



Study Plans - English

Major	: Control and Robotics Engineering / Bachelor			Plan Semester	: 20201	
Faculty	: Faculty of Engineering & Technology			Section	: Control and Robotics Engineering	
Plan Hrs	: 158			Plan Type	: Major	
Min Semester	: 9	Semester(s)	Training	: Found	Edition	: 1 Study Type: Morning
Max Semester	: 16	Semester(s)	Training Hrs	:	Thesis Type	: Nothing

Category : University Requirements Hrs : (17) Hrs

Group : Compulsory Hrs : (17) Hrs

course	Course Name	Hrs	Prerequisite Courses	Prerequisit Hrs
UR00101	Arabic Language	3		
UR00111	English Language 1	3		
UR00112	English Language 2	3	((UR00111 (Pre)	
UR00121	Culture & civilization	3		
UR00122	Palestinian Studies	3		
UR00131	Computer Skills	1		
UR00141	Leadership and Communication Skills	1		

Category : College Requirements Hrs : (25) Hrs

Group : Compulsory Hrs : (25) Hrs

course	Course Name	Hrs	Prerequisite Courses	Prerequisit Hrs
ETBS101	(Calculus(1	3		
ETBS102	(Calculus(2	3	((ETBS101 (Pre)	
ETBS103	Introduction to Environmental Engineering	3		
ETBS111	(General Physics(1	3		
ETBS112	(General Physics(2	3	((ETBS111 (Pre)	
ETBS113	.Physics Lab	1		
ETBS131	Hand Engineering Drawing	1		
ETBS132	Engineering Drawing by Computer	1	((ETBS131 (Pre)	
ETBS141	(Workshop(1	1	((ETBS131 (Pre)	
ETBS142	(Workshop(2	1	((ETBS141 (Pre)	
ETBS251	Engineering Programming	3	((UR00131 (Pre)	
ETBS261	Engineering Ethics	1	((UR00112 (Pre)	
ETBS362	Scientific Research & Technical Writing	1	((ETBS261 (Pre)	

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Category : Compulsory Major Requirements

Hrs : 116) Hrs

Group : Compulsory

Hrs : 104) Hrs

course	Course Name	Hrs	Prerequisite Courses	Prerequisit Hrs
ETBS201	Applied Engineering Math	3	((ETBS102 (Pre)	
ETBS202	General Chemistry	3		
ETBS204	Differential Equations for Engineers	3	((ETBS201 (Pre)	
ETBS301	Numerical Analysis for Engineers	3	((ETBS201 (Pre)	
ETBS302	Statistics & Probability for Engineers	3	((ETBS301 (Pre)	
ETCR222	Logic Circuits	3	((UR00131 (Pre)	
ETCR231	Engineering Mechanics	3	((ETBS111 (Pre)	
ETCR232	Engineering Materials	3	((ETCR231 (Pre)	
ETCR323	Embedded Systems	3	((ETCR222 (Pre)	
ETCR341	Measurements & Instrumentations	3	((ETRE224 (Pre)	
ETCR342	Automatic Control	3	((ETCR341 (Pre)	
ETCR371	Engineering Training	0		100
ETCR411	Multi Robotics System	3	((ETRE224 (Pre)	
ETCR425	Intelligent Control Systems	3	((ETCR342 (Pre)	
ETCR433	Dynamic systems and Vibrations	3	((ETCR231 (Pre)	
ETCR441	.Measurements & Instrumentations Lab	1		
ETCR442	Automatic Control Lab	1	((ETCR342 (Pre)	
ETCR443	Modern Control Systems	3	((ETCR342 (Pre)	
ETCR451	Digital Signals Analysis	3	((ETBS204 (Pre)	
ETCR452	Communication and Computer Networks	3	((ETCR451 (Pre)	
ETCR453	Programmable Logic Controllers	3	((ETCR323 (Pre)	
ETCR454	Automatic Control II Lab	1	((ETCR442 (Pre)	
ETCR461	Automation	3	((ETCR443 (Pre)	
ETCR462	Robotics Systems	3		
ETCR471	(Graduation Project(1	1		100
ETCR542	Industrial Process Control	3	((ETCR342 (Pre)	
ETCR544	Real-Time Systems	3	((ETCR323 (Pre)	
ETCR563	.Robotics Systems Lab	1		
ETCR571	(Graduation Project(2	3	((ETCR471 (Pre)	
ETCR575	Engineering Economy and Administration	3	((ETBS204 (Pre)	
ETDN221	Electromagnetic	3	((ETBS204 (Pre)	
ETDN311	Electric Machines	3	((ETDN221 (Pre)	
ETDN312	.Electric Machines Lab	1	((ETDN221 (Pre)	
ETRE221	(Electric Circuits(1	3	((ETBS112 (Pre)	
ETRE222	(Electric Circuits(2	3	((ETRE221 (Pre)	
ETRE223	.Electric Circuits Lab	1	((ETRE221 (Pre)	
ETRE224	Electronics	3	((ETRE221 (Pre)	
ETRE226	.Electronics Lab	1		

Hrs : 116) Hrs

Hrs : 104) Hrs

course	Course Name	Hrs	Prerequisite Courses	Prerequisite Hrs
ETRE323	Power Electronics	3	((ETRE224 (Pre)	
ETRE331	Fluids Mechanics & Hydrology	3	((ETBS202 (Pre)	
ETRE401	Modeling & Simulation	3	((ETCR342 (Pre)	

Hrs : (12) Hrs

course	Course Name	Hrs	Prerequisite Courses	Prerequisit Hrs
ETCR527	Neural Networks and Fuzzy Logic	3	((ETCR425 (Pre)	
ETCR543	Non Linear Control	3	((ETCR443 (Pre)	
ETCR545	Quality Standards and Reliability	3	((ETCR575 (Pre)	
ETCR546	Flexible Manufacturing Systems	3	((ETCR462 (Pre)	
ETCR547	Optimal Control Theories	3	((ETCR443 (Pre)	
ETCR561	Safe Robotics Navigation Theories	3	((ETCR443 (Pre)	
ETCR562	Special Topics in Control and Robotics	3		120
ETCR581	Adaptive Control Systems	3	((ETCR443 (Pre)	