

BACHELOR PROGRAMS
COMPUTER ENGINEERING
2014-2015

Study Plan for Bachelor of Computer Engineering

UNIVERSITY OF NIZWA																							
BACHELOR IN COMPUTER ENGINEERING																							
C – Credit Hours, L – Credit Lecture, P – Credit Practical																							
Y E A R 1	Summer Semester		CODE		COURSE			C		L		P											
			MATH116/L		Pre- Calculus			4		3		1											
			ARAB100		Arabic Language I			3		3		0											
								7		6		1											
F A L L	CODE		COURSE			C		L		P		S P R I N G	CODE		COURSE			C		L		P	
	PHYS101/L		General Physics I			4		3		1			MATH212/L		Calculus II			3		3		0	
	MATH211/L		Calculus I			4		3		1			ENGN103		Engineering Drawing			2		1		1	
	ENGL150		English Language I			3		3		0			PHYS150/L		General Physics II			4		3		1	
	COMP101/L		Computer Skill			3		2		1			ELEC212		Circuit Analysis I			3		3		0	
	ENGN101		Introduction to Engineering			2		2		0			COMP151/L		Introduction to Algorithm & Programming			4		3		1	
					16			13			3					16		13		3			
Summer Semester		CODE		COURSE			C		L		P												
		ARAB101		Arabic Language II			3		3		0												
		ENGL152		English Language II			3		3		0												
							6		6		0												
Y E A R 2	CODE		COURSE			C		L		P		S P R I N G	CODE		COURSE			C		L		P	
	MATH222/L		Discrete Mathematics			3		3		0			MATH312/L		Differential Equations for Engineers			3		3		0	
	ELEC221		Electronics I			3		3		0			ELEC241		Digital Logic Design			3		3		0	
	ELEC331		Signals & Systems			3		3		0			ELEC322		Digital Electronics			3		3		0	
	ENGL155		Communication Skill			3		3		0			ELEC311		Measurement and Instrumentation			3		3		0	
	COMP222/L		Object Oriented Programming			3		2		1			COMP255/L		Data Structure & Algorithm Design			3		2		1	
	ELEC291		Electrical Circuits Lab			1		0		1			ELEC292		Analog Electronics Lab			1		0		1	
				16			14			2					16		14		2				
Summer Semester		CODE		COURSE			C		L		P												
		STAT105/L		University Elective			3		3		0												
				Statistics for Engineers			3		3		0												
							6		6		0												
Y E A R 3	CODE		COURSE			C		L		P		S P R I N G	CODE		COURSE			C		L		P	
	ELEC412		Control Systems			3		3		0			ELEC442		Embedded Systems			3		3		0	
	ELEC431		Communication Systems			3		3		0			ELEC443		Computer Architecture & Organization			3		3		0	
	ELEC351		Database Systems			3		3		0			ELEC444		Computer Interfacing			3		3		0	
	ELEC341		Microprocessors and Microcontrollers			3		3		0			ELEC461		Computer Networks			3		3		0	
	ELEC432		Digital Signal Processing			3		3		0			ELEC323/L		Digital Systems Design with VHDL			3		2		1	
	ELEC281		Digital Logic Design lab			1		0		1			ELEC392		Digital Electronics Lab			1		0		1	
				16			15			1					17		14		3				
Summer Semester		CODE		COURSE			C		L		P												
		ENGN333		Industrial training			2		0		2												
							2		0		2												
Y E A R 4	CODE		COURSE			C		L		P		S P R I N G	CODE		COURSE			C		L		P	
	ELEC5**		Elective – I			3		3		0			ELEC504		Final Year Project (Part II)			4		0		4	
	ELEC5**		Elective - II			3		3		0			ELEC5**		Elective - III			3		3		0	
	ELEC552		Operating Systems			3		3		0			ELEC551		Software Systems Design			3		3		0	
	ELEC503		Final Year Project (Part I)			2		0		2			ELEC482		Microprocessor and Interfacing Lab			1		0		1	
	ELEC484		Embedded Systems Lab			1		0		1			ELEC483		Computer Networks Lab			1		0		1	
				12			9			5					12		6		4				
Summer Semester		CODE		COURSE			C		L		P												
		HIST150		College Elective			3		3		0												
				Islamic Civilization			3		3		0												
							6		6		0												

Total No. of Credit

148

Curriculum for Bachelor in Computer Engineering

Minimum Number of Credits for Graduation in this degree plan = 148

No.	Course Code	Course	Credit	Pre-Requisite	Co-Requisite
University Requirements = 21 Credits					
1	ARAB100	Arabic Language I	3(3+0)	None	None
2	ARAB101	Arabic Language II	3(3+0)	ARAB100	None
3	COMP101/L	Computer Skill	3(2+1)	COMP A, COMP B	None
4	ENGL150	English Language I	3(3+0)	None	None
5	ENGL152	English Language II	3(3+0)	ENGL150	None
6	ENGL155	Communication Skill	3(3+0)	ENGL152	None
7	HIST150	Islamic Civilization	3(3+0)	None	None
University Elective = 3 Credits					
College Requirements = 18 Credits					
1	COMP151/L	Introduction to Algorithm & Programming	4(3+1)	COMP101/L	None
2	ENGN101	Introduction to Engineering	2(2+0)	MATH116/L	None
3	ENGN103	Engineering Drawings	2(1+1)	None	None
4	ENGN333	Industrial Training	2(0+2)	110 credits	None
5	MATH116/L	Pre-Calculus	4(3+1)	None	None
6	MATH211/L	Calculus I	4(3+1)	MATH116/L	None
College Elective = 3 Credits					
Department Requirement: Core Courses = 94 Credits					
No.	Code	Course	Credit	Pre-Requisite	Co-Requisite
1.	PHYS101/L	General Physics I	4(3+1)	MATH116/L	None
2.	PHYS150/L	General Physics II	4(3+1)	PHYS101/L	None
3.	MATH212/L	Calculus II	3(3+0)	MATH211/L	None
4.	MATH222/L	Discrete Mathematics	3(3+0)	MATH211/L	None
5.	MATH312/L	Differential Equations for Engineers	3(3+0)	MATH212/L	None
6.	STAT105/L	Statistics for Engineers	3(3+0)	MATH211/L	None
7.	COMP222/L	Object Oriented Programming	3(2+1)	COMP151/L	None
8.	COMP255/L	Data Structure and Algorithm Design	3(2+1)	COMP222/L	None
9.	ELEC212	Circuit Analysis I	3(3+0)	PHYS101/L	PHYS150/L
10.	ELEC221	Electronics I	3(3+0)	ELEC212	None
11.	ELEC241	Digital Logic Design	3(3+0)	ELEC212	None
12.	ELEC291	Electrical Circuits Lab	1(0+1)*	ELEC212	None
13.	ELEC292	Analog Electronics Lab	1(0+1)*	ELEC221	None

14.	ELEC281	Digital Logic Design Lab	3(3+0)	ELEC241	None
15.	ELEC331	Signals & Systems	3(3+0)	ELEC212	None
16.	ELEC351	Database Systems	3(3+0)	COMP255, MATH222/L	None
17.	ELEC341	Microprocessors and Microcontrollers	3(3+0)	ELEC241	None
18.	ELEC311	Measurements and Instrumentation	3(3+0)	ELEC221	None
19.	ELEC322	Digital Electronics	3(3+0)	ELEC221	None
20.	ELEC323/L	Digital Systems Design with VHDL	3(2+1)	ELEC341	None
21.	ELEC392	Digital Electronics Lab	1(0+1)*	ELEC322	None
22.	ELEC412	Control Systems	3(3+0)	ELEC331, MATH312/L	None
23.	ELEC431	Communication Systems	3(3+0)	ELEC331	None
24.	ELEC432	Digital Signal Processing	3(3+0)	ELEC331	None
25.	ELEC442	Embedded Systems	3(3+0)	ELEC341	None
26.	ELEC443	Computer Architecture & Organization	3(3+0)	ELEC341	None
27.	ELEC444	Computer Interfacing	3(3+0)	ELEC341	None
28.	ELEC461	Computer Networks	3(3+0)	ELEC431	None
29.	ELEC491	Control Lab	3(3+0)	ELEC412	Non
30.	ELEC482	Microprocessor and Interfacing Lab	1(0+1)*	ELEC341	ELEC444
31.	ELEC484	Embedded Systems Lab	1(0+1)*	ELEC442	None
32.	ELEC483	Computer Network Lab	1(0+1)*	ELEC461	None
33.	ELEC552	Operating Systems	3(3+0)	ELEC443	None
34.	ELEC551	Software Systems Design	3(3+0)	ELEC351	None
35.	ELEC503	Final Year Project (Part I)	2(0+2)	Final Year	None
36.	ELEC504	Final Year Project (Part II)	4(0+4)	ELEC503	None

Department Technical Electives: 9 Credits

1	ELEC553	Multimedia Technology	3(3+0)	ELEC461	None
2	ELEC555	Image Processing and Computer Vision	3(3+0)	COMP255/L	None
3	ELEC557	Neural Network and Fuzzy Logic	3(3+0)	ELEC412	None
4	ELEC517	Digital Control	3(3+0)	ELEC412	None
5	ELEC546	Computer Controlled Systems	3(3+0)	ELEC482	None
6	ELEC558	Mobile Programming Systems	3(3+0)	COMP222/L	None
7	ELEC559	Internet Programming	3(3+0)	COMP255/L	None
8	ELEC564	Network Programming	3(3+0)	ELEC559	None
9	ELEC559	Special Topics in Computer Engineering	3(3+0)	Final Year	None
10	ELEC562	Parallel Computing	3(3+0)	ELEC442	None
11	ELEC545	Real-Time Systems	3(3+0)	ELEC442	None
12	ELEC563	Wireless and Mobile Networks	3(3+0)	ELEC483	None
13	ELEC565	Network Security	3(3+0)	ELEC461	None
14	ELEC572	Robotics	3(3+0)	ELEC442	None
15	ELEC573	Engineering Economics and Management	3(3+0)	Final Year	None

Note: * 1 credit in department Lab courses = 3 contact hours

DIPLOMA PROGRAMS
COMPUTER TECHNOLOGY
2014-2015