



Curriculum For The Bachelor Degree In Electrical Engineering \ Network systems and Security 2020



Established 1997

Curriculum for the Bachelor Degree in Electrical Engineering/ Network systems and Security

The curriculum for the B.S.c. degree in electrical engineering contains **(162)** credit hours distributed as follows:

Course No.	Requirements	Credit Hours (Cr.H)
1	University Requirements	24
	• Compulsory Requirements	18
	• Elective Requirements	6
2	Faculty Requirements	32
3	Compulsory Department Requirements	47
4	Specialization Requirements	59
	• Compulsory Requirements	50
	• Elective Requirements	9
Total		162

Curriculum for the Bachelor Degree in Electrical Engineering/ Network systems and Security

First: University Requirement (24 Cr.H.)

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

Course No.	Course	Cr. Hrs.	Weekly Hrs.		Prerequisite
			Lec.	Lab.	
AAL101	Applied Arabic Language	3	3	-	Arabic 99 OR passing Arabic Level Exam
AEL101	Applied English Language (1)	3	3	-	English 99 OR passing English Level Exam
AEL102	Applied English Language (2)	3	3	-	AEL101
NE101	National Education and University Behavior	3	3	-	-
35001101	Military Sciences	3	3	-	Passing 90 Cr. Hrs.
CS101	Computer Skills and E-Learning	1	1	-	Computer Skills 99 OR passing Computer Skills Level Exam
IEC101	Innovation, Entrepreneurship, and Creativity	2	2	-	-
Total		18	18	-	

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
36001101	Communication Skills	3
36002102	Introduction to Psychology	3
36003103	Jordan Society	3
36004104	Sport for All	3
36005105	Islamic Culture	3
36006110	Modern Administrative Concepts and skills	3
36009111	Economic Concepts	3
36007107	Agriculture in Jordan	3
36008108	Environment and Society	3
36012109	History of the Rightly Guided Caliphs	3
36009114	Jerusalem (Palestinian issue)	3
36009112	Law, Media and Society	3
36009109	Islam and Life	3



Established 1997

Curriculum for the Bachelor Degree in Electrical Engineering/ Network systems and Security

36009115	Digital Community	3

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

Course No.	Course Title	Cr.H.	Weekly Hours		Prerequisite
			Lecture	Lab.	
30202101	Calculus 1	3	3	-	--
30202102	Calculus 2	3	3	-	30202101
30201101	General Physics 1	3	3	-	--
30201102	General Physics 2	3	3	-	30201101
30201111	General Physics 1 Lab.	1	-	3	*30201101
30206101	General Chemistry 1	3	3	-	--
30206102	General Chemistry 1 Lab.	1	-	3	*30206101
30202203	Ordinary Differential Equations (1)	3	3	-	30202102
BSE0201	Programming for Engineers	3	2	3	CS101
BSE0203	Technical Writing & Professional Ethics	3	3	-	AEL102
BSE0205	Engineering Drawing	2	-	6	CS101
BSE0102	Engineering Workshop	1	-	3	--
BSE0401	Engineering Economy	3	3	-	80 credit hrs.
Total		32	26	18	

* co-requisite

Third: Compulsory Department Requirements: (47 Cr .H.)

Course No.	Course Title	Cr.H.	Weekly Hours		Perquisites
			Lectures	Lab	
ELE 0211	Electrical Circuits (1)	3	3	-	30201102
ELE 0212	Electrical Circuits (2)	3	3	-	ELE 0211
BSE 0202	Statistics and Probabilities for Engineers	3	3	-	30202101
ELE 0213	Digital Logic Design	3	3	-	BES 0201
ELE 0214	Electrical Circuits lab.	1	-	3	ELE 0212*
ELE 0205	Linear algebra	3	3	-	30202102
ELE 0216	Electronics (1)	3	3	-	ELE 0211
ELE 0228	Microprocessor Systems	3	3	-	ELE 0213



Established 1997

Curriculum for the Bachelor Degree in Electrical Engineering/ Network systems and Security

ELE 0321	Signals and Systems	3	3	-	BES 0211
ELE 0322	Communications and data transmission	3	3	-	ELE 0321+ ELE 0213+ ELE 0205
ELE 0313	Electronics (1) Lab.	1	-	3	ELE 0216
ELE 0334	Control Systems	3	3	-	ELE 0321
ELE 0335	Electrical Machines (1)	3	3	-	ELE 0212
BES 0306	Numerical Methods	3	3	-	30202102
ELE 0328	Microprocessor systems Lab.	1	-	3	ELE 0228
ELE 0431	Control Systems Lab.	1	-	3	ELE 0334
ELE 0442	Training	3	-	3	Pass 115 Cr. Hrs **
ELE 0541	Graduation Project (1)	1	-	1	Pass 120 Cr. Hrs
ELE 0542	Graduation Project (2)	3	-	3	ELE 0541
Total		47	36	19	

* co-requisite

** Field training after passing 115 credit hours of the plan, and the duration of field training is 280 practical hours, the student will be full-time for training in an institution related to the specialization, and the training period will be continuous.

Compulsory Specialization Requirements: (50 Cr .H.)

Course No.	Course Title	Cr.H.	Weekly Hours		Perquisites
			Lectures	Lab	
ELE 5251	Object Oriented Programming	3	2	3	BSE 0201
ELE 5252	Data Structures and Algorithms	3	3	0	ELE 5251
ELE 5254	Data Structures and Algorithms Lab.	1	-	3	ELE 5252
ELE 5216	Digital Logic Design Lab.	1	-	3	ELE 0213
ELE 5361	Computer Architecture and Organization	3	3	-	ELE 0228
ELE 5364	Computer Architecture and Organization Lab.	1	-	3	ELE 5361
ELE 5362	Operating Systems	3	3	-	ELE 5252
ELE 5354	Database Systems	3	3	-	ELE 5252
ELE 5455	Database Systems Lab.	1	-		ELE 5354

Curriculum for the Bachelor Degree in Electrical Engineering/ Network systems and Security

ELE 6461	Fundamentals of Computer Networks	3	3	-	ELE 0322
ELE 6464	Computer Networks Lab.	1	-		ELE 6461
ELE 6466	Networks Protocols	3	3	-	ELE 6461
ELE 6468	Network Programming	3	2	3	ELE 6466
ELE 5453	Artificial Intelligence and Machine Learning	3	3	-	ELE 5251, BSE 0202
ELE 6565	Networks Protocols Lab.	1	-	3	ELE 6466
ELE 6472	Fundamentals of Cyber Security	3	3	-	ELE 6461
ELE 6465	Wireless Networks	3	3	-	ELE 6466
ELE 6574	Network Systems Security Lab.	1	-	3	ELE 6472
ELE 6572	Encryption and Network Security Systems	3	3	-	ELE 6472
ELE 6571	Networks Digital Forensics System Systems	3	3	-	ELE 6574
ELE 6576	Networks Digital Forensics Systems Lab.	1	-	3	ELE 6571
ELE 6566	Cloud Computing	3	3	0	ELE 6466
Total		50	42	35	

Elective Specialization Requirements: (9 Cr.H.) to be selected from the following list:

Course No.	Course Title	Cr.H	Weekly Hours		Prerequisites
			Lectures	Lab	
ELE 6575	Special Topics in Networks & Security Systems	3	3	-	Completion of 90 Cr.h
ELE 6569	Network performance modeling and simulation	3	3	-	Completion of 90 Cr.h
ELE 6463	Internet of Things	3	3	-	Completion of 90 Cr.h +ELE6466
ELE 6578	Ethical Hacking	3	3	-	Completion of 90 Cr.h
ELE 6570	Wireless Sensor Networks	3	3	-	Completion of 90 Cr.h
ELE 6467	Introduction to Linux	3	3	-	Completion of 90 Cr.h
ELE 6479	Wireless Networks Security	3	3	-	Completion of 90 Cr.h