



Curriculum For The Bachelor Degree In Electrical Engineering/Electrical Power 2020



Established 1997

Curriculum for the Bachelor Degree in Electrical Engineering/Electrical Power

The curriculum for the B.S.c. degree in electrical engineering/Electrical Power 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



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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	-	-
٣٥٠.١١.١	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

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36009115	Digital Community	3
Total		6

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

Course No.	Course Title	Cr.H.	Weekly Hours		Prerequisite
			Lecture	Lab.	
٣٠٢٠٢١٠١	Calculus 1	3	3	-	--
٣٠٢٠٢١٠٢	Calculus 2	3	3	-	٣٠٢٠٢١٠١
٣٠٢٠١١٠١	General Physics 1	3	3	-	--
٣٠٢٠١١٠٢	General Physics 2	3	3	-	٣٠٢٠١١٠١
٣٠٢٠١١١١	General Physics 1 Lab.	1	-	3	*٣٠٢٠١١٠١
٣٠٢٠٦١٠١	General Chemistry 1	٣	٣	-	--
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	٢	-	٦	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
ELE 0321	Signals and Systems	3	3	-	BES 0211
ELE 0322	Communications and data	3	3	-	ELE 0321+

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	transmission				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.

Fourth: Specialization Requirements: (59 Cr .H.)

Electrical Power Engineering

Compulsory Specialization Requirements: (50 Cr .H.)

Course No.	Course Title	Cr.H.	Weekly Hours		Perquisites
			Lectures	Lab	
ELE ٢٣٦٣	Power Electronics	3	3	-	ELE ٠٢١٦
ELE ٢٣٦٢	Power Electronics Lab.	1	-	3	ELE 2363
ELE ٤٢٥٢	Electromagnetic (1)	3	3	-	30201102
ELE 5216	Digital Logic Design lab.	1	-	3	ELE 0213
ELE 1311	Electric and electronic Measurements	3	3	-	ELE 0216
ELE ١٣٧٤	Power System Analysis I	3	3	-	ELE 0212+ ELE ٠٣٣٥
ELE ١٤٧٣	Power System Analysis II	3	3	-	ELE 1374
ELE ١٤٧٤	Electrical Power Systems Lab. I.	1	-	3	ELE 1374

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ELE ١٣٥٢	Electrical Machines II	3	3	-	ELE 4252 + ELE ٠٣٣٥*
ELE ١٣٥٨	Electrical Machines Lab.	1	-	3	ELE 0335
ELE ١٤٧٥	Electrical Installations & safety	3	3	-	ELE ١٣٧٤
ELE 1476	Electrical Installations & safety Lab.	1	-	3	ELE 1475
ELE ٤٣١١	Electronics (2)	3	3	-	ELE 0216
ELE ٣٤٢٧	Communications and data transmission lab.	1	-	3	ELE 0322
ELE ١٥٧٠	Reliability of Power Systems	3	3	-	ELE ١٤٧١+ ELE ١٤٧٩
ELE ١٤٧١	Power System Protection	3	3	-	ELE ١٣٧٤
ELE ١٤٧٢	Power System Protection lab	1	-	3	ELE 1471
ELE ١٤٧٩	Power Transmission & Distribution Systems	3	3	-	ELE 1374
ELE 1571	High Voltage Engineering	3	3	-	ELE 1479
ELE ١٤٨٠	Renewable Energy Systems	3	3	-	ELE ١٣٥٢+ ELE ٤٣١١
ELE 1477	Modeling & Simulation of Power Systems	1	-	3	ELE 1473
ELE 1579	Power System Operation & Control	3	3	-	ELE 1473
Total	50	42	24		

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 ٤٤٦٧	Digital signal processing	3	3	-	ELE0321+ 110 Cr.Hrs
ELE ١٤٧٨	Special Topics in Electrical Power	3	3	-	110 Cr.Hrs
ELE ١٥٧٦	Electrical Power Economics and Sources	3	3	-	ELE 1473+ 110 Cr.Hrs



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ELE ١٥٧٥	Power systems Stability	3	3	-	ELE ١٤٧٣+ ١١٠ Cr.Hrs
ELE ١٥٧٨	Transient in electrical power systems	3	3	-	ELE 1473+ 110 Cr.Hrs
ELE 2461	Electrical drives	3	3		ELE 2363+ 110 Cr.Hrs
ELE ١٥٨٧	Smart power grids and storage systems	3	3	-	ELE 1480+ 110 Cr.Hrs
Total	9	9	-		