Department of Architecture
College of Engineering
Salahaddin Univeresity – Erboil

Course Book of
Design Methods
Second Year
2020 – 2021 (2nd Semester)

Asst. Prof. Dr. Faris Ali Mustafa Mzoori

Asst.lec. Faten Radhwan Yaseen

Course Book Discription

1. Course name	Design Methods
2. Lecturer in charge	Asst. Prof. Dr. Faris Ali Mustafa Mzoori Asst.lec. Faten Radhwan Yaseen
3. Department/ College	Architecture, Engineering
4. Contact	e-mail: fatin.yaseen@su.edu.krd architect_fatin@yahoo.com
5. Time: hours/week	Theory: 4 hours/week (2 theory + 2 practical)
6. Time table	Sunday from 9:00-11:00, Monday from 1:30-3:30 AM
7. Course code	
8. Teacher's academic profile	Dr. Faris Ali Mustafa is an Assistant Professor and a member of post graduate studies committee at the Department of Architecture, College of Engineering, Salahaddin University – Erbil, Iraqi Kurdistan Region. He was the Head of Quality Assurance Committee at the same department from 2011-2013. He is a member of the Commission on Certificate Equivalency in the Ministry of Higher Education and Scientific Research, Kurdistan Region, Erbil, Iraq, from 2012 until present. He was appointed as a deputy head of the department of the architectural engineering, at the same university in 2004-2005. He was also a consultant architect and the founding member of Nvar center for architecture in Erbil city in 2000. A registered architect in the Iraqi engineers union (IEU) and Kurdistan engineers union (KEU) since 1994. His specialization is architectural design studies. His researches particularly address building design and its functional efficiency and performance applying space syntax theory and its techniques and methods. His research interests in Space Syntax, Interior Design, Building Performance Evaluation (BPE), and Architectural Design. Faten Yaseen, finished her BSc. in architecture at University of Salahaddin in 2012. She was top 3 in her department, therefore established working in the department as assistant. In 2019 continued MSc. degree in Salahaddin University with an Excellent degree in the thesis of “Biophilic Architecture”. Now she is one of the teaching staff in the department. Interested in researches about sustainability and biophilic design approach. She has one publication in the field of biophilic design.
9. Keywords	Architecture, architectural design, design methods, design process, philosophy of design...etc.

10. Course Overview:

- Design Methods is one of the theoretical subjects related to the core of architecture. It provides a sound base for students to be familiar with the basic principles of architectural design required for all phases of architecture in general and in particular topics related to design such as architectural design, interior design, landscape design...etc.
- Students have to study this subject in detail to understand the different methods of architectural design process (traditional and new methods).
- Design Methods will be presented in two parts (theoretical and practical); theoretically, there will be weekly lectures to provide clarifications on the theoretical and cognitive aspects related to the design process and the procedures and steps required to deal with the existing architectural condition.
- As for the practical level, and in order to verify and investigate these theoretical aspects, some projects will be elected to follow the procedures and steps that the designers have followed to reach the final production of their projects through conducting workshops and extensive discussions.

11. Course Objective:

This Subject aims to show and analyze methods of architectural design process, familiarizing students with different methods and helping students how to overcome design problems during design process.

The main objectives could be summarized as follows:

1. **O**pen a window to the architecture and design methods, explain why are they needed and where did they came from.
2. **T**o introduce architectural design methods and to discuss its importance.
3. **T**o describe types of architectural design methods that may be used.
4. **T**o introduce architectural design and to discuss its importance.
5. **T**o explain the architectural design decisions and their crucial role of decision making in design process.
6. **T**o understand the meaning of design, as mental habits, and the ways in which the designer tries to use creative thinking.
7. **T**o study the factors that affects the design methods in the field of architectural design.
8. **I**ncreasing the ability of the students in understanding the new methods of architectural design.
9. **T**o teach the students the ways that used by architects during design process.
10. **T**o teach the students the ways that used by architects to solve design problems during design process.

12. Student's Obligation:

- The participation of the students for the lecture is a basic and crucial point for the enrichment of the course. In general, students are required to attend each lecture due to its sequential nature as each lecture is related to the other lecture, and therefore the absence in one of the lectures will create lack of understanding of the subject.
- Due to the basic design nature of the course subject, students need to contribute to the lectures by asking questions, giving feedback, and even by introducing new

ideas.

- Students are required to prepare seminars at the end of the course to show and discuss related topics, and other students may be asked to enrich the presentation. Students must be fully prepared for any quiz done by the teacher.

13. Forms of Teaching:

- Students will be provided with the main references given by the teacher at the beginning of the year.
- The teacher uses PowerPoint presentation through using data show projector and white board for further understanding.
- The teacher encourages students for the participation of the discussion in the lectures.
- For the practical lectures, students will be divided into groups to discuss a specific topic or design project through structured workshops every week or two.

14. Assessment Scheme:

Assessement of students will be as follows:
Students are required to do one closed book exam at the mid of the semester besides other assignments including one assignment report. The exam has 25 marks, classroom activities, assignments and reports, and short quizzes together counting 15 marks. There will be a final exam on 60 marks. So that the final grade will be based upon the following criteria:

Mid-semester exam: 25%
1 quize, Classroom participation, and assignments 15%
Final exam: 60%

Constructive classroom participation, assignment presentation, and class attendance will be assessed by the lecturer during the semester. Examinations and assignments require analytical work, not just memorizing topics or articles.

15. Student Learning Outcome:

- Design Methods has been one of the most important topics in architecture since the appearance of architectural science.
- Given the philosophical and theoretical nature of the semester subject. Thus, students need to attend lectures and actively participate in the class.
- Students will be familiar to the core topics of architectural design and its methods; dealing with design process in architecture based on scientific procedure; student will be able to know how all different stages could be controlled in architectural design process.
- Student learn how to cover different design problems at different stages of design process as well as knowing to select the best solution for each problem. Accordingly, the student learns how to make the right decision during the design process, which is the most difficult stage in the field of architectural design.
- After the lecturer provides the student with a definition of the foundations and rules of dealing with the design process according to the basics of architectural criticism. The student will have the ability to self-criticize their architectural designs and projects.

16. Course Reading List and References:

1- Design Method, Seeds of human futures. John Christopher Jones, 1980.
2- How designers think. Bryan Lawson, Oxford, MA, 2005.

3- What designers Know. Bryan Lawson, Oxford, MA, 2005.
4- Design Thinking. Rowe, Peter G., MIT Press, 1987.
5- 100 Things every designer needs to know about people. Susan Weinschenk, U.S.A, 2011.
6- Notes on the Synthesis of Form. Cristopher Alexander, Harvard University Press, Cambridge, Massachuests, 1964.
7- The Sciences of the Artificial. Simon H.A.,The MIT Press, 1981.
8- Designerly Ways of Knowing: Design Discipline Versus Design Science. Nigel Cross, Design Issues, 17(3), pp. 49 – 55, 2001.
9- The Design Research Society, DRS, is an organization of the design research community. You can find more about their activities and services at their website, https://www.designresearchsociety.org/cpages/publications-1
10-Design Studies Journal: http://www.sciencedirect.com/science/journal/0142694X
11-Environment and Planning B: Planning and Design, https://journals.sagepub.com/toc/epb/current
12-Design Strategies in Architecture: An Approach to the Analysis of Form, Geoffrey H. Baker, routledge, 2006.

17. Topics and Lectures:

Second Semester		
Week No.	**Topics**	**Lecturer's name**
1	**Course overview, Introduction, the origin of architecture**	Dr. Faris Ali Mustafa
2	**Knowledge, logic and philosophy**	
3	**Logic and philosophy in architecture**	
4	**What is design and design process?**	
5	**Design in architecture, ways of design**	
6	**Traditional methods :Design by drawing**	
7	**Developing design process The need for new Methods How do traditional designers copy with complexity?**	
8	**The need for new methods In what ways are modern design problems More complicated than traditional ones?**	
9	**The need for new methods What are the interpersonal obstacles in solving modern design problems?**	
10	**The need for new methods What are the new kinds of complexity beyond the scope of the traditional design process?**	
11	**How do you design - design process What do Designers Need for Design**	
12	**Design process and strategic thinking in architecture**	

13	**Design process: stages of design process**	
14	**Concept in architectural design process, architectural design variables, architectural design problem – 1**	
15	**Concept in architectural design process, architectural design variables, architectural design problem – 2**	
Hint: Quizzes would be included within lectures.		
18. Practical Topics: **Will be selected according to the lectures' topics (discussions, assignments, workshops…etc.)**		