

Bachelor of Science in Electrical Engineering in Mechatronics

Semester	Course Code		Course Title	Pre/Co Requisite	Credit Hours
Semester 1	LNG	181	English I for Engineering & Computing	None	3
	ENG	101	Digital Logic	None	4
	MTH	112	Calculus I	Pass Math Placement Test or MTH-012	3
	SHS	103	Chemistry		3
	SWS	110	Programming I		3
	ENT	141	Fundamentals in Innovation and Entrepreneurship 1	None	2
	Total				
Semester 2	LNG	182	English II for Engineering & Computing	LNG-181	3
	SCI	220	Engineering Mechanics	MTH-112	3
	MTH	113	Calculus II	MTH-112	3
	NET	110	Computer Networks Fundamentals	ENG-101	3
	SWS	316	Programming II	SWS-110	3
	ENT	142	Fundamentals in Innovation and Entrepreneurship 2	ENT-141	1
	Total				
Semester 3	MTH	212	Calculus III	MTH-113	3
	MTH	130	Probability and Statistics	MTH-112	3
	SCI	210	Modern Physics	<u>MTH 113</u> , SCI-220	3
	ENG	221	Electric Circuit	<u>SCI-210</u>	4
	ENT	241	Entrepreneurship I	ENT-142	2
	Total				
Semester 4	MTH	220	Ordinary Differential Equations	MTH-212	3

Semester	Course Code		Course Title	Pre/Co Requisite	Credit Hours
	ENG	310	Electronics I	ENG-221	3
	ENG	222	Engineering Electromagnetics	MTH-212, SCI-210	3
	ENG	223	Electric Circuit II	ENG-221	3
	ENG	210	Computer Architecture	ENG-101	4
	ENT	242	Entrepreneurship II	ENT-241	1
	Total				
Semester 5	ENG	301	Electronics II	ENG-310	3
	GED	198	Islamic Culture	None	3
	MEC	305	Mechanical Vibrations	MTH-220	3
	MEC	306	Electro-pneumatic & Hydraulic Control Circuits	SCI-210	3
	BUS	311	Engineering Economy	MTH-130	3
			Humanity Elective		3
Total					18
Semester 6	BUS	310	Project Management	Completion of 60 Credit Hrs	3
	ENG	314	Electric Machines	ENG-223	3
	ENG	315	Control Systems	MTH-220	3
	MEC	310	Mechatronics Engineering	ENG-301, <u>ELC-323</u>	3
	ELC	323	Instrumentation and Measurements	ENG-223	3
	COM	411	Digital Filter Design	MTH 220	3
Total					18
Semester 7	ENG	410	Professional and Ethical Practice	None	3
	MEC	412	Sensors and Actuators	ELC-323	3
	MEC	411	Intelligent Systems	SWS-316, MTH-130	3

Semester	Course Code	Course Title	Pre/Co Requisite	Credit Hours
		Major elective 1		3
	ENG 400	Graduation Project-1	Completed 100 Cr.H	2
	MEC 413	Industrial Automation	MEC-310	3
	Total			18
Semester 8	MEC 422	Mechatronics Systems Design	MEC-310, MEC-412	3
	ENG 401	Graduation Project-2	ENG-400	2
	MEC 427	Computer Integrated Manufacturing (CIM)	MEC-413	3
	MEC 421	Robotics	MEC-310, MEC-411, MEC-412	4
		Major elective 2		3
	GED 199	UAE Society	None	3
	Total			17
Internship to be taken summer semester after completion of 90 Cr.H + CGPA 2.0 or more				2
Total Credit Hours				138