

Al-Balqa Applied University

Civil Engineering Department



Established 1997

Curriculum of Bachelor Degree in Civil Engineering

جامعة البلقاء التطبيقية

قسم الهندسة المدنية

Curriculum For the Bachelor Degree In Civil Engineering/Surveying and Geomatics



Curriculum of Bachelor Degree in Civil Engineering

The curriculum for the B.Sc. Degree in Civil Engineering/Surveying and Geomatics (162) credit hours are distributed as follows:

Course No.	Requirements	Credit Hours (Cr.H)
1	University Requirements:	24
	A. University Mandatory Courses	18
	B. University Elective Courses	6
2	Faculty Mandatory Requirements	32
3	Specialization Requirements:	106
	A. Compulsory Civil Engineering	76
	B. Specialization Mandatory Requirements	21
	C. Specialization Elective Requirements	9
Total		162



Curriculum of Bachelor Degree in Civil Engineering

First: University Requirement (24 Cr.H.)

A: Compulsory Requirements (18 Cr.H.):

Course Number	Course Title	Credit Hours	Weekly Hours		Pre-requisite
			Lecture	Lab.	
AAL101	Applied Arabic Language	3	3	0	Arabic 99 OR passing Arabic Level Exam
AEL101	Applied English Language (1)	3	3	0	English 99 OR passing English Level Exam
AEL102	Applied English Language (2)	3	3	0	AEL101
NE101	National Education and University Behavior	3	3	0	--
٣٥٠٠١١٠١	Military Sciences	3	3	0	Passing 90 Cr. Hrs.
CS101	Computer Skills and E-Learning	1	1	0	Passing Computer Exam Level
IEC101	Innovation, Entrepreneurship, and Creativity	2	2	0	--
Total Hours:		18	18	0	--

B: Elective University Requirements: (6 Cr.H.)

The student is allowed to select (6 Cr.H.) from the university elective courses offered by faculties other than the faculty of college.

Course No.	Course	Credit Hours
٣٦٠٠١١٠١	Communication Skills	3
٣٦٠٠٢١٠٢	Introduction to Psychology	3
٣٦٠٠٣١٠٣	Jordan Society	3
٣٦٠٠٤١٠٤	Sport for All	3
٣٦٠٠٥١٠٥	Islamic Culture	3
٣٦٠٠٩١١١	Economic Concepts	3
36006110	Modern Administrative Concepts and skills	3
٣٦٠٠٧١٠٧	Agriculture in Jordan	3
٣٦٠٠٨١٠٨	Environment and Society	3
٣٦٠١٢١٠٩	History of the Rightly Guided Caliphs	3
٣٦٠٠٩١١٤	Jerusalem (Palestine issue)	3
٣٦٠٠٩١١٢	Law, media and society	3
٣٦٠٠٩١٠٩	Islam and life	3
٣٦٠٠٩١١٥	Digital community	3
Total		6



Curriculum of Bachelor Degree in Civil Engineering

Second: Faculty Requirements: (32 Cr .H.)

Course No.	Course Title	Credit Hours	Weekly Hours		Pre-requisite
			Lecture	Lab.	
30202101	Calculus 1	3	3	-	--
30202102	Calculus 2	3	3	-	٣٠٢٠٢١٠١
30201101	General Physics 1	3	3	-	--
30201102	General Physics 2	3	3	-	٣٠٢٠١١٠١
30201111	General Physics Lab	1	-	3	*٣٠٢٠١١٠١
30206101	General Chemistry	3	-	-	--
30206102	General Chemistry Lab	1	-	3	*٣٠٢٠٦١٠١
BSE0201	Programming for Engineers	3	2	3	CS101
30202203	Ordinary Differential Equations (1)	3	3	-	٣٠٢٠٢١٠٢
BSE0203	Technical Writing and Professional Ethics	3	3	-	AEL102
BSE0205	Engineering Drawing	2	-	6	CS101
BSE0102	Engineering Workshop	1	-	3	--
BSE0401	Engineering Economy	3	3	-	Completing 80 CH
Total Hours:		32	26	18	

* co-requisite

Third: Specialization Requirements: (106 Cr.H.)

A- Compulsory Civil Specialization Requirements: (76 Cr.H.)

Course No.	Course Title	Cr.H.	Weekly Hours		Perquisites
			Lecture s	Lab	
CIE0221	Statics	٣	٣	-	٣٠٢٠١١٠١, ٣٠٢٠٢١٠٢
BSE0202	Statistics and Probabilities for Engineers	٣	٣	-	٣٠٢٠٢١٠١
MEE0212	Dynamics	٣	٣	-	CIE0221
MEE0214	Strength of Materials	٣	٣	-	CIE0221
CIE0214	Engineering Geology	٢	٢	-	-
CIE0216	Engineering Geology Lab	١	-	٣	CIE0214*
MEE0327	Fluid Mechanics	٣	٣	-	CIE0221 + 30202203
CIE0367	Geotechnical Engineering	٣	٣	-	MEE0214+CIE0214
CIE0369	Geotechnical Engineering-Lab	١	-	٣	CIE0367*
CIE0213	Surveying	٣	٣	-	30202101
CIE0215	Surveying Lab	١	-	٣	CIE0213*
CIE0563	Foundation Engineering	٣	٣	-	CIE0369
CIE0331	Structural Analysis I	٣	٣	-	MEE0214
CIE0333	Properties of Concrete	٣	٣	-	MEE0214
CIE0335	Properties of Concrete Lab	١	-	٣	CIE0333*



Curriculum of Bachelor Degree in Civil Engineering

CIE0342	Hydraulics	٣	٣	-	MEE0327
CIE0344	Hydraulics Lab	١	-	٣	CIE0342*
CIE0346	Water treatment	٣	٣	-	30206101CI,E0342*
CIE0433	Reinforced Concrete Design I	٣	٣	-	CIE0331, CIE0335
CIE0438	Steel Structures	٣	٣	-	CIE0331+CIE0335
CIE0447	Engineering Hydrology	٣	٣	-	CIE0344
CIE0537	Reinforced Concrete Design II	٣	٣	-	CIE0433
CIE0455	Highway Engineering	٣	٣	-	CIE0215
CIE0452	Pavement Design	٣	٣	-	CIE0455
CIE0454	Pavement Design Lab	١	-	٣	CIE0452*
CIE0575	Project Management	٣	٣	-	CIE0438, CIE0476
CIE0490	Field Training	٣	-	-	Completing 115CH
CIE0591	Graduation Project 1	1	-	-	Completing 120CH
CIE0592	Graduation Project 2	٣	-	-	CIE0591
CIE0476	Specifications, contracts, and Quantity Surveying	٣	٣	-	CIE0433, CIE0455
CIE0410	Civil Engineering Drawing	1	-	3	CIE0433
Total		76	62	21	

B- Compulsory Specialization Requirements: 21 credit hours

1. Compulsory Surveying and Geomatics Requirements: 21 credit hours

Course No.	Course Title	Cr.H	Weekly Hours		Perquisites
			Lectures	Lab	
BSE0306	Numerical Methods	٣	٣	-	٣٠٢٠٢١٠٢
30201112	General Physics II -Lab	١	-	٣	*٣٠٢٠١١٠٢
CIE2481	Mathematical Geodesy and Adjustment	٣	٢	٣	BSE0202, CIE2381
CIE2382	Aerial Photogrammetry and Remote Sensing	٣	2	3	CIE0215
CIE2381	Route and Construction Surveying	2	1	3	CIE0215
CIE2384	Geographical Information System	٢	٢	-	CIE0215
CIE2386	Geographical Information System Practical	١	-	٣	*CIE2384
CIE2582	Cadastral Surveys and Land Administration	١	١	-	CIE0215
CIE2482	Geodetic Positioning and Global Navigation Satellite System	٢	٢	-	CIE2481
CIE2484	Geodetic Positioning and Global Navigation Satellite System (Practical)	١	-	٣	*CIE2482
CIE2483	Programming for Geomatics Applications	٢	٢	٠	٣٠٨٠١١٠١, CIE2386
Total		21	15	18	



Curriculum of Bachelor Degree in Civil Engineering

1. Elective **Surveying and Geomatics**: 9 credit hours from the following:

Course No.	Course Title	Cr.H	Weekly Hours		Prerequisite
			Lecture	Lab	
CIE1332	Structural Analysis II	٣	٣	-	CIE0331
CIE2584	Design and Implementation of GIS	٣	٢	٣	CIE2386
CIE2585	Advance Remote Sensing	٣	2	3	CIE2382
CIE2586	Special Topics in Geomatics Engineering	٣	٣	٠	CIE2386, CIE2382
CIE2587	Gravity Field	٣	٣	٠	CIE2482
CIE2583	Digital Image Processing	٣	٣	٠	CIE2382
CIE2588	Satellite Positioning and Applications	٢	٢	٠	CIE2482
CIE3552	Traffic Engineering	٢	٢	-	CIE0455
CIE1571	Construction Management	٣	٣	-	CIE0476, CIE1332
CIE2383	Photo Interpretation	٢	٢	٠	CIE0214
CIE2581	Analytical and Digital Photogrammetry	٣	٢	٣	CIE2382
CIE1538	Occupational Safety	٢	٢	-	CIE0575
Total		9			