



Department of Architectural Engineering
College of Engineering
University of Cihan - Sulaymaniyah

Subject: Building Element
Course Book – Second stage

Lecturer's name:
Mohammed Fadhil Hama

Academic Year: 2023/2024

Course Book

1. Course name	Building Element
2. Lecturer	Mohammed Fadhil Hama
3. Department/ College	Architecture/Engineering
4. Contact	
5. Time (in hours) per week	Theory: 2 Practical: 0
6. Office hours	
7. Course code	ARC-41121
8. Teacher's academic profile	<ul style="list-style-type: none">• BSc. in Civil Engineering from The University of Bahrain, Bahrain, 2012.• MSc in Structural Engineering with Materials, United Kingdom, 2013.• PhD in Civil Engineering from The University of Nottingham, United Kingdom, expected to finish by end of 2023.
9. Keywords	All types of building elements, foundation, wall, stair, openings, roof, floor, Finishing.
10. Course overview:	<p>This course provides an introductory overview of the various elements used in construction. After receiving an introduction into fundamental principles of structural, physical, and long-term performance, students learn about element and product manufacturing techniques and how they relate to mechanical and non-mechanical properties of the various elements. Common construction methods are introduced and building details are explored.</p>
11. Course objective:	<p>Students have the opportunity to experience element capacity and behaviour as well as construction methods in demonstrations.</p> <p>Furthermore, element applications and detailing in structural and non-structural building components are explored. Resulting from this course, students will gain a comparative knowledge of element properties and possible applications in construction and architecture.</p>
12. Student's obligation	<p>Students are required to attend class, do quizzes, self-study after each class and will have two take two exams during the semester</p>

13. Forms of teaching

The elements are explained mainly by data show and the white board is used

14. Assessment scheme:

Midterm Examination	30%
Participation	5%
Quizzes	10%
Final exam	50%

15. Student learning outcome:


- Comparative knowledge of element properties (physical, structural, ...) for most common and advanced building elements,
- Understanding of typical and potential applications of these elements,
- Understanding of relationship between element properties and structural form,
- Ability to identify crucial problem areas in manufacture and applications of building elements,
- Understanding of importance of experimental verification of element properties.

16. Course Reading List and References:

- Allen, E. & Iano, J., 2014. Fundamentals of Building Construction. 6th ed. NJ: John Wiley & Sons.
- Barry, R., 1999. The Construction of Buildings. 7th ed. Oxford: Blackwell Science.

17. The Topics:

Week No.	Topic
1	Introduction to course
2	Introduction to Foundations
3	Foundations, different types, and functions
4	Introduction to structural elements; beams, columns, lintels, etc.
5	Introduction to walls
6	Walls, different types, and functions
7	Introduction floors
8	Introduction roofs
9	Introduction to stairs
10	Precast Concrete Framing Systems
11	Steel structures
12	Glass, glazing, windows, doors
13	Internal finishes, external rendering, and HVAC

14	Review of the course
Final examination	
 Main Lecturer Mohammed Fadhil Hama	Head of The Department Mrs. Tara Azad Rauof