

## Guidance Plan

### First Year

First Semester				Second Semester			
Course No.	Course Title	Credit Hours	Prerequisite or Co-Requisite *	Course No.	Course Title	Credit Hours	Prerequisite or Co-Requisite *
110102101	General Physics 1	3	–	110101102	Calculus 2	3	110108101
110102103	General Physics Lab	1	110102101*- Co-requisite	110102102	General Physics 2	3	110102101
110108101	Calculus 1	3	–	110103107	Basics of General Chemistry	3	–
110400101	Engineering Workshop	1	–	110103108	Basics of General Chemistry lab	1	110103107*- Co-requisite
110400201	Manual Engineering Drawing	2		0110400102	Computer Programming	3	Qualifier exam or 110108099
111404117	Military Science	3	-	111405110	English Language	3	Qualifier exam or 111405099
111405101	Arabic Language	3	Qualifier exam or 111405098				
<b>Total</b>		<b>16</b>		<b>Total</b>		<b>16</b>	

## Second Year

First Semester				Second Semester			
Course No.	Course Title	Credit Hours	Prerequisite or Co-Requisite *	Course No.	Course Title	Credit Hours	Prerequisite or Co-Requisite *
110101201	Calculus 3	3	110101102	110403242	Probabilities and Statistics	3	110101102
110101203	Ordinary Differential Equation (1)	3	110101102	110406229	Fundamentals of Electrical Circuits	3	110101102+110102102
110400202	Computer Aided Engineering Drawing	1	-	2104031302	Engineering Economy	2	1101011201
110400203	Ethics and Communication Skills	3	111405110	2104021230	Strength of Materials (1)	3	110401211
110401211	Statics	3	110108101 + 110102101	110402231	Dynamics	3	110401211
111404118	National Education	3	-	2104021241	Mechanical Drawing	1	110400202
<b>Total</b>		<b>16</b>		<b>Total</b>		<b>15</b>	

**Third Year**

First Semester				Second Semester			
Course No.	Course Title	Credit Hours	Prerequisite or Co-Requisite *	Course No.	Course Title	Credit Hours	Prerequisite or Co-Requisite *
2104031352	Material science	3	110103107	110402313	Fluid Mechanics Lab	1	110402310
110406260	Applied Mathematics	3	110101203	2104021322	Thermodynamics (2)	3	2104021321
1704001303	Numerical Analysis	3	110101203+1100400102	2104021332	Manufacturing Processes	3	2104031352+210402123
110402310	Fluid Mechanics (1)	3	110101203	2104021341	Machine Design (1)	3	2104021330
2104021321	Thermodynamics (1)	3	110103107+110102101	2104021342	Theory of Machines	3	110406260+110402231
2104021330	Strength of Materials Lab	1	21040211212 or 2104021230 or 2104051312	—	University Elective *1	3	—
<b>Total</b>		<b>16</b>		<b>Total</b>		<b>16</b>	

### Fourth Year

First Semester				Second Semester			
Course No.	Course Title	Credit Hours	Prerequisite or Co-Requisite *	Course No.	Course Title	Credit Hours	Prerequisite or Co-Requisite *
110409260	Fundamentals of Electrical Circuits lab	1	110102103 + 110406229	2104021422	Thermal Science Lab (1)	1	2104021421
2104021401	Engineering Measurements	3	110101102+ 110403242 + 110406229	110402434	Control Systems	3	110402433
2104021412	Fluid Power System	3	110402310	2104021441	Machine Design (2)	3	2104021342+2104021341
2104021421	Heat Transfer	3	2104021321+110402310	2104021451	Automotive Technology	3	2104021322+2104021342
2104021431	Mechanical Vibrations	3	110101201+2104021342	–	Specialization Elective *2	3	–
–	Specialization Elective*1	3	–	–	University Elective *2	3	–
<b>Total</b>		<b>16</b>		<b>Total</b>		<b>16</b>	

### Summer semester

Course No.	Course Title	Credit Hours	Prerequisite or Co-Requisite *
2104021599	Practical Training	3	The student should pass (120) credit hours from the curriculum including 110400203 -excluding catch-up courses

**Fifth Year**

First Semester				Second Semester			
Course No.	Course Title	Credit Hours	Prerequisite or Co-Requisite *	Course No.	Course Title	Credit Hours	Prerequisite or Co-Requisite *
2104021532	Vibration and Control Lab	1	2104021434	2104021543	CAD/CAM	3	2104021341+204021341
2104021541	Electromechanical Systems	3	2104021401	2104021550	Thermal Science lab (2)	1	2104021451+ 2104021551
2104021542	Measurements Lab	1	2104021541-Co-requisite , 110409260	2104021573	Graduation Project (2)	2	2104021572
2104021551	HVAC	3	2104021322+2104021421	–	University Elective *4	3	–
2104021572	Graduation Project (1)	1	The student must pass at least (120) credit hours from the curriculum which must include 2104021322, and 2104021341	–	Specialization Elective *4	3	–
–	University Elective *3	3	–	–	Specialization Elective *5	3	–
–	Specialization Elective *3	3	–				
<b>Total</b>		<b>15</b>		<b>Total</b>		<b>15</b>	