



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

Subject: Estimation and Specifications
Course Book – Year 5

Lecturer's name:

Mohammed Fadhil Hama

Academic Year: 2023/2024

Course Book

1. Course name	Estimation and Specification
2. Lecturer	Mohammed Fadhil Hama
3. Department/ College	Architecture/Engineering
4. Time (in hours) per week	Theory: 2 Practical: 0
5. Office hours	<i>To be confirmed</i>
6. Course code	
7. 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.
8. Keywords	
9. Course overview:	
<ul style="list-style-type: none"> • Introduction to quantity surveying. • Methods of measurement and calculations of different items and materials used in a typical building project (Earthworks, Foundations, masonry units, concrete works, steel reinforcement, slabs, beams, etc). • Preparation of comparative tables of prices and bids and their evaluation. Specification writings. • General conditions of contract between architect, client, and contractor. Specifications for materials and various constructional works and execution procedures. • Preparation of contract document for various trades and works for bids. 	

10. Course objective:

- To learn what is meant by estimation and the different measurement types, as well as different types of estimation.
- To learn how to estimate individual components of buildings, such as earthwork, masonry, concrete, steel works, gypsum, etc.
- To learn how to price and compute the cost of building elements.
- To teach students about construction specifications, how to find the sources of them, how to make a B.O.Q.
- To teach students to about different engineering contracts.

11. Student's obligation

Students are Required to attend class, do the quizzes, self- study after each class and take two exams during the semester.

12. Forms of teaching

Lectures, exercises, presentations, self-evaluation, assignments, and projects.

13. Assessment scheme

Midterm Examination	30 %
Quiz and Project	10 %
Final theory exam	60 %

Examinations: Essay Questions, Solving problems, Calculations, True-False

14. Student learning outcome:

This subject is one of the most important subjects that must be taken in the fifth stage because the student will be taught how they can prepare a tender for a project and how arrange the B.O.Q items according to the engineering standards and specifications.

Also this subject will help the students to have information about the engineering union and municipality regulations.

15. Course Reading List and References:

- Brook, M., 2004. *Estimating and Tendering for Construction Work*. 3rd ed. Oxford: Elsevier.
- Dagostino, F. R. & Peterson, S. J., 2011. *Estimating in Building Construction*. 7th ed. NJ: Prentice Hall.
- Del Pico, W. J., 2012. *Estimating Building Costs for the Residential & Light Commercial Construction Professional*. 2nd ed. Hoboken: John Wiley & Sons.
- Popescu, C. M., Phaobunjong, K. & Ovararin, N., 2003. *Estimating Building Costs*. 1st ed. New York: Marcel Dekker.

16. The Topics:

Lecture No	Topic
1	Introduction to estimation and specification
2	Planning, Designing, Budgeting and Tendering phases
3	Types of estimation and duty of estimator
4	Calculating linear measure area & volume
5	Earthwork measurements
6	Concrete works
7	Reinforced concrete foundation
8	Reinforced concrete slabs
9	Reinforced concrete beams and columns
10	Masonry units and metals
Midterm exam starts 20 – 26 Nov	
11	Interior and exterior finishing works
12	Interior and exterior finishing works
13	Specifications and preparing bill of quantities - <i>Example</i>
14	Review of the course
Final Examination 18 – 24 Dec	



Main Lecturer
Mohammed Fadhil Hama

Head of The Department
Mrs. Tara Azad Rauof