

Al-Nahrain University

College of Information Engineering

Networks Engineering Program

Study Plan and Course Description

2015

Study Plan



Networks Engineering Program						
First Year – Semester I						
No.	Code	Subject	Hrs. Per week			Units
			Theo.	App.	Tut.	
1	UR111	English Language I	2	--	--	2
2	CR111	Computer Programming	2	3	0	3
3	CR112	Mathematics I	3	--	1	3
4	CR113	Logic Circuits	2	3	--	3
5	CR114	IT Fundamentals & Workshop	2	3	--	3
6	CR115	Physical Electronics	3	3	--	4
Total			14	12	1	18
			27			
Networks Engineering Program						
First Year – Semester II						
No.	Code	Subject	Hrs. Per week			Units
			Theo.	App.	Tut.	
1	UR121	English Language II	2	--	--	2
2	CR121	Object oriented Programming I (C++)	2	3	--	3
3	CR122	Mathematics II	4	--	1	4
4	CR123	Electrical Circuits	3	3	1	4
5	CR124	Engineering Drawing & CAD	1	3	-	2
6	NE121	Networks Fundamentals	2	2	--	3
Total			14	11	2	18
			27			

Networks Engineering Program						
Second Year – Semester I						
No.	Code	Subject	Hrs. Per week			Units
			Theo.	App.	Tut.	
1	UR211	Arabic Language	2	--	--	2
2	CR211	Object Oriented Programming II (Java)	2	3	--	3
3	CR212	Electronics	3	3	-	4
4	NE211	Computer Networks I	2	3	-	3
5	NE212	Web Programming	1	2	1	2
6	NE213	Engineering and Numerical Analysis	4	--	2	4
Total			14	11	3	18
			28			
Networks Engineering Program						
Second Year – Semester II						
No.	Code	Subject	Hrs. Per week			Units
			Theo.	App.	Tut.	
1	CR221	Digital Electronics	2	3	-	3
2	NE221	Signals & Systems	3	-	1	3
3	NE222	Fiber Optics & Transmission Lines	2	-	1	2
4	NE223	Information Theory and Coding	3	--	1	3
5	NE224	Computer Networks II	3	3	--	4
6	NE225	Networks Programming I	2	2	1	3
Total			15	8	4	18
			27			

Networks Engineering Program						
Third Year – Semester I						
No.	Code	Subject	Hrs. Per week			Units
			Theo.	App.	Tut.	
1	CR311	Communication Systems	3	3	1	4
2	CR312	Project Management	2	--	1	2
3	NE311	Storage Area Networks	3	--	-	3
4	NE312	Networks Programming II	2	2	--	3
5	NE313	Database (PHP, MY_SQL)	1	2	1	2
6	NE314	Computer Architecture & Microprocessors	3	3	--	4
Total			14	10	3	18
			27			
Networks Engineering Program						
Third Year – Semester II						
No.	Code	Subject	Hrs. Per week			Units
			Theo.	App.	Tut.	
1	UR321	Human Rights	1	--	--	1
2	CR321	Operating Systems	3	3	-	4
3	NE321	Networks Simulation	2	3	1	3
4	NE322	Data Communications	3	3	1	4
5	NE323	Software Engineering	3	--	--	3
6	NE324	Network Protocols & Services	2	3	--	3
Total			14	12	2	18
			28			

Networks Engineering Program						
Fourth Year – Semester I						
No.	Code	Subject	Hrs. Per week			Units
			Theo.	App.	Tut.	
1	UR411	Democracy	1	--	--	1
2	CR411	Digital Signal Processing	3	3	1	4
3	NE411	Project	--	4	--	2
4	NE412	Modern Networks Technologies	3	--	1	3
5	NE413	Selected Subject-1	3	2	-	4
6	NE414	Selected Subject-2	3	2	-	4
Total			13	11	2	18
			26			
Networks Engineering Program						
Fourth Year – Semester II						
No.	Code	Subject	Hrs. Per week			Units
			Theo.	App.	Tut.	
1	NE421	Project	--	4	--	2
2	NE422	Networks Management	2	--	1	2
3	NE423	Networks Design	2	--	1	2
4	NE424	Wireless Networks	3	3	--	4
5	NE425	Selected Subject-3	3	2	-	4
6	NE426	Selected Subject-4	3	2	-	4
Total			13	11	2	18
			26			

Selected Subjects

No.	Code	Subject Title	Hrs			Units
			Th.	Prac.	Tut.	
Selected Subject-1		Queuing Theory and Systems	3	2	0	4
Selected Subject-2		Optical Networks	3	2	0	4
Selected Subject-3		Networks Security	3	2	0	4
Selected Subject-4		Automatic Control & Robotics	3	2	0	4
Selected Subject-5		WSN & Applications	3	2	0	4
Selected Subject-6		Optical Networking	3	2	0	4
Selected Subject-7		Mobile Networks	3	2	0	4
Selected Subject-8		Multimedia Networks	3	2	0	4
Selected Subject-9		New Generation Networks	3	2	0	4
Selected Subject-10		Artificial Intelligence	3	2	0	4

ملخص عدد الساعات والوحدات موزعة على الفصول الدراسية
ومتطلبات الجامعة والكلية والقسم

Networks Engineering Program

Seq	Year	Semester	Hrs. Per Week			Total Hrs (Actual)		Total Units	
			Theo.	App.	Tut.	Per Week	Per Year	Per Sem.	Per Year
1	First	1 st	14	12	1	27	54	18	36
2		2 nd	14	11	2	27		18	
3	Second	1 st	14	11	3	28	55	18	36
4		2 nd	15	8	4	27		18	
5	Third	1 st	14	10	3	27	55	18	36
6		2 nd	14	12	2	28		18	
7	Fourth	1 st	13	11	2	26	52	18	36
8		2 nd	13	11	2	26		18	
Total (Four Years)							216	144	

Year/ Semester	University Requirements (UR)		College Requirements (CR)		Specialization (NE)		Total	
	Hrs/Week	Units	Hrs/Week	Units	Hrs/Week	Units	Hrs/Week	Units
1-1	2	2	25	16	-	-	27	18
1-2	2	2	21	13	4	3	27	18
2-1	2	2	17	11	9	5	28	18
2-2	-	-	5	3	22	15	27	18
3-1	-	-	16	10	11	8	27	18
3-2	1	1	6	4	21	13	28	18
4-1	1	1	7	4	18	13	26	18
4-2	-	-	-	-	26	18	26	18
total	8x15=120	8	97x15=1455	61	111x15=1665	75	216x15=3240	144

	%Hrs	%Units
University Requirements	3.7	5.5
College Requirements	44.9	42.36
Department Requirements	51.4	52.14