Jerash University
Faculty of Engineering

جامعة جرش
كليـــة الهندسة

Student Guidance Plan - Bachelor of Renewable and Sustainable Energy
Total plan hours (160) credit hours

First year							
Second semester (17 credit hours)				First semester (16 credit hours)			
Prerequisite	S	Course name	Course number	Prerequisite	S	Course name	Course number
0303101	3	Calculus)2(	0303102		3	General Physics)1(	0000160
0000160	3	General Physics)2(	0000162	*0000160	1	General Physics Practical)1(	0000161
1001099	2	Engineering drawing	0901202		3	Calculus)1(	0303101
0000112	2	Communication Skills/College of Engineering	0901207	1001099	3	Programming Basics	1001130
	1	Professional ethics	0901523		3	General Chemistry)1(	301101
	3	Linear algebra	303241 0		3	University Elective Requirements	
	3	University Requirements					

Second year							
Second semester (15 credit hours)				First semester (17 credit hours)			
Prerequisite	S	Course name	Course number	Prerequisite	S	Course name	Course number
0901206	2	Engineering Economy	0901302	0303102	3	Numerical analysis)1(	0303321
0000162	3	Electrical circuits	0904205	303102	3	Ordinary differential equations	0 303204
0904205 *	1	Electrical Circuits Lab	0904206	0000160	2	Engineering workshops	0 901201
0303102 +0303321	3	Engineering mathematics	0904207	303101	3	Probability and Statistics / Engineering	0 901206
	3	University Requirements		0000160	3	Engineering Mechanics	0 9033340
	3	University Elective Requirements			3	University Requirements	

Third year							
Second semester (16 credit hours)				First semester (15 credit hours)			
Prerequisite	S	Course name	Course number	Prerequisite	S	Course name	Course number
0904208	3	Signals and systems analysis	0904310	904205	3	Electronic devices	0 904208
0904312	3	Control of electrical machines	0904314	904205	3	Electrical power and machines	0 904312
0904314 *	1	Control of electrical machines lab	0904315	301101	3	Materials science	0 901300
0904413	3	Energy conversion and efficiency	0904415	904204	3	Fluid and thermal mechanics	0 904204
	3	University Elective Requirements			3	Introduction to Renewable Energy Systems	0 904413
	3	University Requirements					

Fourth year							
Second semester (16 credit hours)				First semester (16 credit hours)			
Prerequisite	S	Course name	Course number	Prerequisite	S	Course name	Course number
0904317	3	Power electronics	0904319	0904314	3	Control systems	0 904317
0904409	3	Control and operation of power systems	0904411	0904310	3	Communication systems	0 904405
901310 0	3	Wind energy systems	0904417	0904405	1	Communication Systems Lab	0 904407*
0904417 *	1	Wind Energy Systems Lab	0904418	0904314	3	Stability of electrical power systems	0 904409
	3	Elective major requirement			3	Elective major requirement	
	3	University Requirements			3	University Requirements	

Fourth year			
Summer Semester (3 credit hours)			
Prerequisite	S	Course name	Course number
	0	Volunteer work in the service of civil society	0000105
hours 115	3	**Practical training	0904512

Fifth year							
Second semester (14 credit hours)				First semester (15 credit hours)			
Prerequisite	S	Course name	Course number	Prerequisite	S	Course name	Course number

0904417+ 0904420	3	Artificial Intelligence and Renewable Energy	0904422	0904319	3	Power Electronics Applications	0904321
0301101+ 0904413	3	Energy storage	090 4 410	0904413	3	Photovoltaic energy systems	0904420
0904208	3	Digital Logic Design	0904509	0904420 *	1	Photovoltaic energy Systems Laboratory	0904424
0904509 *	1	Digital Logic Design Lab	0904510	0904413	3	Environmental Engineering	0901408
0904410	2	Green Hydrogen	0904511	0901408 *	1	Environmental Engineering Laboratory	0901409
0904514	2	Graduation Project 2	0904515	0904512	1	Graduation Project 1	0904514
					3	Elective major requirement	

(*) Laboratories may be registered simultaneously with their previous requirement.

(**) The minimum duration of field training is 280 practical hours, and the student is full-time for training in an institution related to the specialization.

- The student must apply at the beginning of the semester in which he was accepted at the university for an exam at the level of Arabic, English, and computer, and in the event that he obtains a mark of (50) or more in any of them, he is exempted from studying a remedial subject for that subject in which he succeeded, and in the event that the student did not take the exam in any of them, or did not achieve success in any of them, he must register and study a remedial subject for those in which he did not take the exam. Success in remedial subjects is a graduation requirement.