

Academic Program Description Form

University Name: Future University Faculty/Institute: College of
Engineering and Engineering Technologies Scientific Department:
Department of Building and Construction Techniques Engineering
Department

Academic Program Name: Bachelor's Degree Final Certificate Name:
Bachelor of Science in Building and Construction Techniques
Engineering Department

Study System: Annual Description Preparation

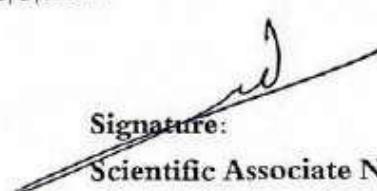
Date: File Completion Date: 18/5/2024

Signature: 

Head of Department Name:

Dr. Mayadah Waheed Falah

Date: 10/2/2025

Signature: 

Scientific Associate Name: Dr.

Ameen Mohammad Kitab

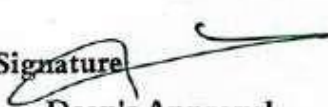
Date: 10/2/2025

Reviewed by: Quality Assurance and academic Performance Division Name of
Director of Quality Assurance and academic Performance Division:

Signature: 

Dr. Zahraa Hashim Kareem

Date: 10/2/2025

Signature: 

Dean's Approval

1. Program Vision

The department aspires to be a leader and a distinguished entity in the field of construction and building technologies, providing high-quality scientific research characterized by innovation and creativity at the local, regional, and international levels.

2. Program Mission

To prepare technical engineers with outstanding capabilities in utilizing modern and advanced technologies and methods for the design, implementation, and maintenance of all engineering projects, contributing to the achievement of the country's scientific and economic development goals.

To conduct scientific and applied research aimed at creatively and innovatively developing construction technologies to meet the needs of the labor market.

3. Program Objectives

1. Developing curricula to meet labor market demands and enhance students' scientific and practical competencies.
2. Advancing technical and laboratory infrastructure to support the educational and research process and provide a stimulating interactive learning environment.
3. Improving the educational environment by providing suitable and motivating facilities and ensuring a safe and inclusive academic atmosphere.
4. Developing the teaching staff through continuous training, exchange of expertise, and exposure to the latest methods and approaches in higher education.
5. Promoting scientific research and knowledge production by supporting research projects, scientific publications, and participation in academic conferences.
6. Supporting community engagement initiatives to foster social responsibility among students and strengthen the university's role in serving society.
7. Enhancing partnerships with government agencies and the private sector to align educational outcomes with labor market needs and provide training and employment opportunities for graduates.

4. Program Accreditation

It is also known as specialized program accreditation, which refers to the evaluation of specialized programs of an educational institution or one of its departments to ensure the quality of these programs and their alignment with the

level of degree they confer. The educational institution seeking program accreditation prepares a detailed study of its current status and compares it with the standards of the accrediting body, in addition to defining its objectives and future vision, which represents the basic step in the evaluation process. As such, the Department of Construction and Civil Engineering Technologies has obtained program accreditation from the Arab Accreditation Board of Engineering and Technology for a duration of four years starting from January 1st, 2022, until December 30th, 2025.

5. Other external influences

The employment of graduates from the Department of Construction and Building Technologies in the local and regional labor markets is a key factor influencing the development of the academic program. The demand from government institutions and the private sector for engineering competencies helps align educational outcomes with the required practical skills. Moreover, the employment of students during or after their studies reflects the quality of the program and supports curriculum review to meet job market requirements, especially with the high rate of graduates being employed in government projects and private contracting companies such as:

1. **Emtidad Al-Dhamin Engineering Company**
2. **Al-Sakhaa Engineering Contracting Company**
3. **EarthLink Company**
4. **Ministry of Housing and Reconstruction**
5. **Ministry of Environment**
6. **Ministry of Electricity**
7. **Babel Water Directorate, among others...**

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	6	12	15%	
College Requirements				
Department Requirements	32	182	80%	The curriculum is not courses

Summer Training	2		5%	
Other				

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

7. Program Description				
Credit Hours		Course Code	Course Name	Year/Level
practical	theoretical			
60	30	MU0232001	Engineering mechanics	Stage One
30	60	MU0232002	Mathematics	
45	30	MU0232003	Engineering drawing	
60	60	MU0232004	Construction material	
60	60	MU0232005	Plane Surveying	
60	15	MU0232006	Computer Principles	
0	30	MU0232007	Human rights & democracy	
0	30	MU0232008	Advanced English skills	
0	18	MU0232009	Arabic	
60	30	MU0232001	Building Construction	Stage Two
90	60	MU0232002	Concrete Technology	
90	60	MU0232003	Surveying (2)	
60	60	MU0232004	Advanced Mathematics	
60	60	MU0232005	Strength of Materials Fluid	
60	30	MU0232006	Mechanics Construction	
60	60	MU0232007	Materials Technology	
30	15	MU0232008	Computer Applications (1)	
0	30	MU0232009	English Language	
60	60	MU0233001	Analysis and Design of Reinforced Concrete Structures (1)	Stage Three
60	60	MU0233002	Concrete Technology (2)	
50	90	MU0233003	Soil Mechanics	
60	60	MU0233004	Engineering Management and Construction Machinery	
60	30	MU0233005	Structural Theory	
0	90	MU0233006	Structural Analysis	
60	60	MU0233007	Road Engineering	
60	30	MU0233008	Computer Applications (2)	
0	30	MU0233009	English Language	
60	60	MU0234001	Analysis and Design of Reinforced Concrete Structures (2)	Stage Four
60	60	MU0234002	Foundation Engineering	
0	90	MU0234003	Steel Structures Design	

60	60	MU0234004	Estimation, Specifications, and Contracts	
60	60	MU0234005	Environmental Engineering	
0	60	MU0234006	ISO Standards	
60	30	MU0234007	Structural Drawing	
60	30	MU0234008	Computer Applications (3)	
60	60	MU0234009	English Language	

8. Expected learning outcomes of the program	
Knowledge	
Learning Outcomes 1	1- Motivating students to explore foundational specialized information. 2- Increasing students' capability and fostering their ideas. 3- Providing diverse and reliable resources. 4- Familiarizing students with the psychological aspect. 5- Diversifying students' cultural knowledge. 6- Developing training plans and programs through workshops and seminars.
Skills	
Learning Outcomes 2	1- The student understands the concept of accounting. 2- The student lists the types of accounting and its tools. 3- The student distinguishes between each type and mentions its characteristics.
Learning Outcomes 3	1 - To acquire technical knowledge 2 - To master project management 3 - To apply safety and quality standards 4 - To design sustainable construction projects 5 - To utilize modern technologies
Ethics	
Learning Outcomes 4	1- Providing assistance to students and guiding them towards excellence. 2- Analyzing students' behaviors and treating them fairly. 3- Caring for students from low-income backgrounds and disadvantaged groups. 4- Treating students kindly and striving to promote love and respect among them.
Learning Outcomes 5	1- The ability to understand and apply developments occurring in the work environment. 2- Attracting experienced, skilled, and motivated individuals. 3- Increasing and encouraging organizational loyalty. 4- Developing employees' skills through workshops and courses.

9. Teaching and Learning Strategies

- 1 .Discussion and Dialogue Strategy
- 2 .Brainstorming Strategy
- 3 .Discovery Learning Strategy
- 4 .Cooperative Learning Strategy
- 5 .Reciprocal Teaching Strategy
- 6 .Project-Based Learning Strategy
- 7 .Problem-Solving Strategy
- 8 .E-Learning Strategy
- 9 .Lecture Strategy
- 10 .Self-Learning Strategy
- 11 .Blended Learning
- 12 .Peer Teaching and Learning
13. Interactive Lessons

10. Evaluation methods

The academic program employs a variety of assessment methods aimed at measuring the extent to which students achieve cognitive, skill-based, and behavioral learning outcomes. These methods include written tests (both short and final), assignments and tasks, projects and presentations, research reports, classroom activities, as well as practical assessments in laboratories according to the nature of the courses. Assessment tools are distributed to ensure their comprehensiveness, fairness, and alignment with the course objectives and program outcomes.

11.Skills Guide – Department of Building and Construction Engineering Technologies

The academic program in the Department of Building and Construction Engineering Technologies aims to prepare graduates with integrated competencies, including cognitive and technical skills, as well as personal and professional abilities that align with labor market demands. The Skills Guide outlines a set of competencies that students are expected to acquire during their academic journey, such as the ability for engineering design, use of engineering software, conducting laboratory experiments, teamwork, and adherence to professional ethics and safety standards.

Skill	Description	Skill Domain
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Understanding Basic Engineering Principles	Ability to comprehend theoretical concepts related to construction, soil mechanics, and material properties	Cognitive Skills
Structural Problem Analysis	Ability to analyze structural systems and identify the most appropriate technical solutions	
Preliminary Engineering Design	Designing simple structural elements according to technical and economic standards	
Use of Engineering Software	Using programs like AutoCAD, Revit, and ETABS to prepare designs and drawings	Technical / Technological Skills
Conducting Laboratory Tests	Performing laboratory tests on construction materials (soil, concrete, asphalt, steel, etc.)	
Reading and Analysing Drawings	Ability to accurately read and interpret execution and structural drawings	
Construction Site Management	Understanding field procedures and organizational aspects of managing construction projects	
Preparing Technical Reports	Writing comprehensive technical reports on projects or experiments	Communication and Personal Skills
Presentation and Communication	Delivering technical presentations and clearly explaining ideas using technical tools	
Teamwork	Actively participating in group projects and task distribution	
Commitment to Occupational Safety	Applying safety and occupational health standards at construction sites	Professional and Ethical Skills
Ethical and Professional Conduct	Adhering to professional values and fulfilling social and environmental responsibilities	

12.Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Dr. Mayada Waheed Falah						
Dr. Bareq Ali Abdulhadi						
Assoc. Prof. Imran Issa Mohammed						
Assoc. Prof. Sabah Mohammed Abd						
Dr. Najah Mahdi Lateef						

Mr. Aqeel Abdul Hassan						
Ms. Fatima Hashim Kareem						
Mr. Mohammed Jawad Kazim						
Ms. Israa Mohsen Kazim						
Ms. Raghad Ali Nasser						
Ms. Alaa Hussein Abdulameer						
Ms. Fatima Muslim Hadi						
Ms. Hanin Fadel Kazim						
Duaa Falah Yousif						
Noura Fawzi Abdo						
Zainab Abdul Rahman Abbas						
Hassan Mohammed Abdul Hamza						
Dr. Ahmed Najm Abdullah						
Mr. Tamim Mohammed Hashem						
Dr. Alaa Hussein Ali						
Dr. Yasser Mohammed Jaber						
Mr. Karar Ahmed Hamza						
Ms. Sally Sillan Hussain						
Ms. Maryam Mohammad Mussa						
Ms. Benin Mohammad Hilal						
Mr. Tammar Maitham Abdulwahhab						
Ms. Lina Hussain Ali						
Ms. Elaf Sami Hassan						
Mr. Muhammed Hussein						

Professional Development

Mentoring new faculty members

"Establishing programs for department members, assigning tasks to each, and implementing guidance and counseling programs."

Professional development of faculty members

A brief description of the academic and professional development plan and arrangements for faculty members, including teaching and learning strategies, assessment of learning outcomes, professional development, etc.:

In an effort to enhance the competence of faculty members and strengthen their teaching capabilities:

- The department is committed to issuing an administrative order for newly appointed instructors to be granted partial or full-time release to attend the university-accredited "Teaching Methods" course. This course is considered a fundamental requirement for permanent teaching within the department and is officially counted among their academic duties.

- A training program titled “*Specialized Skills Development*” has been implemented, which includes training courses for the administrative staff in the department, covering topics such as administrative development, official correspondence, communications, services, and laws and regulations.
- Additionally, the same training program “*Specialized Skills Development*” has been conducted for the teaching staff in the department. It includes training courses such as *Occupational Health and Safety* and *Computer Skills for Non-Specialists*.

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13. Acceptance Criterion

Students from the scientific (biology and applied science) and literary branches of the Iraqi high school (sixth preparatory) are eligible for admission to the Department of Building and Construction Technologies Engineering. The minimum required average is 60% for the morning program and 58% for the evening program, with an annual tuition fee of 2,750,000 Iraqi Dinars.

- Admission follows the standards of private education, which are issued in the form of a handbook that is updated annually and published by the Directorate of Private University Education. (The handbook is uploaded on the main page of the department's website.)
- Opportunities for students to study in the department are announced through the “Study in Iraq” program, which is published annually on the official website of the Ministry of Higher Education and Scientific Research. (It is also available on the department’s main webpage.)

14. The most important sources of information about the program

"Library/Internet/Websites/Virtual Library
 Departmental and Faculty Handbook and Guide
 Department's website within the University's website
 Departments and faculties equivalent to the Department of Construction and Building Technologies Engineering"

15. Program Development Plan

The program development plan in the Department of Building and Construction Engineering Technologies is considered an essential part of the ongoing quality policy aimed at improving the educational process and enhancing graduates' competencies to align with labor market requirements and national development directions. The main pillars of the development plan are summarized as follows:

First: Continuous Review and Evaluation

- *Conducting periodic reviews of all components of the academic program (objectives, outcomes, content, teaching methods, assessment).
- *Using surveys to evaluate the opinions of students, graduates, and employers to identify strengths and weaknesses.
- *Presenting annual evaluation reports to the department's Quality Assurance Committee and submitting them to the dean's office for follow-up.
- *Updating course syllabi and linking them to recent technological developments in sustainable construction, BIM technologies, and advanced building materials.

Second: Development of Teaching Staff

- *Ensuring the availability of a sufficient number of faculty members specialized in the program's specific fields (structural design, soil mechanics, project management, laboratories, etc.).
- *Linking academic recruitment to scholarship and postgraduate study plans inside and outside the country.
- *Granting new faculty members administrative leave to attend the university-approved teaching methods course as part of their pedagogical qualification before permanent academic work.
- *Organizing internal workshops for experience exchange and improving teaching and assessment methods.
- *Encouraging faculty to conduct applied research related to the needs of the construction sector.

Third: Enhancing Student Interaction and Developing Services**

- *Developing academic advising programs by assigning qualified advisors to regularly follow up with students.
- *Supporting students' participation in extracurricular activities, scientific competitions, and student conferences.
- *Creating a supportive learning environment by developing laboratories, drawing halls, and technical workshops.
- *Linking graduation projects with the needs of professional entities in both the public and private sectors.

Fourth: Integrated Quality and Accreditation Plan**

- *Committing to academic accreditation requirements (such as NCAAA or ABET standards) and aligning learning outcomes with national and international standards.

- *Using Key Performance Indicators (KPIs) to measure program effectiveness and improve outcomes.

- *Periodically updating program documents (program description, course descriptions, improvement plans, skills guide).

Fifth: Implementation and Follow-up Mechanisms**

- *Forming a program development committee within the department to monitor plan implementation and conduct annual performance evaluations.

- *Submitting periodic reports to the college accreditation committee and the department council for appropriate decision-making.

- * Involving stakeholders (students, graduates, employers) in program review.

Program Skills Outline

[illegible]

	Computer Applications (1)	MU0232008	Basic													
	English Language	MU0232009	Basic													
Stage Three	Analysis and Design of Reinforced Concrete Structures (1)	MU0233001	Basic													
	Concrete Technology (2)	MU0233002	Basic													
	Soil Mechanics	MU0233003	Basic													
	Engineering Management and Construction Machinery	MU0233004	Basic													
	Structural Theory	MU0233005	Basic													
	Structural Analysis	MU0233006	Basic													
	Road Engineering	MU0233007	Basic													
	Computer Applications (2)	MU0233008	Basic													
	English Language	MU0233009	Basic													
Stage Four	Analysis and Design of Reinforced Concrete Structures (2)	MU0234001	Basic													
	Foundation Engineering	MU0234002	Basic													
	Steel Structures Design	MU0234003	Basic													
	Estimation, Specifications, and Contracts	MU0234004	Basic													
	Environmental Engineering	MU0234005	Basic													

	ISO Standards	MU0234006	Basic												
	Structural Drawing	MU0234007	Basic												
	Computer Applications (3)	MU0234008	Basic												
	English Language	MU0234009	Basic												