

**Philadelphia University**

**Faculty of Engineering**

**Bachelor of Science Degree (B.Sc) in  
Electrical Engineering  
Curriculum (2011/2017)  
Total Credit Hours: 160 Cr.H**



First: University Requirements (27) Cr. H.			
A- First Field: University Compulsory Requirements: (12) Cr. H.			
Course No.	Course Title	Cr. H.	Prerequisite
114101	Arabic Language Skills (1)	3	114099
111100	Military Science	3	---
111101	National Education	3	---
130101	English Language Skills (1)	3	130099
B- University Elective Courses:			
From the 2 <sup>nd</sup> , 3 <sup>rd</sup> , and 4 <sup>th</sup> fields student should study one course as a minimum, two courses as a maximum that constitutes totally (15) Cr. H.			
Second Field: Human Sciences (3-6) Cr. H.			
Course No.	Course Title	Cr. H.	Prerequisite
114102	Arabic Language Skills (2)	3	114101
130103	English Language Skills (3)	3	130102
140101	Foreign Language (French 1)	3	---
140104	Foreign Language (Italian 1)	3	---
140105	Foreign Language (Italian 2)	3	140104
140106	Foreign Language (Hebrew 1)	3	---
140109	Chinese Language Skills (1)	3	---
140110	Chinese Language Skills (2)	3	140109
Third Field: Social and Economic Sciences: (3-6) Cr. H.			
Course No.	Course Title	Cr. H.	Prerequisite
115255	Development Education	3	---
111111	Introduction to Sociology	3	---
111112	Introduction to Psychology	3	---
111133	Human Vision and Civilization (1)	3	---
111142	Mass MediaCommunication & Society	3	---
420140	Human Rights	3	---
420143	Legal Culture	3	---
Fourth Field: Technology, Agricultural and Health Sciences: (3-6) Cr. H.			
Course No.	Course Title	Cr. H.	Prerequisite
371111	Project Management Skills	3	---
731101	Skills of using Social Media Sites	3	---
761111	Computer Skills	3	761099
910101	Human Health and Community	3	---
910105	Principle of Nursing and First Aids	3	---
All students must take exam in Arabic, English and computer skills. Students who fail to pass in any exam (less than 50%) must successfully pass the fundamental course.			
Codes used in Curriculum:			
(610) Electrical Eng. (611) Renewable Energy Eng. (620) Mechanical Eng.			
(630) Computer Eng. (640) Mechatronics Eng. (650) Comm. & Electronics Eng.			
(670) Civil Eng. (660) Architecture Eng.			

Second: Faculty Requirements (29) Cr. H.			
2-1 Faculty compulsory Requirements (26)Cr. H			
Course No.	Course Title	Cr. H.	Prerequisite
130102	English Language Skills (2)	3	130101
250101	Calculus (1)	3	---
250102	Calculus (2)	3	250101
211104	Applied Physics	3	---
620131	Engineering Drawing	3	---
620171	Engineering Workshop (1)	1	---
620172	Engineering Workshop (2)	1	620171
640253	Engineering Skills	3	130102
630263	Programming Language	3	---
610550	Entrepreneurship	3	640253+120Cr.H.
2-2 - Faculty Elective Requirement (3) Cr. H.			
Course No.	Course Title	Cr. H.	Prerequisite
212101	General Chemistry	3	---
610111	Fundamentals of Engineering	3	---
Third: Department of Electrical Engineering Requirements (104) Cr.H.			
3-1 Compulsory Requirements (83) Cr.H.			
Course No.	Course Title	Cr. H.	Prerequisite
610211	Electric Circuits (1)	3	211104
610212	Electric Circuits (2)	3	610211
610213	Electromagnetic (1)	3	650260+650163
610216	Electric Circuits Lab.(*)	1	610211
630211	Logic Circuits	3	630263
630212	Logic Circuits Lab.(*)	1	630211
650242	Electronics (1)	3	610211
610314	Electric Machines (1)	3	610213
610316	Electric Machines (1) Lab.	1	610314
610332	Instrumentation and Measurement	3	650342
610336	Instrumentation and Measurement Lab.(*)	1	610332
610359	Engineering Project (1)	1	620172+650242
630313	Microprocessors	3	630211
630314	Microprocessor Lab.(*)	1	630313
650320	Systems and Signals	3	630262
650342	Electronics (2)	3	610211+650242
650343	Electronics (1) Lab.(*)	1	650342
650344	Digital Electronics	3	650242+630211

Course No.	Course Title	Cr. H.	Prerequisite
610411	Power Systems (1)	3	610314
610412	Power Systems (2)	3	610411
610414	Automatic Control	3	610332
610416	Automatic Control Lab.(*)	1	610414
610417	Power Systems Lab.(*)	1	610411
610458	Engineering Training (**)	0	90 Cr. H.
610459	Engineering Project (2)	1	120 Cr. H +610359
630414	Embedded Systems	3	630313
640458	Reverse Engineering	3	610359
650420	Analog Communications	3	650364
650425	Digital Communications	3	650420
650428	Communications Lab.(*)	1	650420
610513	Power Systems Protection	3	610412
610514	Electric Machines (2)	3	610314
610517	Electric Machines (2) Lab.(*)	1	610314
610530	Power Electronics	3	650342
610559	Engineering Project (3)	2	610459
650526	Communication Circuits	3	650420
650527	Communications Transmission Systems	3	650425

3.2 Backup Compulsory requirement (15) Cr. H.			
Course No.	Course Title	Cr. H.	Prerequisite
650163	Basis of Engineering Analysis	3	250102
650260	Engineering Analysis (1)	3	250102
630262	Engineering Analysis (2)	3	650260
620313	Thermodynamics	3	250102
650364	Probability and Random Variables	3	650320

3.3 Compulsory requirement: the student must choose 6 Cr. H. from the table below			
Course No.	Course Title	Cr. H.	Prerequisite
610419	Electric Installation	3	610411
610515	Transmission & Distribution of Power Systems	3	610411
610516	Special Topics in Electrical Engineering	3	Department Agreement
610518	Drive Systems	3	610414

(\* Can be taken in concurrent with its subject (\*\* Eight continuous weeks after completing 90 Cr. H.