

**ISRA UNIVERSITY**  
**FACULTY OF ENGINEERING**  
**ELECTRICAL DEPARTMENT- Communications and**  
**Electronics Engineering**  
**PLAN FOR ACADEMIC YEAR 2015-2016**

**A TOTAL OF (160) CREDIT HOURS IS REQUIRED FOR THE BACHELOR'S DEGREE**

<b>I- University Requirements (24) Credits Hours:</b>			
<b>a-Compulsory Requirements (12) Credits Hours:</b>			
Non Jordanian students are required to take both of these (*) courses or a substitute course from courses offered by the university.			
Course number	Course Title	Cr. Hrs	Prerequisite
110115	Arabic Language	3	-
110105	English Language	3	-
110820	Civic Education*	3	-
110100	Military Sciences	3	-
<b>b- Elective requirements (12) Credits Hours:</b>			
* The student should select at least one course from each fields(a,b,c) and at most two courses from each field.			
*"Computer Skills 110615" is compulsory for " Communications and Electronics Engineering " students.			
Course number	Course Title	Cr. Hrs	Prerequisite
<b>(a)</b>			
110116	Communication Skills - Arabic	3	-
110191	Islamic Culture	3	-
110821	Teaching Thinking	3	-
110194	World Thought and Culture	3	-
110196	The History of Jordan and Palestine	3	-
<b>(b)</b>			
110110	Communication Skills - English	3	-
110205	Economic Concepts & systems	3	-
110301	Law in our Life	3	-
110314	Human Rights	3	-
110822	Psychology and Society	3	-
<b>(c)</b>			
110825	Scientific Research methodologies	3	-
110606	Introduction to the Internet	3	-
110615	Computer skills	3	-
110823	Sports and Health	3	-
<b>II- Faculty Compulsory Requirements (24) Credits Hours:</b>			
Course number	Course Title	Cr. Hrs	Prerequisite
402105	Workshops	1	-
403103	Engineering Drawing	3	-
403373	Administration and Engineering Economy	3	604102
604101	Calculus (1)	3	-
604102	Calculus (2)	3	604101
403310	Technical Writing	2	110105 completion of 70 cr. hrs.
403110	Engineering Career Ethics	1	-
1102101	General Physics (1)	3	-
1102102	General Physics (2)	3	1102101
1102103	General Physics Lab (1)	1	W 1102101
1102104	General Physics Lab (2)	1	W 1102102 & 1102103
<b>III- Compulsory Department requirements (100) Credits Hours:</b>			
<b>a-Topics given from Communications and Electronics Engineering Department (82) Credits Hours:</b>			
Course number	Course Title	Cr. Hrs	Prerequisite
402225	Engineering Mathematics and Analysis (1)	3	604101
402226	Engineering Mathematics and Analysis (2)	3	604102
402227	Engineering Mathematics and Analysis (3)	3	٤٠٢٢٢٦
402228	Engineering Mathematics and Analysis (4)	3	٤٠٢٢٢٦
402211	Electrical Circuits (1)	3	١١٠٢١٠٢

402212	Electrical Circuits (2)	3	402211
402219	Electrical Circuits Lab	1	W 402212
402262	Electronics (1)	3	402211
402304	Numerical Methods	3	(404212 or 404316) & 402226
402307	Probability and Random Signals	3	402225
402322	Systems and Signal Processing	3	402227
402351	Electromagnetic (1)	3	402226
402352	Electromagnetic (2)	3	402351
402363	Electronics(2)	٣	402262
402364	Digital Electronics	3	402262 & 404242
402368	Electronics Lab.	1	402219& W402363
402369	Digital Electronics Lab.	1	402364
402483	Power Electronics	٣	402364
٤٠٢٣٧٤	Electrical Machines	3	402351 & 402212
402421	Analog Communications	3	402307 & 402322
402422	Digital Communications	3	402421
402424	Digital Signal Processing	3	402322
402432	Analog Communications lab	1	402421
402441	Control Systems	3	402322
402448	Control Systems Lab.	1	W402441
402485	Power Systems Analysis	٣	402374
402486	Machines & Power Systems Lab.	١	402485
402513	Cellular & Mobile Communications	٣	402422
402520	Modern Communications Systems	٣	402422
402525	Digital Communications Networks	٣	402422
402540	Digital Communications lab.	1	402422
402593	Graduation Project (1)	1	IGGP
402594	Graduation Project (2)	2	402593
402500	Engineering training Practical training of 320 hrs.	0	Completion of 90 cr. Hrs.
<b>b-Topics given from computer engineering department(18) Credits Hours:</b>			
Course number	Course Title	Cr. Hrs	Prerequisite
404212	Programming Principles for Engineers	3	110615
404213	Advanced Programming	3	404212 W practical lab of 0 Cr. Hrs.
404242	Digital Logic Circuits	3	W 402211
404245	Digital Logic Lab.	1	404242
404342	Microprocessors and Assembly Language	3	404242
404346	Microprocessor Lab.	1	404342
404544	Embedded Systems	3	404342
404316	Programming Lab for Electrical Engineering	1	١١٠٦١٥
<b>IV-Elective requirements (9) Credits Hours:</b>			
<b>a-Topics given from Communications and Electronics Engineering Department</b>			
Course number	Course Title	Cr. Hrs	Prerequisite
402412	Modern Filter Design	3	402363
402343	Measurements and instrumentation	3	402262
402544	Communications Electronics	3	402421
402526	Optical Communications	3	402422
402528	Selected Topics in Communications	3	DEEDC
402530	Error Control & Coding	3	402422
402555	Introduction to Wireless Networks	3	402422
402561	Biomedical Electronics	3	402363
402562	Introduction to VLSI Design	3	402364
402563	Optical Electronics	3	402363
402564	Microwave Electronics	3	402352
402566	Selected Topics in Electronics Engineering	3	DEEDC
402552	Antennas and Waves Propagation	3	402352
<b>b-Topics from Computer Engineering Department (12) Credits Hours:</b>			
Course number	Course Title	Cr. Hrs	Prerequisite
404501	Digital Image Processing	3	402322
404542	Modeling and Simulation	3	404213
404551	Introduction to Artificial Intelligence	3	404342
404552	Introduction to Robotics	3	402441
404512	Visual Programming	3	404213
<b>IV-Free course (3) Credits Hours chosen from the courses offered by the university without repetition.</b>			

