

Course Plan for Bachelor program - Course Plan Development and Updating Procedures/ Electrical Engineering/Communications and Computers Department	QF09/0407-3.0E
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Course Plan for Electrical Engineering/Communications and Computer (Bachelor Program)
No.: (20171)

Approved by Deans Council by decision (2017-2016/72/07) dated (30/8/2017)

(160) Credit Hours

No.	Goals and learning outcomes
PEO 1	Implement technical, collaborative, and communication skills with leadership principles, to pursue careers in
SO	Communications and Computer Engineering.
(1)	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
(2)	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
(5)	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
(6)	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
PEO 2	Seek higher degrees in Communications and Computer Engineering and embark on continuing education.
SO	
(1)	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
(2)	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
(3)	An ability to communicate effectively with a range of audiences
(6)	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
(7)	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies
PEO 3	Seek professional membership, discharge their professional skills ethically, and being conscious of the impact of
SO	Communications and Computer Engineering projects on society as well as environment.
(3)	An ability to communicate effectively with a range of audiences
(4)	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
(7)	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies

Note: PEO= Program Educational Objective, SO= Student Outcome

Course Plan for Bachelor program - Course Plan Development and Updating Procedures/ Electrical Engineering/Communications and Computers Department	QF09/0407-3.0E
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Student's information		Course number	Course title	Credit Hours	Theory Hours	Practical Hours	Prerequisite Co-requisite	Advertisement Plan
Registered	passed							Semester/year
First: University Requirements (27) Credit Hours								
a. Mandatory requirement (15 credit hour)								
<input type="checkbox"/>	<input type="checkbox"/>	0420101	Military Sciences	3	3	0		1/2
<input type="checkbox"/>	<input type="checkbox"/>	0420111	Arabic Language (1)	3	3	0	Remedial Arabic Language	1/1
<input type="checkbox"/>	<input type="checkbox"/>	0420121	English Language (1)	3	3	0	Remedial English Language	1/2
<input type="checkbox"/>	<input type="checkbox"/>	0420151	National Education	3	3	0		1/1
<input type="checkbox"/>	<input type="checkbox"/>	0420171	Life Skills	3	3	0		1/1
b. Electives (12 credit hours, minimum 3 credits from each field)								
Field I. Humanitarian courses								
<input type="checkbox"/>	<input type="checkbox"/>	0420103	History of Jerusalem	3	3	0		1/2
<input type="checkbox"/>	<input type="checkbox"/>	0420112	Islamic Culture	3	3	0		2/2
<input type="checkbox"/>	<input type="checkbox"/>	0420131	Principles of Education	3	3	0		1/2
<input type="checkbox"/>	<input type="checkbox"/>	0420134	Sport and Health	3	2	2		2/2
<input type="checkbox"/>	<input type="checkbox"/>	0420142	Human Civilization	3	3	0		1/2
<input type="checkbox"/>	<input type="checkbox"/>	0420152	Introduction to Sociology	3	3			2/2
<input type="checkbox"/>	<input type="checkbox"/>	0501100	Innovation and Entrepreneurship in Business	3	3	0		2/2
<input type="checkbox"/>	<input type="checkbox"/>	0601102	Law in Our Life	3	3	0		1/2
Field II. Scientific course								
<input type="checkbox"/>	<input type="checkbox"/>	0120111	Information Technology and Society	3	3	0	Remedial Computer Skills	1/2
<input type="checkbox"/>	<input type="checkbox"/>	0120153	Medicinal Plants	3	3	0		1/2
<input type="checkbox"/>	<input type="checkbox"/>	0301101	First Aid	3	3	0		1/2
<input type="checkbox"/>	<input type="checkbox"/>	0301102	Fundamental of Nutrition	3	3	0		2/2
<input type="checkbox"/>	<input type="checkbox"/>	0906100	Principles of Energy Science	3	3	0		2/2

Course Plan for Bachelor program - Course Plan Development and Updating Procedures/ Electrical Engineering/Communications and Computers Department	QF09/0407-3.0E
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Second: Faculty Requirements (26) credit hours								
Student's information		Course number	Course title	Credit Hours	Theory Hours	Practical Hours	Prerequisite Co-requisite	Advertisement Plan
Registered	passed							Semester/year
<input type="checkbox"/>	<input type="checkbox"/>	0120132	General Physics Lab I	1	0	3	Co. General Physics	1/1
<input type="checkbox"/>	<input type="checkbox"/>	0911101	Engineering Workshops	2	1	3	-	1/1
<input type="checkbox"/>	<input type="checkbox"/>	0905111	Principles of Electrical Circuits	3	3	0	General Physics I	2/1
<input type="checkbox"/>	<input type="checkbox"/>	0909101	Computer Engineering Applications	3	3	0	Remedial computer Skills (0120001)	2/1
<input type="checkbox"/>	<input type="checkbox"/>	0911102	Engineering Drawing	3	0	6	-	2/1
<input type="checkbox"/>	<input type="checkbox"/>	0908201	Technical Writing and Profession Ethics	2	2	0	English Language I	2/2
<input type="checkbox"/>	<input type="checkbox"/>	0909404	Engineering Economy	3	3	0	4 th Year Level	1/4
<input type="checkbox"/>	<input type="checkbox"/>	0908461	Projects Management and Value Engineering	3	3	0	Engineering Economy	1/5
<input type="checkbox"/>	<input type="checkbox"/>	0120132	General Physics Lab I	1	0	3	Co. General Physics	1/1
Third: Major requirements (107) credit hours								
a. Mandatory Major requirements (79) credit hours								
<input type="checkbox"/>	<input type="checkbox"/>	0909141	Discrete Structures	3	3	0	Calculus I	(2/1)
<input type="checkbox"/>	<input type="checkbox"/>	0909211	Applied Physics	3	3	0	General Physics I	(1/2)
<input type="checkbox"/>	<input type="checkbox"/>	0909221	Introduction to Linear Systems	3	3	0	Calculus I	(1/2)
<input type="checkbox"/>	<input type="checkbox"/>	0909242	Digital Logic Design	3	3	0	Calculus I	(1/2)
<input type="checkbox"/>	<input type="checkbox"/>	0909214	Principles of Electronics	3	3	0	Principles of Electrical Circuits	(2/2)
<input type="checkbox"/>	<input type="checkbox"/>	0909212	Applied Physics Lab.	1	0	3	Co- Applied Physics	(2/2)
<input type="checkbox"/>	<input type="checkbox"/>	0909223	Signals and Systems Analysis	3	3	0	Introduction to Linear Systems	(2/2)
<input type="checkbox"/>	<input type="checkbox"/>	0909243	Digital Logic Design Lab.	1	0	3	Digital Logic Design	(2/2)
<input type="checkbox"/>	<input type="checkbox"/>	0909246	Computer Architecture and Special Processors	3	3	0	Digital Logic Design	(2/2)
<input type="checkbox"/>	<input type="checkbox"/>	0909247	Computer Architecture & Organization Lab.	1	0	3	Co- Computer Organization and Special Processors	(2/2)
<input type="checkbox"/>	<input type="checkbox"/>	0909316	Electronics Circuits	3	3	0	Principles of Electronics	(1/3)
<input type="checkbox"/>	<input type="checkbox"/>	0909322	Electromagnetics	3	3	0	Advanced Electrical Circuits	(1/3)
<input type="checkbox"/>	<input type="checkbox"/>	0909325	Digital Signals Processing	3	3	0	Signals and	(1/3)

Course Plan for Bachelor program - Course Plan Development and Updating Procedures/ Electrical Engineering/Communications and Computers Department	QF09/0407-3.0E
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							Systems Analysis	
<input type="checkbox"/>	<input type="checkbox"/>	0909353	Object Oriented Programming	3	3	0	Computer Application Engineering	(1/3)
<input type="checkbox"/>	<input type="checkbox"/>	0909356	Object Oriented Programming Lab.	1	0	3	Co- Object Oriented Programming	(2/3)
<input type="checkbox"/>	<input type="checkbox"/>	0909215	Electronics Lab	1	0	3	Principles of Electronics	(2/3)
<input type="checkbox"/>	<input type="checkbox"/>	0909317	Digital Electronics	3	3	0	Electronics Circuits	(2/3)
<input type="checkbox"/>	<input type="checkbox"/>	0909324	Probability and Random Signals Analysis	3	3	0	Signals and Systems Analysis	(2/3)
<input type="checkbox"/>	<input type="checkbox"/>	0909326	Analog Communications	3	3	0	Probability and Signals Process	(2/3)
<input type="checkbox"/>	<input type="checkbox"/>	0909349	Operating Systems	3	3	0	Computer Organization and Special Processors	(2/3)
<input type="checkbox"/>	<input type="checkbox"/>	0909401	Engineering Training	3	0	9	Passing (90) Credit Hours (8 Weeks)	Passing (90) Credit Hours
<input type="checkbox"/>	<input type="checkbox"/>	0909427	Analog Communications Lab	1	0	3	Analog Communications	(1/4)
		0909428	Digital Communications	3	3	0	Analog Communications	(1/4)
		0909445	Microprocessors Systems	3	3	0	Digital Logic Design	(1/4)
<input type="checkbox"/>	<input type="checkbox"/>	0909462	Computer Networks	3	3	0	Operating Systems	(1/4)
<input type="checkbox"/>	<input type="checkbox"/>	0909432	Communications and Networks Systems	3	3	0	Digital Communications Computer Networks	(2/4)
<input type="checkbox"/>	<input type="checkbox"/>	0909446	Microprocessors Systems Lab	1	0	3	Co- Microprocessors Systems	(2/4)
<input type="checkbox"/>	<input type="checkbox"/>	0909447	Embedded Systems	3	2	3	Computer Organization and Architecture	(2/4)
<input type="checkbox"/>	<input type="checkbox"/>	0909463	Computer Networks Lab	1	0	3	Computer Networks	(2/4)
<input type="checkbox"/>	<input type="checkbox"/>	0909464	Communications Electronics	3	3	0	Digital Electronics	(2/4)
<input type="checkbox"/>	<input type="checkbox"/>	0909501	Graduation Project I	1	0	3	Passing (120) Credit Hours	(1/5)
<input type="checkbox"/>	<input type="checkbox"/>	0909533	Digital Communications Lab.	1	0	3	Digital Communications	(1/5)
<input type="checkbox"/>	<input type="checkbox"/>	0909548	Embedded Systems Lab.	1	0	3	Co- Embedded Systems	(1/5)
		0909502	Graduation Project II	2	0	6	Graduation Project I	(2/5)
b. Major supporting requirements (25) credit hours								
<input type="checkbox"/>	<input type="checkbox"/>	0101104	Calculus II for Engineering Students	3	3	0	Calculus I	(2/1)
<input type="checkbox"/>	<input type="checkbox"/>	0101205	Calculus III for Engineering Students	3	3	0	Calculus II	(1/2)
<input type="checkbox"/>	<input type="checkbox"/>	0101273	Ordinary Differential Equations	3	3	0	Calculus I	(1/2)
<input type="checkbox"/>	<input type="checkbox"/>	0905212	Electrical Circuits Lab	1	0	3	Principles of	(2/2)

Course Plan for Bachelor program - Course Plan Development and Updating Procedures/ Electrical Engineering/Communications and Computers Department	QF09/0407-3.0E
---	-----------------------

							Electrical Circuits	
<input type="checkbox"/>	<input type="checkbox"/>	0905213	Advanced Electrical Circuits	3	3	0	Principles of Electrical Circuits	(2/2)
<input type="checkbox"/>	<input type="checkbox"/>	0905342	Control Systems	3	3	0	Signals and Systems Analysis	(1/3)
<input type="checkbox"/>	<input type="checkbox"/>	0905331	Electrical Machines	3	3	0	Advanced Electrical Circuits	(1/3)
<input type="checkbox"/>	<input type="checkbox"/>	0905364	Power Electronics	3	3	0	Principles of Electronics	(1/4)
<input type="checkbox"/>	<input type="checkbox"/>	0911361	Numerical Engineering Methods	3	3	0	Calculus II for Engineering Students	(1/5)
<input type="checkbox"/>	<input type="checkbox"/>	0909447	Embedded Systems	3	3	0	Digital Logic Design	(1/3)
c. Major electives (3) credit hours								
<input type="checkbox"/>	<input type="checkbox"/>	0909503	Special Topics	3	3	0	5th year level	(5)
<input type="checkbox"/>	<input type="checkbox"/>	0909529	Wireless Communications	3	3	0	Digital Communications	(5)
<input type="checkbox"/>	<input type="checkbox"/>	0909534	Fiber Optics Communications Systems	3	3	0	Electromagnetics	(5)
<input type="checkbox"/>	<input type="checkbox"/>	0909535	Digital Image Processing	3	3	0	Digital signals Processing	(5)
<input type="checkbox"/>	<input type="checkbox"/>	0909549	Data Base Systems	3	3	0	Object Oriented Programming	(5)
<input type="checkbox"/>	<input type="checkbox"/>	0909556	Machine Learning	3	3	0	Probability and Random Signal Analysis	(5)
Fourth: free electives (0) Credit Hours								
None								

Courses Given to Other Majors)

Course number	Course title	Credit hours	Type of requirement (University Requirements, Faculty Requirements, Supporting Requirements)
0909101	3	Engineering Computer Applications	Faculty Requirements
0909211	3	Applied Physics	Supporting Requirements/Power and Control
0909212	1	Applied Physics Lab.	Supporting Requirements/Power and Control
0909214	3	Principles of Electronics	Supporting Requirements/Power and Control
0909261	1	Electronics Lab.	Supporting Requirements/Power and Control
0909221	3	Introduction to Linear Systems	Supporting Requirements/Power and Control
0909223	3	Signals and Systems Analysis	Supporting Requirements/Power and Control
0909242	3	Digital Logic Design	Supporting Requirements/Power and Control
0909243	1	Digital Logic Design Lab.	Supporting Requirements/Power and Control
0909324	3	Probability and Random Process	Supporting Requirements/Power and Control
0909447	3	Embedded Systems	Supporting Requirements/Power and Control
0909222	3	Principles of Electrical Communications	Supporting Requirements/Civil Engineering and Infrastructure
0909321	3	Communications Networks and Electrical Wiring	Supporting Requirements/Civil Engineering and Infrastructure
0909323	1	Communications Networks and Electrical Wiring Lab.	Supporting Requirements/Civil Engineering and Infrastructure

Course Plan for Bachelor program - Course Plan Development and Updating Procedures/ Electrical Engineering/Communications and Computers Department		QF09/0407-3.0E
0909404	3	Engineering Economy Faculty Requirements