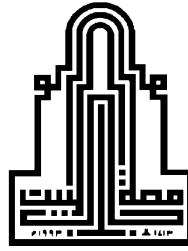


<b>Quality and Development Center</b>	
<b>No</b>	<b>Cent-QD-F 201</b>



**Al al-Bayt University  
Quality and Development Center**



**Al al-Bayt University**

**Faculty / School of Engineering**

**Bachelor Degree Study Plan Template  
of Civil Engineering**

**2018 - 2019**

**14/1/2022**



Department

Faculty

Al al-Bayt University

## Bachelor Degree Study Plan of Civil Engineering

Program Title (Arabic): البكالوريوس في الهندسة المدنية

Program Title (English): B.Sc. In Civil Engineering.

### A. Components of the Plan:

The bachelor's degree study plan of Civil Engineering consists of (163) credit hours distributed as follows:

No.	Requirement Type	Credits
First	University Requirements	27
Second	Faculty Requirements	27
Third	Specialty Requirements: a- Compulsory Requirements b- Elective Requirements	a- 100 b- 9
Fourth	Optional Requirements	-
<b>Total</b>		163

### B. Numbering System

1- Code of the Faculty

Code	Faculty
07	Faculty of engineering

2- Codes of Specialty

Code	Specialty
03	Architectural engineering
04	Civil engineering
05	Surveying engineering
06	Renewable energy engineering

3- Codes of Courses

0-9	0-9	1-5	04	07
Serial	Field	Level	Department	Faculty



### The Significance of the Ten Rank (Field) in the Course Numbers

Field Code	Specialty Field Title	Field Code	Specialty Field Title
0	General	5	Structural Design
1	Fundamentals	6	Fluid Engineering
2	Management & Economy	7	Environmental Engineering
3	Geotechnical	8	Transportation Engineering
4	Structural Analysis	9	Graduation Project

### First: University Requirements

#### A. Compulsory Courses: (18) credit hours include the following courses:

No.	Course No.	Course Title	Credits	Pre-requisite	Learning Type
1	5001100	Islamic Culture	3		online
2	5001101	Islamic systems	3		online
3	5001110	Military science	3		online
4	5001111	National education	3		online
5	5001120	Arabic (1)	3		online
6	5001121	English (1)	3		online
<b>Total</b>			18		

\* The Military Sciences course is elective for non-Jordanian students, and instead they can study an elective course from one of the courses offered by the University.

\*\* Type of learning: indicates that the course will be educated by one of the following: (face-to-face, blended, online)

#### B. Elective Courses: (9) credit hours chosen by the student from outside his faculty, provided that one course is from each of the following fields:

##### 1. The field of humanities:

No.	Course No.	Course Title	Credits	Pre-requisite	Learning Type
1	5001122	German language	3	-	blended
2	5001123	Persian language	3	-	blended
3	5001124	Turkish language	3	-	blended
4	5001125	Jerusalem history	3	-	blended
5	5001126	Islamic culture history	3	-	blended
6	5001180	Introduction to education	3	-	blended

##### 2. The field of social and economic sciences which includes the following courses:

No.	Course No.	Course Title	Credits	Pre-requisite	Learning Type
1	5001112	Law in our life	3	-	blended
2	5001113	Democracy and human rights	3	-	blended



3	5001140	Scientific Research Methodology	3	-	blended
4	5001141	professional ethics	3	-	blended
5	5001142	Leadership and innovation	3	-	blended
6	5001181	Introduction to educational psychology	3	-	blended
7	5001182	Organizing the family and society	3	-	blended
8	5001183	Undergraduate life skills			

### 3. The field of science, technology and health which includes the following courses:

No.	Course No.	Course Title	Credits	Pre-requisite	Learning Type
1	5002104	Scientific Miracles in the Holy Quran	3	-	blended
2	5002130	Physics in our life	3	-	blended
3	5002131	Human biology	3	-	blended
4	5002132	Environment and pollution	3	-	blended
5	5002133	Introduction to astronomy	3	-	blended
6	5002150	Traffic safety	3	-	blended
7	5002160	informatics culture	3	-	blended
8	5002182	media and information education	3	-	blended

**Note:** As for the placement tests, all registered students as of the first semester 2010/2011 shall take the tests in Arabic, English and computer, provided that the student who fails to pass any of these tests shall register a remedial course (099) out of his study plan. These courses are:

#### Remedial Courses:

No.	Course No.	Course Title	Credits	Pre-requisite	Learning Type
1	9901099	Arabic language	3	-	online
2	9902099	English language	3	-	online
3	0901099	Computer skills	3	-	online

**Second: Faculty Requirements** to which (27) credits are allocated and they include the following courses

No.	Course No.	Course Title	Credits	Pre-requisite	Learning Type
1	0401101	Calculus 1	3	-	blended
2	0401102	Calculus 2	3	0401101	blended
3	0402101	Physics 1	3	-	blended
4	0402103	Practical physic lab 1	1	0402101	face-to-face
5	0703128	Engineering drawing and	3	-	face-to-face



		its applications in the computer			
6	0703485	Project planning and scheduling	3	4 <sup>th</sup> year level	face-to-face
7	0704103	Climate Change and Environment	2	-	online
8	0704201	Communications Skills and Technical Writing	2	-	face-to-face
9	0704422	Engineering Economy	3	4 <sup>th</sup> year level	blended
10	0704599	Practical engineering training	3	Pass 115 credited hours	face-to-face
11	0706102	Engineering shops	1		face-to-face
<b>Total</b>			<b>27</b>		

**Third: Specialty Requirements** to which (109) credits are allocated and they include:

A. **Compulsory Courses:** to which (100) credits are allocated and they include the following courses

No.	Course No.	Course Title	Weekly hours		Credits	Pre-requisite	Learning Type
			Theoretical	Practical			
1	0401201	Calculus 3	3	0	3	0401102	face-to-face
2	0401203	Ordinary Differential Equations	3	0	3	0401102	face-to-face
3	0402102	Physics 2	3	0	3	0402103	face-to-face
4	0402104	Practical physic lab 2	0	3	1	0402102	face-to-face
5	0403101	Chemistry 1	3	0	3	-	blended
6	0403103	Practical chemistry lab 1	0	3	1	0403101	face-to-face
7	0705201	Surveying	3	0	3	0401101	face-to-face
8	0704202	Engineering Probability and Statistic	3	0	3	0401102	face-to-face
9	0705203	Surveying lab	0	3	1	0705201	face-to-face
10	0704211	Buildings Construction	2	3	3	0703128	face-to-face
11	0704231	Engineering Geology	3	0	3	-	blended
12	0704241	Statics	3	0	3	0401101 0402103	face-to-face
13	0704242	Dynamics	3	0	3	0704241	face-to-face

**Quality and Development Center**
**No**
**Cent-QD-F 201**

**Al al-Bayt University  
Quality and Development Center**

14	0704244	Strength of Materials	3	0	3	0704241	face-to-face
15	0704301	Numerical Methods for Engineers	2	0	2	0401203	face-to-face
16	0704331	Geotechnical Engineering	3	0	3	0704231 0704244	face-to-face
17	0704332	Geotechnical Engineering Lab	0	3	1	0704331	face-to-face
18	0704341	Structural Analysis (1)	3	0	3	0704244	face-to-face
19	0704351	Construction Materials	3	0	3	0704244 0403101	blended
20	0704352	Construction Materials Lab	0	3	1	0704351	face-to-face
21	0704361	Fluid Mechanics	3	0	3	0401203 0704241	face-to-face
22	0704362	Hydraulics	3	0	3	0704361	face-to-face
23	0704363	Fluid Mechanics and Hydraulics Lab	0	3	1	0704362	face-to-face
24	0704371	Engineering Hydrology	3	0	3	0704202 0704362	blended
25	0704372	Water Resources Engineering	3	0	3	0704362 0403103	face-to-face
26	0704381	Transportation Engineering	3	0	3	0705203	blended
27	0704431	Foundations Engineering (1)	3	0	3	0704332	face-to-face
28	0704441	Structural Analysis (2)	3	0	3	0704341	face-to-face
29	0704451	Reinforced Concrete (1)	3	0	3	0704351 0704341	face-to-face
30	0704452	Reinforced Concrete (2)	3	0	3	0704451	face-to-face
31	0704454	Steel Structures (1)	3	0	3	0704341	face-to-face
32	0704471	Environmental Engineering	3	0	3	0704372	face-to-face
33	0704472	Environmental Engineering Lab	0	3	1	0704471	face-to-face
34	0704481	Highway Engineering	3	0	3	0704381	face-to-face



35	0704482	Pavement Materials and Design	3	0	3	0704381	blended
36	0704483	Highway Engineering Lab	0	3	1	0704482	face-to-face
37	0704484	Traffic Engineering	3	0	3	0401102	face-to-face
38	0704521	Engineering projects and Construction Management	3	0	3	0401102	blended
39	0704591	Graduation Project (1)	1	1	1	0402103	face-to-face
40	0704592	Graduation Project (2)	1	3	2	0402102	face-to-face
<b>Total</b>			90	31	100		

**B. Elective Courses:** to which (9) credits are allocated chosen from the following courses:

No.	Course No.	Course Title	Weekly hours		Credits	Pre-requisite	Learning Type
			Theoretical	Practical			
1	0704522	Project planning and scheduling	3	0	3	0703485	blended
2	0704523	Computer applications in project management	2	3	3	0703485	blended
3	0704531	Foundations engineering (2)	3	0	3	0704431	blended
4	0704532	Soil stabilization and reinforcement	3	0	3	0704431	blended
5	0704535	Special topics in geotechnical engineering	3	0	3	0704431	blended
6	0704541	Matrix structural analysis	3	0	3	0704441	blended
7	0704542	Computer applications in structural engineering	2	3	3	0704441	blended
8	0704551	Reinforced	3	0	3	0704452	blended



		concrete (3)					
9	0704552	Steel structures (2)	3	0	3	0704454	blended
10	0704554	Bridge engineering	3	0	3	0704452 0704454,	blended
11	0704555	Special topics in structural engineering	3	0	3	0704441	blended
12	0704571	Ground water hydrology	3	0	3	0704371	blended
13	0704572	Dam engineering	3	0	3	0704372	blended
14	0704573	Water and wastewater treatment	3	0	3	0704471	blended
15	0704574	Solid waste management	3	0	3	0704471	blended
16	0704575	Special topics in water and environmental engineering	3	0	3	0704471	blended
17	0704581	Highway maintenance	3	0	3	0704482	blended
18	0704582	Traffic engineering and planning	3	0	3	0704484	blended
19	0704585	Special topics in transportation engineering	3	0	3	0704381	blended
20	0704586	Natural Disaster Modelling and Simulation	3	0	3	-	blended
21	0704587	Introduction in GIS and RS for Civil Engineering	3	0	3	-	blended
Total			61	60	63		

**Fourth: Optional Courses:** to which (0) credits are allocated chosen from the courses offered by the university's faculties and institutes.





No.	Course No.	Course Title	Credits	Learning Type
1	-	-	-	-

#### Fifth: Summary of Learning Types in the Study Plan

Learning Type	Online	Blended	Face-to-Face
No. of credit hours	20	54	89
Percentage	12.3	33.1	54.6



## Guidance Plan for Undergraduate Students specializing in civil engineering

First Year							
First Semester				Second Semester			
Course No.	Course Title	Credits	Pre-requisite	Course No.	Course Title	Credits	Pre-requisite
-	Calculus 1	3	0401101	0401102	Calculus 2	3	0401101
-	Physics 1	3	0402103	0402102	Physics 2	3	0402103
402101	Practical physic lab 1	1	0402103	0402104	Practical physic lab 2	1	0402103
-	Chemistry 1	3	-	0703128	Engineering drawing and its applications in the computer	3	
0403101	Practical chemistry lab 1	1	-	0706102	Engineering shops	1	
-		3	-	0704103	Climate Change and Environment	2	
				-		3	
<b>Total</b>		<b>14</b>		<b>Total</b>		<b>16</b>	

Second Year							
First Semester				Second Semester			
Course No.	Course Title	Credits	Pre-requisite	Course No.	Course Title	Credits	Pre-requisite
0401203	Ordinary Differential Equations	3	0401102	0401201	Calculus 3	3	0401102
0704211	Buildings Construction	3	0703128	0704242	Dynamics	3	0704241
0704201	Communications Skills and Technical Writing	2	-	0704244	Strength of Materials	3	0704241
0704241	Statics	3	0401101 0402103	0705201	Surveying	3	0401101
0704231	Engineering Geology	3		0705203	Surveying lab	1	0705201
-		3		-		3	
<b>Total</b>		<b>17</b>		<b>Total</b>		<b>16</b>	

Third Year	
First Semester	Second Semester



Course No.	Course Title	Credits	Pre-requisite	Course No.	Course Title	Credits	Pre-requisite
0704331	Geotechnical Engineering	3	0704231 0704244	0704202	Engineering Probability and Statistics	3	0401102
0704332	Geotechnical Engineering Lab	1	0704331	0704351	Construction Materials	3	0704244 0403101
0704341	Structural Analysis (1)	3	0704244	0704352	Construction Materials Lab	1	0704351
0704371	Engineering Hydrology	3	0401202 0704362	0704362	Hydraulics	3	0704361
0704361	Fluid Mechanics	3	0401203 0704241	0704363	Fluid Mechanics and Hydraulics Lab	1	0704362
0704381	Transportation Engineering	3	0705203	-		3	
-				0704301	Numerical Methods for Engineers	2	0401203
<b>Total</b>		<b>16</b>		<b>Total</b>		<b>16</b>	

Fourth Year							
First Semester				Second Semester			
Course No.	Course Title	Credits	Pre-requisite	Course No.	Course Title	Credits	Pre-requisite
0704372	Water Resources Engineering	3	0704362 0403103	0704452	Reinforced Concrete (2)	3	0704451
0704431	Foundations Engineering (1)	3	0704332	0704454	Steel Structures (1)	3	0704341
0704441	Structural Analysis (2)	3	0704341	0704471	Environmental Engineering	3	0704372
0704451	Reinforced Concrete (1)	3	0704351 0704341	0704472	Environmental Engineering Lab	1	0704471
0704481	Highway Engineering	3	0704381	0704482	Pavement Materials and Design	3	0704381
0703485	Project planning and scheduling	3	4 <sup>th</sup> year level	0704483	Highway Engineering Lab	1	0704482
-		-		0704521	Engineering Projects and Construction Management	3	0703485
<b>Total</b>		<b>18</b>		<b>Total</b>		<b>17</b>	



Fourth Year							
First Semester				Second Semester			
Course No.	Course Title	Credits	Pre-requisite	Course No.	Course Title	Credits	Pre-requisite
0704422	Engineering Economy	3	4 <sup>th</sup> year level	0704592	Graduation Project (2)	2	0704591
0704591	Graduation Project (1)	1	pass 118 credited hours	-	Elective Courses	3	
0704484	Traffic Engineering	3	0704381	-	Elective Courses	3	
-	Elective Courses	3		-			
<b>Total</b>		<b>10</b>		<b>Total</b>		<b>8</b>	