**Yarmouk University**
**Hijjawi Faculty for Engineering Technology**
**Architectural Engineering Department**

# Curriculum

# Bachelor in Architectural Engineering

**2021**

The minimum number of credit hours for obtaining a bachelor's degree in Architectural Engineering is (167) hours, distributed as follows:

| Requirements | Hours | Mandatory | Elective |
|---|---|---|---|
| University Requirements | 27 | 15 | 12 |
| Faculty Requirements | 30 | 30 | - |
| Department Requirements | 110 | 101 | 9 |
| **Total** | **167** | | |

| Requirement | | Total Credit Hours | Percentage of Total Credit Hours of Study Plan |
|---|---|---|---|
| University Requirements | Mandatory | 15 | 8.98 % |
| | Elective | 12 | 7.18% |
| Faculty Requirements | Mandatory | 30 | 17.96 % |
| | Elective | - | - |
| Department Requirements | Mandatory | 101 | 60.47 % |
| | Elective | 9 | 5.38 % |
| **Total** | | **167** | **100 %** |

# First: University Requirements (27 Credit Hours)

## A. Mandatory Courses (15 Credit Hours)

| Course Code | Course Number | Course Name | Credit Hours | Equivalent Course(s) |
|---|---|---|---|---|
| MILT | 100 | Military Sciences and Citizenship | 3 | MILT 100A |
| AL | 101 | Communication Skills (Arabic Language) | 3 | HUM 121 |
| EL | 101 | Communication Skills (English Language) | 3 | HUM 120 |
| PS | 102 | Civil Education | 3 | HUM 124 |
| HUM | 117 | Pioneering and Creativity | 1 | - |
| HUM | 118 | Leadership and Society | 1 | - |
| HUM | 119 | Life Skills | 1 | - |

## B. Elective Courses (12 Credit Hours)
Students study 12 credit hours selected from the following two groups of courses.
- B1: Humanitarian Courses:

| Course Code | Course Number | Course Name | Credit Hours | Equivalent Course(s) |
|---|---|---|---|---|
| HUM | 101 | Basic of Mass Communication | 3 | (JR 100) |
| HUM | 102 | Citizenship and Allegiance | 3 | - |
| HUM | 103 | Islamic Intellect and Civilization | 3 | - |
| HUM | 104 | Arts and Behaviors | 3 | - |
| HUM | 105 | Jordan Contribution to the Human Civilization | 3 | (ARGY 100) |
| HUM | 106 | Introduction to Human Cultural Studies | 3 | - |
| HUM | 107 | Human Rights | 3 | (LAW 101) |
| HUM | 108 | Thinking Skills | 3 | - |
| HUM | 109 | Islamic Systems | 3 | - |
| HUM | 110 | The Culture of Tourism and Hospitality | 3 | - |
| HUM | 111 | History of Jerusalem | 3 | - |
| HUM | 112 | Geography of Jordan | 3 | - |
| HUM | 113 | Islamic Educational Thinking | 3 | - |
| HUM | 114 | Good Governance and Integrity | 3 | - |
| HUM | 115 | Legal Education | 3 | - |
| HUM | 116 | Ancient Writings of Jordan | 3 | - |
| HUM | 122 | Economy and Society | 3 | - |
| HUM | 123 | Performing Arts | 3 | - |
| HUM | 145 | Traffic Safety | 3 | - |

- B2: Scientific Courses:

| Course Code | Course Number | Course Name | Credit Hours | Equivalent Course(s) |
|---|---|---|---|---|
| SCI | 101 | Environment and Public Health | 3 | - |
| SCI | 102 | Information Technology and Society | 3 | - |
| SCI | 103 | Physical Education for All | 3 | (PE 100A) |
| SCI | 104 | Effective Communication Skills | 3 | - |
| SCI | 105 | Renewable Energy | 3 | - |
| SCI | 106 | Management and Society Development | 3 | - |
| SCI | 107 | Scientific Research | 3 | - |
| SCI | 109 | Digital Culture | 3 | - |
| SCI | 110 | Development and Environment | 3 | - |
| SCI | 111 | Principle Of Epidemiology and Community Immunity | 3 | - |

Starting from 2009/2010, with regard to examinations level, all new students are required to take examinations in Arabic, English and computer. If a student fails to succeed in any of these exams, remedial courses (099) outside his study plan should be taken which include:

| Course Code | Course Number | Course Name |
|---|---|---|
| EL | 099 | English Language Skills - Remedial |
| AL | 099 | Arabic Language - Remedial |
| COMP | 099 | Computer Skills – Remedial |

## Second: Faculty Mandatory Requirements (30 Credit Hours)

| Course Code | Course Number | Course Name | Credit Hours | | | Prerequisite | Equivalent Course(s) |
|---|---|---|---|---|---|---|---|
| | | | Theoretical | Practical | Credited | | |
| MATH | 101 | Calculus I | 3 | - | 3 | - | - |
| MATH | 102 | Calculus II | 3 | - | 3 | MATH 101 | - |
| PHYS | 101 | General Physics 1 | 3 | - | 3 | - | - |
| PHYS | 105 | General Physics Lab 1 | 1 | 3 | 1 | PHYS 101* | - |
| PHYS | 102 | General Physics 2 | 3 | - | 3 | PHYS 101 | - |
| PHYS | 106 | General Physics Lab 2 | 1 | 3 | 1 | PHYS 102* | - |
| CHEM | 104 | General Chemistry (1) (for Engineering Students) | 3 | - | 3 | - | CHEM 101 |
| CHEM | 105 | General Chemistry Lab 1 | 1 | 3 | 1 | CHEM 104* | - |
| MATH | 201 | Intermediate Analysis I | 3 | - | 3 | MATH 102 | MATH 201 |
| MATH | 205 | Ordinary Differential Equations I (for Engineers Students) | 3 | - | 3 | MATH 102 | MATH 203 |
| CPE | 150 | Introduction to Programming | 4 | - | 4 | - | - |
| CPE | 150L | Introduction to Programming Lab | 0 | 3 | - | - | - |
| BME | 152 | Introduction to Engineering | 2 | - | 2 | - | CPE 286 |

*\* Can be combined*

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*Course Codes of the Academic Departments of Hijjawi Faculty for Engineering Technology:*

**ELE:** Electronics Engineering.

**CME:** Communication Engineering.

**CPE:** Computer Engineering.

**EPE:** Electrical Power Engineering.

**BME**: Biomedical Systems and Informatics Engineering

**CE**:    Civil Engineering - Construction Management.

**IE:**    Industrial Engineering.

**AE:**    Architectural Engineering.

# Third: Department Requirements (110 Credit Hours)

## A. Mandatory Courses (101 Credit Hours):

| Course Code | Course Number | Course Name | Credit Hours | | | Prerequisite | Equivalent Course(s) |
|---|---|---|---|---|---|---|---|
| | | | Theoretical | Practical | Credited | | |
| AE | 111 | Freehand Drawing | - | 1 | 1 | - | - |
| AE | 114 | Architectural Drawing | - | 3 | 3 | - | - |
| AE | 116 | Architectural Visual Communication | - | 3 | 3 | AE 114 | AE 112 |
| AE | 121 | Introduction to Architectural Design (1) | - | 3 | 3 | - | - |
| AE | 122 | Introduction to Architectural Design (2) | - | 3 | 3 | AE 121 | - |
| AE | 214 | Computer Drawings and Aided Design (1) | - | 3 | 3 | AE 116 | - |
| AE | 221 | Architectural Design (1) | - | 5 | 5 | AE 122 | - |
| AE | 222 | Architectural Design (2) | - | 5 | 5 | AE 221 | - |
| AE | 233 | Building Construction | 3 | - | 3 | AE 116 | - |
| AE | 243 | History and Theories of Architecture | 3 | - | 3 | AE 116 | - |
| AE | 246 | Theories of Contemporary Architecture | 3 | - | 3 | AE 243 | - |
| AE | 311 | Computer Drawings and Aided Design (2) | - | 3 | 3 | AE 214 | - |
| AE | 315 | Working Drawings | - | 2 | 2 | AE 214 and AE 233 | - |
| AE | 321 | Architectural Design (3) | - | 5 | 5 | AE 222 | - |
| AE | 322 | Architectural Design (4) | - | 5 | 5 | AE 321 | - |
| AE | 335 | Advanced Building Construction | 2 | - | 2 | AE 231 or AE 233 | - |
| AE | 342 | Human Behavior in Architectural Environments | 3 | - | 3 | AE 222 | - |
| AE | 350 | Landscape Architecture | - | 3 | 3 | AE 321 | - |
| AE | 352 | Theories of Urban Design | 3 | - | 3 | AE 246 | - |
| AE | 421 | Architectural Design (5) / Urban Design | - | 5 | 5 | AE 322 and AE 352 | - |
| AE | 422 | Architectural Design (6) | - | 5 | 5 | AE 421 | - |
| AE | 451 | Theories of Sustainable Design and Green Architecture | 3 | - | 3 | AE 322 | - |
| AE | 473 | Architectural Physics "Illumination and Acoustics Heat and Humidity" | 3 | - | 3 | PHYS 101 and AE 335 | - |
| AE | 475 | Electrical and | 2 | - | 2 | AE 335 | - |

| Course Code | Course Number | Course Name | Credit Hours | | | Prerequisite | Equivalent Course(s) |
|---|---|---|---|---|---|---|---|
| | | | Theoretical | Practical | Credited | | |
| | | Mechanical Systems | | | | | |
| AE | 480 | Building Regulations and Professional Practice | 2 | - | 2 | AE 315 | - |
| AE | 484 | Projects Management | 2 | - | 2 | AE 315 and AE 335 | - |
| AE | 500 | Field Training | - | 3 | 3 | AE 421 | - |
| AE | 597 | Graduation Project (1) | 2 | - | 2 | AE 422 and AE 350 | - |
| AE | 598 | Graduation Project (2) | - | 4 | 4 | AE 597 | - |
| CE | 336 | Introduction to Structural Design (for Architecture Students) | 3 | - | 3 | PHYS 311 | - |
| PHYS | 311 | Classical Mechanics (1) | 3 | - | 3 | PHYS 102 and MATH 201 | - |
| STAT | 101 | Introduction to Statistics (1) | 3 | - | 3 | - | - |

## B. Elective Courses (9 Credit Hours):

| Course Code | Course Number | Course Name | Credit Hours | | | Prerequisite | Equivalent Course(s) |
|---|---|---|---|---|---|---|---|
| | | | Theoretical | Practical | Credited | | |
| AE | 467 | Geographic Information Systems for Urban Applications (GIS) | 3 | - | 3 | (AE 311) | - |
| AE | 469 | Building Information Modeling | 3 | - | 3 | (AE 311) | - |
| AE | 501A | Industry Certification (1) | 3 | - | 3 | - | - |
| AE | 501B | Industry Certification (2) | 3 | - | 3 | - | - |
| AE | 501C | Industry Certification (3) | 3 | - | 3 | - | - |
| AE | 511 | Advanced Computer Applications | 3 | - | 3 | - | - |
| AE | 533 | Advanced Applications in Architectural Design and Construction | 3 | - | 3 | (CE 336, AE 335, and AE 422) | - |
| AE | 542 | Architecture under the Islamic Emirates (662-1500AD) | 3 | - | 3 | - | - |
| AE | 545 | Local Architecture | 3 | - | 3 | - | - |
| AE | 550 | Contemporary Problems in Landscape Architecture | 3 | - | 3 | - | - |
| AE | 552 | Integrated Street design | 3 | - | 3 | - | - |
| AE | 570 | Interior design and adaptive Reuse | 3 | - | 3 | - | - |
| CE | 341 | Surveying | 3 | - | 3 | (AE 315) | - |
| CON | 101 | Int. to Conservation of Cultural Heritage | 3 | - | 3 | - | - |
| ELE | 205 | Communication Skills | 3 | - | 3 | - | - |