



Department of Architecture

College of Engineering

University of Salahaddin

Subject: Architecture design I

Course Book – (Year 1)

Lecturer's name

- Dr. Hardi K. Abdullah (Lecturer, PhD)
- Dr. Zainab Yasir (Lecturer, PhD)
- Suhaib J. Abdulrahman ((Assistant Lecturer, M.Sc.)
- Fenk D. Miran (Lecturer, M.Sc.)
- Lana M. Hasan (Assistant Lecturer, M.Sc.)
- Siham Mushir (Assistant Lecturer, M.Sc.)
- Nawzad Khoshnaw (Assistant Lecturer, M.Sc.)
- Zana Amjad (B.Sc.)
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Academic Year: 2023-2024

Course Book

1. Course name	Architecture design I
2. Lecturer in charge	Dr. Hardi K.Abdulah
3. Department/ College	Engineering –Architecture
4. Contact	e-mail: hardi.abdullah@su.edu.krd
5. Time (in hours) per week	Theory: 2 Practical: 8
6. Office hours	10 hr
7. Course code	
8. Teacher's academic profile	<p>Hardi Abdullah is an academic, researcher, and designer based in Erbil in Kurdistan, Iraq. Currently, he is working as a full-time lecturer in the Department of Architecture at Salahaddin University-Erbil, where he received his Bachelor's degree in Architecture and came 1st in the faculty. Following this achievement, he obtained a grant to pursue a Master of Science degree in Digital Architecture at Newcastle University, UK. Later on, he won another grant to study for a PhD in Architecture at the Eastern Mediterranean University, Cyprus.</p> <p>Hardi has published several research papers in renowned architecture and built environment-related journals and participated in academic conferences both locally and abroad. He is the author of a book entitled Parametric Design Procedures: A New Approach to Generative-Form in the Conceptual Design Phase. He is an advisory board member of Cambridge Scholars Publishing and a regular reviewer for multiple ISI indexed journals.</p> <p>In addition, He has participated in different training courses and academic workshops at international level, including curriculum development and teaching methods in the USA. In his professional practice, Hardi is the founding partner of AVA Architects in Erbil and has designed numerous projects and buildings.</p>
9. Keywords	Spatial Organization, Shelter Design, Form and Space, Architectural Elements, Primary Elements, Craftsmanship, Materials , Drawing Techniques, Design Principles, Architectural Vocabulary

10. Course overview:

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

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

11. Course objective:

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

12. Student's obligation

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

13. Forms of teaching

- **Project Submissions:** These are comprehensive assignments where students must apply their knowledge to design, plan, and articulate their vision for a given brief.
- **Drawings:** Technical drawing skills are honed through practice and submissions, enabling students to communicate their ideas effectively.
- **Modeling:** Physical or digital modeling allows students to explore the spatial and material qualities of their designs.
- **Design Reviews:** Also known as critiques or "crits," these sessions involve presenting work to peers and faculty for feedback.
- **Research Papers:** Writing assignments focused on historical, theoretical, or technical topics help deepen understanding.
- **Studio Work:** Hands-on studio time is essential for exploring design concepts in a practical setting.
- **Field Studies:** Visits to significant sites and structures support experiential learning about space, structure, and context.
- **Workshops:** Intensive sessions on specific skills or techniques, from digital tools to hand-crafting.
- **Lectures:** Presentations by faculty or guest speakers offer insights into various topics within

- architecture.
- Collaborative Projects: Group work that simulates professional collaborative processes found in the architecture industry.

14. Assessment scheme

- Final grade for this module will be calculated as following:
First semester:100% for semester balance
- - Assignments (including all studio-works, home-works, group activities ,day sketch and daily quizzes , Class discussion and participation) 65%
- - Weekly final submission 15%
- -Prelim, Pre-final, and Final project submission 15%
- Attendance 5%
- Student's attendance is required in all classes.
- - Continuous exam %70
- - Final exam %30

15. Student learning outcome:

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

16. Course Reading List and References:

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

Textbooks required for Design communication module are :

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

17. The Topics:

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

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Week 5	Theoretical	Primary shapes and surfaces - Representing materials	1
	Practical	Drawing exercises (practicing properties of forms and primary shapes) Material representation Drawing exercises (practicing properties of forms and primary shapes) Material representation	9
Week 6	Theoretical	Primary solids - Rendering tonal values: -Hatching, crosshatching, scribbling and stippling -Value scale	1
	Practical	Physical modeling: using card and paper works to create the primary solids - Individual work. Rendering exercises	9
Week 7	Theoretical	Regular and irregular forms. Architectural drawing systems: -Multi view Drawings (top, front and side)	1
	Practical	-Drawing exercises (practicing properties of forms and primary Shapes). -Orthographic projection	9
Week 8	Theoretical	Transformation of form -Subtractive and additive forms -Centralized, linear, radial, clustered form -Multi view Drawings (top, front and side)	1
	Practical	Physical composition using cubical units: The students are requested to create different cubical forms and spaces through applying theoretical concepts (individual work). -Orthographic projection	9
Week 9	Theoretical	Form and space Multi view Drawings	1
	Practical	-Cubical composition: Ambiguity state -Cubical composition: Subtraction -Orthographic projection exercises	9
Week 10	Theoretical	Form and space Multi view Drawings	1
	Practical	Cubical composition: Addition -Cubical composition: Space creation (Final submission). -Orthographic projection exercises	9

Week 11	Theoretical	-Opening in space: defining elements -Degree of enclosure -Architectural multi view Drawings: Drawing a floor plan	1
	Practical	-Physical modeling: The students are asked to design and create enclosure or sheltered space by cubes -Drawing exercises	9
Week 12	Theoretical	Architectural multiview Drawings: -Doors and windows -Stairs	1
	Practical	Physical modelling: 3D Screen pattern design which focuses on the idea of visual connection between inside and outside of a space/room as well as light penetration into space – using cubes -Drawing exercises	9
Week 13	Theoretical	Organization of form and space Spatial organizations: centralized, linear, radial, cluster and grid organizations Architectural multiview Drawings: -Stairs	1
	Practical	-Physical modeling: practicing different types of spatial organization by using cubes Individual works -Drawing exercises	9
Week 14	Theoretical	-Circulation: movement through space Forms of circulation space. Architectural multiview Drawings: -Scale and orientation	1
	Practical	Drawing exercises for movement and circulation types 3D modeling of cubes Drawing exercises for section and elevation	9
Week 15	Theoretical	-Proportions and scale: material,	1

structured and manufactured.	
Architectural multiview Drawings: -Site plans drawings	
Practical	Ergonomic studies in relation to human scale and furniture dimensions in particular space- (drawing/ rendering/ collage /physical model) using cubes Drawing exercises for section and elevation
9	
Total Hours of Work Load Lectures	
150	

19. Examinations:

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

20. Extra notes:

In architectural education, it's crucial to remember the importance of iterative learning and reflection. Students should be encouraged to learn from each project and critique, taking constructive feedback into their future work. Balancing practical skills with theoretical knowledge is key, as is fostering a collaborative environment where students can learn from each other. Regularly updating course content to include sustainable and innovative design practices can also enhance learning outcomes

21. Peer review . پيداچوونهوهى .