

BACHELOR PROGRAM

CIVIL ENGINEERING

2014-2015

Study plan for B.Sc. Civil Engineering

UNIVERSITY OF NIZWA												
BACHELOR IN CIVIL ENGINEERING												
C – Credit Hours, L – Credit Lecture, P – Credit Practical												
YEAR 1			SUMMER	CODE	COURSE	C	L	P				
				MATH116	Pre Calculus	4	3	1				
				ENGL150	English Language-I	3	3	0				
					7	6	1					
	FALL	CODE	COURSE	C	L	P	SPRING	CODE	COURSE	C	L	P
		ENGN101	Introduction to Engineering	2	2	0		MATH212	Calculus-II	3	2	1
		MATH211	Calculus-I	4	3	1		ENGN103	Engineering Drawing	2	1	1
		ENGL152	English Language-II	3	3	0		CHEM107	Fundamentals of chemistry	4	3	1
		COMP101/L	Computer Skills	3	2	1		HIST150	Islamic Civilization	3	3	0
		PHYS101	General Physics-I	4	3	1		CIVL211	Statics	3	3	0
				16	13	3				15	12	3
YEAR 2			SUMMER	CODE	COURSE	C	L	P				
				STAT105	Statistics for Engineering	3	2	1				
				ENGL155	Communication Skills	3	3	0				
					6	5	1					
	FALL	CODE	COURSE	C	L	P	SPRING	CODE	COURSE	C	L	P
		MATH312	Differential Equations for Engineers	3	2	1		ARAB100	Arabic Language-I	3	3	0
		CIVL215	Civil Engineering Drawing	2	0	2		CIVL221	Solid Mechanics	3	3	0
		CIVL212	Civil Engineering Materials	3	2	1		CIVL241	Environmental Engineering	3	3	0
		CIVL216	Dynamics	2	2	0		CIVL214	Geomatic Engineering	3	2	1
		CIVL213	Fluid Engineering Mechanics	3	2	1		CIVL321	Structural Analysis-I	3	2	1
		University elective	3	3	0							
				16	11	5			15	13	2	
YEAR 3			SUMMER	CODE	COURSE	C	L	P				
				ARAB101	Arabic Language-II	3	3	0				
				COMP151L	Introduction to Algorithm & Programming	4	3	1				
					7	6	1					
	FALL	CODE	COURSE	C	L	P	SPRING	CODE	COURSE	C	L	P
		CIVL332	Geotechnical Engineering-I	4	3	1		CIVL431	Geotechnical Engineering-II	3	3	0
		CIVL342	Hydrology & Hydraulics	3	3	0		CIVL421	Structural Design-II	3	3	0
		CIVL322	Structural analysis-II	3	3	0		CIVL461	Engineering Economy	2	2	0
		CIVL451	Highway Engineering-I	3	3	0		CIVL452	Highway Engineering-II	3	2	1
		CIVL323	Structural Design-I	3	3	0		CIVL441	Water and wastewater Engineering	3	2	1
						CIVL462		Construction methods and Estimation	3	2	1	
				16	15	1			17	14	3	
YEAR 4			SUMMER	CODE	COURSE	C	L	P				
				ENGN333	Industrial training	2	0	2				
					2	0	2					
	FALL	CODE	COURSE	C	L	P	SPRING	CODE	COURSE	C	L	P
		CIVL432	Foundation Engineering	3	3	0		CIVL471	Design Project	2	0	2
		CIVLXXX	Technical elective-I	3	3	0		CIVL473	Final Year Project-II	4	0	4
		CIVLXXX	Technical elective-II	3	3	0		CIVLXXX	Technical elective-III	3	3	0
		CIVL472	Final year Project-I	2	0	2		CIVLXXX	Technical elective-IV	3	3	0
		CIVL463	Project Management	2	2	0		CIVLXXX	Technical elective-V	3	3	0
		College Elective	3	3	0							
				16	14	2			15	9	6	
Total No. of Credit									148			

Curriculum for B.Sc. Civil Engineering

Minimum number of credits for graduation in this degree plan = 148				
No.	Course code	Course	Credit	Pre-requisite
University requirements = 21 Credits				
1	ARAB100	Arabic Language-I	3(3+0)	None
2	ARAB101	Arabic Language-II	3(3+0)	ARAB100
3	COMP101/L	Computer Skill	3(2+1)	Comp-A, Comp-B (Digital Literacy)
4	ENGL150	English Language-I	3(3+0)	None
5	ENGL152	English Language-II	3(3+0)	ENGL150
6	ENGL155	Communication Skill	3(3+0)	ENGL152
7	HIST150	Islamic Civilization	3(3+0)	None
University Elective = 3 Credits				
College requirements = 18 Credits				
1	COMP151/L	Intro. to Algorithm & Programming	4(3+1)	COMP101/L
2	ENGN101	Introduction to Engineering	2(2+0)	MATH116
3	ENGN103	Engineering Drawing	2(1+1)	None
4	ENGN333	Industrial Training	2(0+2)	110 credits
5	MATH116	Pre Calculus	4(3+1)	None
6	MATH211	Calculus-I	4(3+1)	MATH116
College elective = 3 Credits				
Department requirement: core courses = 88 Credits				
No.	Code	Course	Credit	Pre-Requisite
1.	MATH212	Calculus-II	3(2+1)	MATH211
2.	MATH312	Differential Equations for Engineers	3(2+1)	MATH212
3.	STAT105	Statistics for Engineering	3(2+1)	MATH211
4.	CHEM107/L	Fundamentals of Chemistry	4(3+1)	None
5.	PHYS101/L	General Physic-I	4(3+1)	MATH116
6.	CIVL211	Statics	3(3+0)	PHYS101/L
7.	CIVL212	Civil Engineering Materials	3(2+1)	CHEM107/L,CIVL211

8.	CIVL214	Geomatic Engineering	3(2+1)	ENGN101,MATH211
9.	CIVL215	Civil Engineering Drawing	2(0+2)	ENGN103
10.	CIVL216	Dynamics	2(2+0)	CIVL211
11.	CIVL221	Solid Mechanics	3(3+0)	CIVL211+CIVL212
12.	CIVL321	Structural Analysis-I	3(2+1)	CIVL 221, CIVL216,MATH211
13.	CIVL322	Structural Analysis-II	3(3+0)	CIVL321
14.	CIVL323	Structural Design-I	3(3+0)	CIVL321,CIVL212 CIVL215
15.	CIVL421	Structural Design-II	3(3+0)	CIVL323
16.	CIVL332	Geotechnical Engineering-I	4(3+1)	CIVL221,MATH212
17.	CIVL431	Geotechnical Engineering-II	3(3+0)	CIVL332, MATH312
18.	CIVL432	Foundation Engineering	3(3+0)	CIVL431 ,CIVL215
19.	CIVL213	Fluid Engineering Mechanics	3(2+1)	MATH211, CIVL211
20.	CIVL241	Environmental Engineering	3(3+0)	CHEM107/L,PHYS101/L
21.	CIVL342	Hydrology and Hydraulics	3(3+0)	CIVL213 ,MATH212
22.	CIVL441	Water and Wastewater Engineering	3(2+1)	CIVL241
23.	CIVL451	Highway Engineering-I	3(3+0)	CIVL214, STAT105
24.	CIVL452	Highway Engineering-II	3(2+1)	CIVL451,CIVL212
25.	CIVL463	Project Management	2(2+0)	CIVL462 & CIVL461
26.	CIVL462	Construction Methods and Estimation	3(2+1)	CIVL212; CIVL215
27.	CIVL461	Engineering Economics	2(2+0)	STAT105
28.	CIVL471	Design Project	2(0+2)	Final Year
29.	CIVL472	Final Year Project-I	2(0+2)	Final year
30.	CIVL473	Final Year Project-II	4(0+4)	CIVL472
Department technical electives: Minor specialization = 15 Credits				
1	CIVL521	Structural Analysis-III	3(3+0)	CIVL322
2	CIVL522	Bridge Engineering	3(3+0)	CIVL421,CIVL521& CIVL452
3	CIVL523	Design of Building Structure	3(3+0)	CIVL421,CIVL521& CIVL432
4	CIVL524	Assessment and Rehabilitation of Structures	3(3+0)	CIVL421,CIVL212
5	CIVL531	Retaining Structures	3(3+0)	CIVL323, CIVL432
6	CIVL532	Foundation Design	3(3+0)	CIVL432
7	CIVL533	Soil Improvement	3(3+0)	CIVL431

8	CIVL534	Dam Design	3(3+0)	CIVL431,CIVL342
9	CIVL541	Surface Water Engineering	3(3+0)	CIVL342
10	CIVL542	Groundwater Engineering	3(3+0)	CIVL342
11	CIVL543	Advanced Wastewater Engineering	3(3+0)	CIVL441/L
12	CIVL544	Solid Waste Management Engineering	3(3+0)	CIVL241,CIVL463
13	CIVL545	Water Resources Management	3(3+0)	CIVL342,CIVL463
14	CIVL511	Geoinformation	3(3+0)	CIVL214,COMP101
15	CIVL551	Analysis of Road Transportation System	3(3+0)	CIVL451
16	CIVL552	Road Construction and Maintenance	3(3+0)	CIVL452
17	CIVL553	Advanced Pavement Engineering	3(3+0)	CIVL452
18	CIVL554	Traffic Safety Management	3(3+0)	CIVL451
19	CIVL535	Offshore Structures	3(3+0)	CIVL421,CIVL521
20	CIVL536	Structural Dynamics	3(3+0)	CIVL421,CIVL521

Elective Courses (Minor Specialization) Bachelor of Civil Engineering

Structural and Geotechnical Engineering									
Student select 15 credits for Minor specialization									
First Semester					Second Semester				
CODE	COURSE	C	L	P	CODE	COURSE	C	L	P
CIVL521	Structural Analysis-III	3	3	0	CIVL532	Foundation Design	3	3	0
CIVL524	Assessment and Rehabilitation of Structures	3	3	0	CIVL523	Design of Building Structure	3	3	0
CIVL531	Retaining Structures	3	3	0	CIVL522	Bridge Engineering	3	3	0
CIVL533	Soil Improvement	3	3	0	CIVL534	Dam Design	3	3	0
CIVL535	Offshore Structures	3	3	0	CIVL536	Structural dynamics	3	3	0
Water Resources Engineering									
Student select 15 credits for Minor specialization									
First Semester					Second Semester				
CIVL541	Surface Water Engineering	3	3	0	CIVL543	Advanced Wastewater Engineering	3	3	0
CIVL542	Groundwater Engineering	3	3	0	CIVL544	Solid Waste Management Engineering	3	3	0

CIVL511	Geoinformation	3	3	0	CIVL545	Water Resources Management	3	3	0
CIVL534	Dam Design	3	3	0					
Highway and Transportation Engineering									
Student select 15 credits for Minor specialization									
First Semester					Second Semester				
CIVL551	Analysis of Road Transportation System	3	3	0	CIVL553	Advanced Pavement Engineering	3	3	0
CIVL511	Geoinformation	3	3	0	CIVL554	Traffic Safety Management	3	3	0
CIVL552	Road construction and maintenance	3	3	0	CIVL533	Soil Improvement	3	3	0