**Ministry of Higher Education and Scientific Research**

**Scientific Supervision and Evaluation Authority**

**Quality Assurance and Academic Accreditation Department**

# Academic Programs Description
# Madenat Alelem University
# The Technical Engineering College
# Department of Building and Construction Engineering Technology

2026

**University Name: Madenat Alelem University**

**Faculty/Institute: College of Technical Engineering**

**Scientific Department: Department of Building and Construction Technology**

**Academic or Professional Program Name: Bachelor of Building and Construction Technology**

**Final Certificate Name: Bachelor of Building and Construction Technology**

**Academic System: Annual**

**Date of preparation of the description: 7/2/2026**

**File filling date: 7/2/2026**

Signature

Head of Department Name Maysam Abbood

Date 13/4/2026

Signature

Scientific Associate Name Dr. Maysam

Date 4/4

The file was checked by the Division of Quality Assurance and University Performance

Name of the Head of the Quality Assurance and University Performance Division Taman Zaid

Date: 13/4/2026

Signature:

Approval of the Dean

أ.م.د. نصير قاسم حمودي

## 1. Vision

**The Technical Engineering College in madenat AlElm university seeks to prepare graduates in the field of engineering technologies, particularly in Construction and Building Engineering Technology, to work in government sectors and to apply their specialization effectively in practical and applied fields .**

## 2. Program Mission

**The program aims to prepare and graduate pioneering scientific and leadership competencies in the field of Construction Engineering Technology, and to contribute to the advancement of knowledge through scientific research in construction and building technology. It also seeks to serve the local, regional, and international community, while training and refining students' minds scientifically and intellectually. Furthermore, the program emphasizes social and cultural values and responds to the requirements of the local labor market .**

## 3. Program Objectives

- To recognize, understand, and study engineering problems in the field of Construction and Building Engineering.
- To address and analyze the impact of economic and engineering challenges in the construction and building sector.
- To understand and study the influence of modern engineering designs on applications in construction and building engineering.
- To develop the ability to produce modern engineering designs that meet required needs within specific constraints.
- To acquire the ability to conduct and implement appropriate measurements and tests, ensuring quality, and to analyze and interpret results in the field of construction and building engineering..

## 4. Program Accreditation

The program does not have any accreditation

## 5. External influences

There is no sponsor for the program

## 6. Program Structure

| Reviews* | Percentage | Credit Hours | Number of cycles | Program Structure |
|---|---|---|---|---|
| Primary | 10.6 | 21 | 7 | Institutional Requirements |
| Primary | 17.2 | 34 | 7 | College Requirements |
| Specialized | 72.2 | 143 | 26 | Department Requirements |
| Specialized, non credit | | | 2 | Summer Training |
| | | | None | Other |

| 1. Faculty | | | | | | | |
|---|---|---|---|---|---|---|---|
| Faculty Members | | | | | | | |
| Academic Rank | | Specialization | | Special Requirements/Skills (if applicable) | | Number of the teaching staff | |
| | | General | Special | | | Staff | Lecturer |
| Asst.Lect.Manaf Raied Salman | Assistant Lecturer | Civil Engineering | Structure Engineering | | | * | |
| Asst.Lect.Fawzy khudir Khalaf | Assistant Lecturer | Civil Engineering | Geotechnical Engineering | | | * | |
| Asst.Lect.Ahmed Ismail | Assistant Lecturer | Civil Engineering | Management Engineering | | | * | |
| Dr.Eyad Kadhim Hussien | Lecturer | Civil Engineering | Geotechnical Engineering | | | | * |
| Eyab Fadhil Mohammed | Assistant Lecturer | Civil Engineering | Management Engineering | | | | * |
| Hasan Najam abdullah | Assistant Lecturer | Civil Engineering | Material engineering | | | | * |

| Course Code | Course Name | Theoretical | Practical | Total | Units |
|---|---|---|---|---|---|
| MBCT2401 | Analysis and Design of Structures 2 | 2 | 1 | 3 | 5 |
| MBCT2402 | Foundation Engineering Technology | 2 | 2 | 4 | 6 |
| MBCT 2403 | Design of Steel Structures | 2 | 1 | 3 | 5 |
| MBCT2404 | Estimation and Specifications | 2 | 2 | 4 | 6 |
| MBCT2405 | Environmental Engineering | 3 | 3 | 6 | 9 |
| MBCT2407 | Structural Drawing | - | 3 | 3 | 3 |
| MBCT2408 | Highway Engineering | 2 | 2 | 4 | 4 |
| MBCTC2409 | Computer Applications 2 | 1 | 2 | 3 | 4 |
| MBCET2410 | Project | - | 6 | 6 | 4 |
| MBCET2411 | Professional Ethics | 1 | - | 1 | 2 |

## 1. Expected learning outcomes of the program

| **Knowledge** | |
|---|---|
| Methods of assessing knowledge and understanding | **Learning Outcomes** |
| 1. Keeping up with the design and supervision of all aspects of engineering projects such as buildings, bridges, roads, airports, tunnels, dams, hydraulic structures, prefabricated units, and prestressed concrete units..<br><br>2. A2 – Conducting all field, site, and laboratory tests (destructive and nondestructive) on construction materials and soil, interpreting the results, and verifying compliance with standard specifications. A3 – Reading, preparing, and implementing structural and architectural drawings, calculating quantities and costs, and preparing contracts projects using for computer applications extensively. A4 – Engaging with all new and useful developments in construction engineering and adapting them into practice. | |
| **Skills** | |
| Methods of assessing thinking skills | **Learning Outcomes** |
| 1Handling modern construction materials, locally available alternatives,. admixtures in concrete works, and soil stabilization techniques for major projects.<br>B2 – Organizing and managing different construction projects using modern methods and computer applications, with familiarity in professional construction practices, addition to in studying construction machinery in terms of productivity, operating costs, and usage methods.<br>B3 – Extensively using modern surveying instruments to prepare maps and topographic drawings, subdivide lands, determine road alignments, and produce longitudinal and sections | |
| **Values** | |
| Statement of Learning Outcomes | **Learning Outcomes** |
| 1 .Developing students' C1 ability to share ideas in the field of construction<br>2 .C2 – Ensuring continuity in students' ability to find solutions to construction engineering problems. C3 – Acquiring skills derived from the use of measurement instruments across different disciplines. C4 – Adhering to quality systems and required specifications | |


## 2. Teaching and Learning Strategies

**Explaining scientific material to students in detail.**
**2. Engaging students in solving problems and hydraulic design exercises.**
**3. Conducting discussions and dialogues related to course topics.**

**4. Traditional theoretical delivery using a whiteboard, with emphasis on the "how" and "why" approach in alignment with the course syllabus.**
**5. Theoretical delivery using a data show device (projector), also employing the "how" and "why" approach based on the course syllabus.**
**6. Laboratory instruction using specialized instruments for measuring fluid properties in static and dynamic conditions**

| 3. | **Evaluation methods** |
|---|---|
| | Weekly, monthly, and daily examinations, as well as the final annual examination.<br>• Direct questioning using the "how and why" approach during theoretical and practical lectures.<br>• Surprise (unannounced) quizzes during theoretical and practical lectures.<br>• Midterm examinations for both theoretical and practical components.<br>• Final examinations for both theoretical and practical components. |

| Professional Development |
|---|
| Mentoring new faculty members |
| **Commitment to official working hours.**<br>**2. Adherence to lecture and examination schedules.**<br>**3. Monitoring the progress of lectures and completion rates.**<br>. |
| Professional development of faculty members |
| ●Encouraging the completion of scientific research and supporting faculty members.<br>• Encouraging new faculty members to participate in scientific activities.<br>• Promoting cooperation and the exchange of academic expertise with universities and scientific centers.<br>• Participating in scientific activities related to continuing education. |
| 7. Personal Development Planning |
| •Using direct questions about how situations occur and their causes.<br>• Conducting surprise (unannounced) quizzes.<br>• Administering practical examinations.<br>• Developing laboratory measuring instruments to assess additional cases. |
| 8. Acceptance Criteria |
| Graduates of secondary education from the Scientific Branch and the Industrial Branch. |

| 4. **The most important sources of information about the program** |
|---|
| •Required textbooks.<br>•Main references and sources (books, journals, and research papers).<br>•Scientific journals, reports, etc. (with relevant and related specializations).<br>•Electronic resources, websites, etc., that focus on interior design and the int t.<br>•The college library and other public libraries.<br>•Course syllabi.<br>•The online information network.<br>• Academic teaching staff, relevant professional associations, and civil society or |

| 5. Program Development Plan |
|---|
| Using direct questions about how situations occur and their causes.<br>• Conducting surprise (unannounced) quizzes.<br>• Administering practical examinations.<br>• Developing laboratory measuring instruments to assess additional cases. |

| Year\level | رمز المقرر | اسم المقرر | اساسي أم اختياري | المعرفة (أ1) | المعرفة (أ2) | المعرفة (أ3) | المعرفة (أ4) | المهارات (ب1) | المهارات (ب2) | المهارات (ب3) | المهارات (ب4) | القيم (ج1) | القيم (ج2) | القيم (ج3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| الاول | MBCT2101 | مواد الانشاء | اساسي | √ | | | | | | | | | | √ |
| | MBCT2102 | ميكانيك هندسي | | √ | | | | | | √ | | | | √ |
| | MBCT2103 | مساحة 1 | | √ | | | | | | | | | | √ |
| | MBCT2104 | رسم هندسي | | | √ | | | | | | | | √ | |
| | MBCT2105 | رياضيات | مساعد | √ | | | √ | | | √ | | | √ | |
| | MBCT2106 | ورش | | √ | | √ | | | √ | | | | | |
| | MBCT2107 | مبادئ حاسبة | | | | | | √ | | | | √ | √ | |
| | MBCT2108 | جيولوجيا هندسية | | | √ | | | | | | | | √ | |

| Year\level | رمز المقرر | اسم المقرر | اساسي أم اختياري | المعرفة (أ1) | المعرفة (أ2) | المعرفة (أ3) | المعرفة (أ4) | المهارات (ب1) | المهارات (ب2) | المهارات (ب3) | المهارات (ب4) | القيم (ج1) | القيم (ج2) | القيم (ج3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MBCT 2109 | حقوق انسان | | √ | | √ | | | | | | | √ | |
| | MBCT 2110 | اللغة الانكليزية | | √ | | | | | | | | | √ | |
| | MBCT 2111 | لغة عربية | | | √ | | | | | | | | √ | |
| الثاني | MBCT 2201 | انشاء مباني | اساسي | √ | | √ | | | | | √ | | √ | |
| | MBCT 2202 | تقنية خرسانة | | √ | √ | | | √ | | √ | | | | |
| | MBCT 2203 | مساحة ٢ | | | √ | | | √ | | | | | √ | |
| | MBCT 2204 | ري اضيات | | √ | | | | | | | | | √ | |
| | MBCT 2205 | مقاومة مواد | | | √ | | | | | √ | | | √ | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MBCT 2206 | ميكانيك موائع | | | | | | | | | | | | |
| | MBCT 2207 | مبادئ حاسبة | مساعد | √ | | | √ | | | √ | | | | |
| | MBCT 2208 | تقنية صناعة | | √ | | | | | | | | | | |
| | MBCT 2209 | تدريب منهجي | | √ | | | | √ | | | √ | | | |
| | MBCT 2210 | اللغة الانكليزية | | | | | | √ | | | | | | |
| الثالث | MBCT 2301 | تحليل وتصميم | اساسي | | √ | | √ | | | | √ | | √ | |
| | MBCT 2302 | تقنية خرسانة ٢ | اساسي | | √ | | | | | | √ | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MBCT 2303 | ميكانيك تربة | اساسي | √ | | | | √ | | | | | √ | |
| | MBCT 2304 | هندسة إدارة المشاريع | اساسي | √ | | | | √ | | | | | √ | √ |
| | MBCT 2305 | نظرية منشات | اساسي | √ | | | | √ | | | | | √ | |
| | MBCT 2306 | تحليل هندسي | | | √ | | | √ | | | | | | |
| | MBCT 2307 | هندسة الطرق | | | √ | | | √ | | | √ | | | |
| | MBCT 2308 | تطبيقات حاسبة | مساعد | | √ | | | | | | √ | | | |
| | MBCT 2309 | تدريب منهجي | | | √ | | | | | | √ | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| الرابع | MBCT2401 | تحليل وتصميم | اساسي | √ | | √ | | | | | √ | | √ | |
| | MBCT2402 | تقنية اسس | | √ | | √ | | | | | √ | | √ | |
| | MBCT 2403 | تصميم فولاذ | | √ | | √ | | | | | √ | | | |
| | MBCT2404 | التخمين والمواصفات والعقود | √ | | √ | | | | | √ | | √ | √ | |
| | MBCT2405 | هندسة بيئة | | | √ | | | √ | | | √ | | | |
| | MBCT2406 | رسم انشائي | | | √ | | | √ | | | √ | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MBCT 2407 | المشروع | | | | | | | | | | | | |
| | MBCT 2408 | تطبيقات حاسبه | مساعد | | √ | | | √ | | | | | √ | |
| | MBCT 2409 | اخلاقيات مهنه | | | √ | | | √ | | | | | √ | |


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