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	<b>Execute Contract Administration:</b> Master the legal principles of construction contracts, specifically focusing on FIDIC and local standard contracts.	Management	<i>Attendance</i>	Daily test

<i>Week-5</i>	2	<b>Develop Financial Literacy:</b> Create and manage project budgets, fee proposals, and payment schedules.	Management	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	<b>Administer Procurement:</b> Design strategies for tendering, contractor selection, and supply chain management.	Management	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	<b>Apply Ethical Standards:</b> Resolve ethical dilemmas in professional conduct, including conflicts of interest and public safety obligations.	Contracts	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	<b>Execute Site Supervision:</b> Conduct professional site inspections and quality control audits according to engineering standards.	Contracts	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	<b>Facilitate Multidisciplinary Coordination:</b> Manage the integration of structural, MEP, and landscaping consultants into the design process.	Contracts	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	<b>Implement Risk Management:</b> Identify and mitigate liabilities, insurance requirements, and project risks.	Construction	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	<b>Draft Technical Documentation:</b> Produce precise specifications, Bills of Quantities (BoQ), and comprehensive site reports.	Construction	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	<b>Optimize Office Management:</b> Apply principles of HR, time management, and firm marketing in an Iraqi context.	Construction	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	<b>Apply Dispute Resolution:</b> Employ mediation and negotiation techniques to resolve conflicts between clients and contractors.	Business	<i>Attendance</i>	Daily test
<i>Week-14</i>	2	<b>Manage Digital Professionalism:</b> Utilize BIM and project management software to streamline communication and data transparency.	Business	<i>Attendance</i>	Daily test
<i>Week-15</i>	2	<b>Formulate a Professional Strategy:</b> Develop a career trajectory plan including firm branding and business development goals.	Business	<i>Attendance</i>	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ol style="list-style-type: none"> <li><b>Pressman, A. (2018).</b> <i>Professional Practice 101: Business Strategies and Case Studies in Architecture</i>. Wiley. (Essential for understanding firm structure and business development).</li> <li><b>Chappell, D. (2020).</b> <i>Professional Practice for Architects and Project Managers</i>. Wiley-Blackwell. (Provides a comprehensive guide to project management, contract administration, and site duties).</li> <li><b>The Architects Registration Board (ARB) / RIBA Guidance.</b> (Curriculum-aligned practice guides are ideal for mapping professional responsibilities. Local Iraqi equivalents, such as the <i>Iraqi Engineers Union</i></li> </ol>
---	---

	<i>regulations, must be treated as the primary "living" textbook alongside these).</i>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>FIDIC (International Federation of Consulting Engineers).</b> <i>The FIDIC Suite of Contracts (Red, Yellow, and Silver Books).</i> These are the gold standard for construction contracts internationally. Understanding these is vital for any architect working on large-scale or international projects in Iraq.</li> <li>• <b>The Iraqi Engineers Union (IEU) Practice Manuals.</b> (Students should be directed to the specific bylaws and practice guidelines published by the local branch of the IEU).</li> <li>• <b>AIA (American Institute of Architects).</b> <i>The Architect's Handbook of Professional Practice.</i> (Widely considered the "bible" of architectural practice; excellent for deep dives into liability, ethics, and contract law).</li> </ul>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <b>Emmitt, S., Prins, M., &amp; den Otter, A. (Eds.) (2009).</b> <i>Architectural Management: International Research and Practice.</i> Wiley-Blackwell.</li> <li>• <b>Cramer, J. P., &amp; Simpson, S. (2002).</b> <i>How Firms Succeed: A Field Guide to Design Management.</i></li> <li>• <b>Hardin, B., &amp; McCool, D. (2015).</b> <i>BIM and Construction Management: Proven Tools, Methods, and Workflows.</i> (Highly recommended for modernizing practice).</li> </ul>
Electronic References, Websites	<p>1-Arch Daily: <a href="https://www.archdaily.com">https://www.archdaily.com</a></p> <p>2. Dezeen: <a href="https://www.dezeen.com">https://www.dezeen.com</a></p>

## Course Description Form

1. Course Name:	
Contemporary Arab Architecture	
2. Course Code:	
ARCH 508	
3. Semester / Year:	
Second Semester / 2025–2026	
4. Description Preparation Date:	
01/02/2026	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: PhD- Hadel Saad Al-Mur'ib's Email: <a href="mailto:hadel.arch@mu.edu.iq">hadel.arch@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Analyze Regional Identity:</b> Critique the evolution of "Arabness" in architecture, evaluating how architects negotiate between traditional motifs and modern structural requirements.</li> <li>• <b>Evaluate Critical Regionalism:</b> Apply the theoretical framework of Critical Regionalism to assess projects that successfully respond to local climate, social habits, and geography.</li> <li>• <b>Synthesize Global-Local Dialectics:</b> Examine the impact of imported western design models on Arab cities and propose strategies for better integration of local cultural contexts.</li> <li>• <b>Deconstruct Contemporary Typologies:</b> Analyze modern adaptations of traditional Arab typologies—such as the <i>Sahan</i>, <i>Mashrabiya</i>, and <i>Souq</i>—to determine their relevance in high-density urban settings.</li> <li>• <b>Assess Architectural Symbolic Power:</b> Investigate how modern government, cultural, and religious institutions in the Arab world utilize architecture to express national identity and power.</li> <li>• <b>Investigate Urban Morphology:</b> Map and interpret the rapid transformation of the Arab urban fabric, focusing on the shift from low-rise historic cores to contemporary mega-projects.</li> <li>• <b>Evaluate Sustainability in Arid Climates:</b> Critique contemporary buildings based on their passive design performance, moving beyond "Green" aesthetics to actual environmental efficacy in desert or arid environments.</li> </ul>	Course Objectives

- **Document Modern Heritage:** Develop the skills to research and document the mid-to-late 20th-century architectural heritage that is currently under threat from rapid modernization.
- **Formulate a Critical Voice:** Synthesize academic research into a coherent, evidence-based critique of current architectural practices within the Arab world, specifically addressing the Iraqi context.

The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	Introduction: Defining "Contemporary" in the Arab world.	The Modernist Encounter	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	The "School of Baghdad" and early regionalists (Chadirji, Makiya).	The Modernist Encounter	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	From colonial imposition to local synthesis.	The Modernist Encounter	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	The courtyard as a contemporary urban strategy.	Climate, Material, & Typology	<i>Attendance</i>	Daily test
<i>Week-5</i>	2	Reinterpreting the <i>Mashrabiya</i> : From traditional wood to kinetic high-performance skins.	Climate, Material, & Typology	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	Materiality: Brick, stone, and the evolution of the structural frame.	Climate, Material, & Typology	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	The transformation of the <i>Medina</i> (Historic center) to the modern grid.	Urbanism & The Global City	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	High-density challenges and the "verticalization" of the Arab city.	Urbanism & The Global City	<i>Attendance</i>	Daily test

Week-9	2	Mega-projects and the impact on local social fabric.	Urbanism & The Global City	Attendance	Daily test
Week-10	2	The architecture of power: Public squares, museums, and monuments.	Social Agency & Politics	Attendance	Daily test
Week-11	2	Housing equality and the crisis of the modern apartment block.	Social Agency & Politics	Attendance	Daily test
Week-12	2	Post-conflict architecture: The role of the architect in reconstruction.	Social Agency & Politics	Attendance	Daily test
Week-13	2	Sustainability beyond "Green" marketing: Passive design efficacy.	Future Trajectories	Attendance	Daily test
Week-14	2	Digital tools, AI, and the future of regional design firms.	Future Trajectories	Attendance	Daily test
Week-15	2	Final Presentation: The Personal Manifesto for an Arab Architecture.	Future Trajectories	Attendance	Daily test

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<ol style="list-style-type: none"> <li>1. <b>Damluji, S. S. (2006).</b> <i>The Architecture of the Arab World (1960s to present)</i>. This is the definitive survey of modern regional developments.</li> <li>2. <b>Frampton, K. (1983).</b> <i>Towards a Critical Regionalism: Six Points for an Architecture of Resistance</i>. (Essential for theoretical grounding).</li> <li>3. <b>Chadirji, R. (1986).</b> <i>Concepts and Influences: Towards a Regionalized International Architecture</i>. (A crucial local reference for the Iraqi context and the development of the "School of Baghdad").</li> </ol>
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Aga Khan Award for Architecture (AKAA) Archives:</b> The most comprehensive database of contemporary projects in the Arab world, essential for analyzing the success of modern interventions.</li> <li>• <b>Makiya, M. (1991).</b> <i>Post-Islamic Classicism: A Visual Essay</i>. (A foundational look at how traditional Islamic forms can be reinterpreted).</li> <li>• <b>Steele, J. (1997).</b> <i>An Architecture for People: The Complete Works of Hassan Fathy</i>. (A core reference for vernacular-based contemporary design).</li> </ul>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <b>Elsheshtawy, Y. (2004).</b> <i>Planning Middle Eastern Cities: An Urban Kaleidoscope</i>. (Essential for understanding the transition from the traditional Medina to the modern global city).</li> <li>• <b>Al-Asad, M. (2007).</b> <i>Contemporary Architecture and Urbanism in the Middle East</i>. (Provides critical insights into the politics of space).</li> <li>• <b>Pallasmaa, J. (2005).</b> <i>The Eyes of the Skin: Architecture and the Senses</i>. (Useful for teaching students to critique the phenomenological experience of Arab spaces).</li> </ul>
Electronic References, Websites	<ol style="list-style-type: none"> <li>1-Arch Daily: <a href="https://www.archdaily.com">https://www.archdaily.com</a></li> <li>2. Dezeen: <a href="https://www.dezeen.com">https://www.dezeen.com</a></li> </ol>

## Course Description Form

1. Course Name:	
Philosophy Of Architecture	
2. Course Code:	
ARCH 509	
3. Semester / Year:	
Second Semester / 2025–2026	
4. Description Preparation Date:	
01/02/2026	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: PhD- Hadel Saad Al-Mur'ib's Email: <a href="mailto:hadel.arch@mu.edu.iq">hadel.arch@mu.edu.iq</a>	
8. Course Objectives	
<ul style="list-style-type: none"> <li>• <b>Analyze Foundational Debates:</b> Critically examine the historical evolution of architectural philosophy, from Vitruvian principles to Post-structuralism and Deconstruction.</li> <li>• <b>Deconstruct Spatial Perception:</b> Evaluate the phenomenological experience of space, analyzing how light, texture, sound, and movement shape human consciousness and collective memory.</li> <li>• <b>Critique Socio-Political Power:</b> Investigate how architectural spaces function as tools of power, ideology, and social control, with a specific focus on the urban history of the Middle East.</li> <li>• <b>Evaluate Ethical Frameworks:</b> Assess the ethical responsibilities of the architect, particularly regarding environmental stewardship, social equity, and the preservation of cultural identity in a globalized era.</li> <li>• <b>Interpret Semiotics in Design:</b> Develop the ability to read and interpret the "language" of architecture—how forms, symbols, and details communicate cultural and religious meanings to the user.</li> <li>• <b>Synthesize Theory and Practice:</b> Demonstrate the capacity to bridge abstract philosophical concepts (e.g., Heidegger’s <i>Dwelling</i>, Foucault’s <i>Heterotopia</i>) with tangible architectural design decisions.</li> <li>• <b>Debate Contemporary Paradigms:</b> Engage in structured academic debate regarding current architectural movements, such as Digital Formalism, Sustainable Urbanism, and Neotraditionalism.</li> </ul>	Course Objectives

- **Formulate a Personal Manifesto:** Synthesize the semester's theoretical inquiries to draft a clear, professional philosophy that will guide the student's career as a practitioner.
  - **Apply Hermeneutics to Local Contexts:** Use interpretative methods to analyze the philosophical "intent" behind historical and contemporary Iraqi architecture.
- The study involves a set of tests and submissions to determine the student's ability to make the right design decisions within a certain period of time.

## 9. Teaching and Learning Strategies

<b>Strategy</b>	<p>Theory Lectures Supported by Media: Use of presentations, diagrams, and videos to explain theoretical concepts.</p> <p>Critical Analysis Sessions: Students analyze architectural projects through theoretical lenses.</p> <p>Problem-Based Learning: Encouraging students to apply theory to design challenges.</p> <p>Seminars and Discussions: Weekly discussions on readings from key theorists.  </p>
-----------------	---

## 10. Course Structure

<i>Week</i>	<i>Hours</i>	<i>Required Learning Outcomes</i>	<i>Unit or subject name</i>	<i>Learning method</i>	<i>Evaluation method</i>
<i>Week-1</i>	2	Introduction: Why do architects need philosophy?	The Foundations of Thought	<i>Attendance</i>	Daily test
<i>Week-2</i>	2	The Vitruvian Legacy and its modern challenges.	The Foundations of Thought	<i>Attendance</i>	Daily test
<i>Week-3</i>	2	Rationalism vs. Empiricism in architectural history.	The Foundations of Thought	<i>Attendance</i>	Daily test
<i>Week-4</i>	2	Heidegger's <i>Building, Dwelling, Thinking</i> .	Phenomenological Experiences	<i>Attendance</i>	Daily test
<i>Week-5</i>	2	The multisensory experience: Light, sound, and touch.	Phenomenological Experiences	<i>Attendance</i>	Daily test
<i>Week-6</i>	2	Mapping the difference between "Space" (mathematical) and "Place" (experiential).	Phenomenological Experiences	<i>Attendance</i>	Daily test
<i>Week-7</i>	2	Foucault and the Architecture of Control (Panopticism).	Politics & Ethics	<i>Attendance</i>	Daily test
<i>Week-8</i>	2	Architecture as a tool for National/Regional Identity.	Politics & Ethics	<i>Attendance</i>	Daily test
<i>Week-9</i>	2	Ethics of the built environment: Social equity and public responsibility.	Politics & Ethics	<i>Attendance</i>	Daily test
<i>Week-10</i>	2	Semiotics: How does a building speak to its occupant?	Symbols & Meanings	<i>Attendance</i>	Daily test
<i>Week-11</i>	2	Traditional symbolism in a globalized, modern world.	Symbols & Meanings	<i>Attendance</i>	Daily test
<i>Week-12</i>	2	The role of the "Icon" vs. the "Vernacular."	Symbols & Meanings	<i>Attendance</i>	Daily test
<i>Week-13</i>	2	Debating Contemporary Paradigms (BIM, AI, Sustainable Ethics).	The Final Manifesto	<i>Attendance</i>	Daily test

Week-14	2	Peer review of the Personal Manifesto (The final thesis statement).	The Final Manifesto	Attendance	Daily test
Week-15	2	Final Submission: The Architect as a Public Intellectual.	The Final Manifesto	Attendance	Daily test
<b>11. Course Evaluation</b>					
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc					
<b>12. Learning and Teaching Resources</b>					
Required textbooks (curricular books, if any)	<ol style="list-style-type: none"> <li>1. <b>Pallasmaa, J. (2005).</b> <i>The Eyes of the Skin: Architecture and the Senses.</i> (Essential for shifting the student focus from purely visual/aesthetic concerns to a phenomenological, multi-sensory understanding of space).</li> <li>2. <b>Vitruvius, P. (Translated by Morris Hicky Morgan).</b> <i>The Ten Books on Architecture.</i> (The primary historical text; essential for debating the "Commodity, Firmness, and Delight" framework against modern digital paradigms).</li> <li>3. • <b>Broadbent, G. (1980).</b> <i>Design in Architecture: Architecture and the Human Sciences.</i> (Provides the necessary link between scientific/humanistic theory and the act of design).</li> </ol>				
Main references (sources)	<ul style="list-style-type: none"> <li>• <b>Foucault, M. (1977).</b> <i>Discipline and Punish: The Birth of the Prison.</i> (Crucial for the Unit on Architecture of Control).</li> <li>• <b>Heidegger, M. (1971).</b> <i>Poetry, Language, Thought</i> (Specifically the essay: "Building, Dwelling, Thinking"). (Foundational for the Unit on Phenomenology).</li> <li>• <b>Venturi, R. (1966).</b> <i>Complexity and Contradiction in Architecture.</i> (A classic text for teaching semiotics and the "meaning" of forms).</li> </ul>				
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>• <b>Frampton, K. (1995).</b> <i>Studies in Tectonic Culture.</i> (Focuses on the poetic expression of construction, which is vital for senior students).</li> <li>• <b>Bachelard, G. (1958).</b> <i>The Poetics of Space.</i> (A deeper dive into how architecture influences human memory and dreams).</li> <li>• <b>Leatherbarrow, D. (2009).</b> <i>Architecture Oriented Otherwise.</i> (Offers a critical look at how to approach design when traditional rules are broken).</li> </ul>				
Electronic References, Websites	<ol style="list-style-type: none"> <li>1-Arch Daily: <a href="https://www.archdaily.com">https://www.archdaily.com</a></li> <li>2. Dezeen: <a href="https://www.dezeen.com">https://www.dezeen.com</a></li> </ol>				