

MECHATRONICS ENGINEERING STUDY PLAN

First Semester					
Ser. No.	Course Code	Title	Lecture Hrs.	Units	Corequisite(s)
1	GES101	Math I	4	12	-
2	GES111	English I	3	9	-
3	GES121	Arabic Language	2	6	-
4	GES131	Probability and Engineering Statistics	3	9	-
5	GES141	Engineering Drawing	3	6	-
6	GES151	Engineering Physics	4	12	-
7	GES161	Engineering Physics Lab	3	3	GES151
Total			22	57	-

Second Semester					
Ser. No.	Course Code	Title	Lecture Hrs.	Units	Prerequisite(s)
1	GES102	Math II	4	12	GES101
2	GES112	English II	3	9	GES111
3	GES122	General Chemistry	3	9	-
4	GES132	Computer Languages (C++)	3	9	-
5	GES142	AutoCad	3	6	GES141
6	GES152	Engineering Statics	4	12	GES101, GES151
7	GES162	Communication Skills	2	6	-
Total			22	63	-

Third Semester						
No	Course Code	Course Title	Hours	Units	Prerequisite(s)	Co-requisite(s)
1	GES201	Differential Equations	4	12	GES102	-
2	GES251	Engineering Dynamics	4	12	GES152	-
3	IME211	workshop Technology	3	6	GES102, GES142	-
4	MTE201	Material Science and Engineering	4	12	GES151, GES122	-
5	MTE221	Electrical Circuits	4	12	GES102	-
6	MTE261	Electrical Circuit Lab	3	5	-	MTE221
7	MTE271	Material Science Lab	3	5	-	MTE201
Total			25	64	-	-

Fourth Semester						
No	Course Code	Course Title	Hours	Units	Prerequisite(s)	Co-requisite(s)
1	GES202	Linear Algebra	4	12	GES102	-
2	MTE212	Strength of Material	4	12	GES152, MTE201	-
3	MTE222	Electronics	4	12	MTE221	-
4	MTE232	Kinematics of Machinery	4	12	GES251	-
5	MTE242	Digital Logic Design	3	9	GES132	-
6	MTE262	Strength of Material Lab	3	3	GES152, MTE201	MTE212
7	MTE272	Electronics Lab	3	3	-	MTE222
Total			25	67	-	-

Fifth Semester						
No	Course Code	Course Title	Hours	Units	Prerequisite(s)	Co-requisite(s)
1	MTE301	Thermodynamics Principles and Applications	4	12	GES122, GES201	-
2	MTE311	Fluid Mechanics and Machinery	4	12	GES251	-
3	IME351	Manufacturing Technology	3	9	IME211	
4	MTE331	Electrical Actuators	3	9	MTE221	-
5	MTE 361	Electrical Actuators Lab	3	5	-	MTE331
6	MTE 371	Thermodynamics Principles and Applications Lab	3	5	GES122, GES201	MTE301
7	MTE 381	Fluid Mechanics and Machinery Lab	3	5	GES251	MTE311
Total			23	63	-	-

Sixth Semester						
No	Course Code	Course Title	Hours	Units	Prerequisite(s)	Co-requisite(s)
	GES302	Critical Thinking	2	6	GES162	
1	GES332	Research Methodology	2	6	GES131	-
2	MTE312	Design of Machine Elements-I	4	12	MTE212	-
3	MTE322	Automatic Control	4	12	MTE221	-
4	MTE332	Dynamics of Machinery and Vibration	3	9		-
5	MTE342	Measurements and Signal Processing	3	9	MTE221	
6	MTE352	Numerical Analysis	3	9	GES132, GES201	
7	MTE362	Automatic Control Lab	3	5	-	MTE322
Total			24	68	-	-

Seventh Semester						
No	Course Code	Course Title	Hours	Units	Prerequisite(s)	Co-requisite(s)
1	GES401	Ethics	3	9	-	MTE491
2	MTE421	Transducers and Sensors	4	12	-	MTE461
3	MTE411	Applied Hydraulics and Pneumatics	3	9	MTE311	-
4	MTE431	Design of Machine Elements-II	3	9	MTE312	-
5	MTE461	Microprocessors and Microcontrollers	3	9	MTE352	-
6	MTExxx	Elective I	3	9		
7	MTE491	Final Year Project –I	2	6	GES332	-
Total			21	63	-	-

Eighth Semester						
No	Course Code	Course Title	Hours	Units	Prerequisite(s)	Co-requisite(s)
1	MTE402	Robotic Systems	3	9	MTE421, MTE461	
2	MTE412	Mechatronics Systems	3	9	MTE421, MTE461	
3	MTE422	Power Electronics & Drives	3	9	MTE222, MTE331	-
4	MTE462	Power Electronics & Drives Lab	3	3	-	MTE422
5	MTEyyy	Elective II	3	9	-	-
6	MTEzzz	Elective III	3	9	-	-
7	MTE492	Final Year Project –II	6	18	MTE491	-
Total			20	66	-	-