

**Study Plan Guide**  
**Mechanical Engineering \ Design technology**

**First year**

**First Semester**

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hours</b>	<b>Subject Prerequisite</b>
HUM 121	Communication and communication skills " Arabic language."	3	--
HUM 120	Communication and communication skills "English language."	3	--
MATH 101	Calculus 1	3	--
PHYS 101	General Physics 1	3	
CHEM 104	General Chemistry (for engineering students)	3	
BME 152	Introduction to Engineering	2	
<b>Total</b>		<b>17</b>	

**First year**

**Second Semester**

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hours</b>	<b>Subject Prerequisite</b>
PS 102	National education	3	--
MATH 102	Calculus 2	3	MATH 102
PHYS 102	General Physics 2	3	PHYS 101
PHYS 105	General Physics Lab 1	1	PHYS 101
CHEM 105	General Chemistry Lab	1	CHEM 104
HUM 117	Entrepreneurship and innovation	1	
CPE 150	Introduction to Programming	4	
CPE 150L	Introduction to Programming Lab	0	CPE 150
<b>Total</b>		<b>16</b>	

**Second year****First Semester**

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hours</b>	<b>Subject Prerequisite</b>
MLT 100	Military science	3	
MATH 201	Intermediate Analysis 1	3	MATH 102
PHYS 106	General Physics Lab 2	1	PHYS 102
MATH 205	Ordinary Differential Equations (for engineering students)	3	MATH 102
CE 201	Statics	3	PHYS 101
CE 200	Engineering Drawing	2	--
IE 205	Engineering Workshop	2	MATH 102
<b>Total</b>		<b>17</b>	

**Second year****Second Semester**

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hours</b>	<b>Subject Prerequisite</b>
ME 202	Dynamics for Mechanical Engineering	3	CE 201
ELE 206	Technical writing and engineering ethics	3	BME152
ME 207	Computer Aided Machine Drawing	1	CE 200
CE 210	Principles of engineering probability and statistics	3	PHYS 102
IE 212	Metrology	2	MATH 102
ME 227	Mechanics of Materials	3	CE 201
HUM 119	Life Skills	1	
<b>Total</b>		<b>16</b>	

**Third year****First Semester**

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hours</b>	<b>Subject Prerequisite</b>
IE 213	Metrology Lab	1	IE 212
ELE 220	Electrical Circuits	3	PHYS 102
ME 228	Mechanics of Materials Lab	1	ME 227
MATH	Linear Algebra	3	MATH 101
ME 251	Thermodynamics (1)	3	PHYS 101
IE 262	Properties of Engineering Materials	3	CHEM 104
ME 341	Fluid mechanics (1)	3	CHEM 101
<b>Total</b>		<b>17</b>	

**Third year****Second Semester**

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hours</b>	<b>Subject Prerequisite</b>
CPE 310	Numerical Analysis for Engineers	3	MATH205+ CPE 150 + MATH 241
EPE 320	Automatic Control Systems	3	EPE 222 و ELE 220
ME 326	Theory of machine	3	ME 202
EPE 354	Electric Machines	3	EPE222 و ELE 220
IE 366	Manufacturing Processes (1)	3	IE 262+ ME 223
	Elective University Requirement	3	---
<b>Total</b>		<b>18</b>	

**Fourth year****First Semester**

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hours</b>	<b>Subject Prerequisite</b>
HUM 118	Leadership and social responsibility	1	
ME 353	Heat Transfer (1)	3	ME 251
EPE 321	Automatic Control Systems Lab	1	EPE 320
ME 322	<b>Mechanical Design (1)</b>	3	ME 227
ME 365	<b>Material selection for design</b>	3	IE 262+ ME 227
ME 421	Mechanical Vibration	3	ME 326
	Elective University Requirement	3	---
<b>Total</b>		<b>17</b>	

**Fourth year****Second Semester**

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hours</b>	<b>Subject Prerequisite</b>
IE 367	Manufacturing Processes Lab	1	IE 366
ME 418	Computer Aided Engineering Design CAD	3	ME 322
ME 422	Mechanical Vibration and Theory of machine Lab	1	ME 421+ME 326
IE 432	Engineering Economics	3	MATH 205
ME 498	Graduation Project 1	1	After Successfully completely 120 (Dept)
	Elective University Requirement	3	--
	Elective Dept.	3	--
<b>Total</b>		<b>15</b>	

**Fourth year****Summer Semester**

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hours</b>	<b>Subject Prerequisite</b>
ME 500	Industrial Training	3	After Successfully completely 115 Cr. Hr (Dept)
<b>Total</b>		<b>3</b>	

**Fifth year****First Semester**

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hours</b>	<b>Subject Prerequisite</b>
ME 425	Mechanical Design (2)	3	ME 322
ME 428	Reverse Engineering	3	ME 425
ME 521	Tribology	3	ME 425
ME 526	Mechanical Design Lab	1	ME 425
ME 529	Biomimicry	3	ME 425
	Dept. Electives	3	
<b>Total</b>		<b>16</b>	

**Fifth year****Second Semester**

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hours</b>	<b>Subject Prerequisite</b>
ME 524	Introduction to Automotive Design	3	ME 425
ME 549	Product design and innovation	3	ME 322
ME 562	Mechanics of Composite Materials	3	IE 366
ME 598	Graduation Project 2	3	ME 498
	Dept. Electives	3	--
	Elective University Requirement	3	--
<b>Total</b>		<b>15</b>	

**Chair of Mech. Eng. Dept.**

Prof. Ammar Alrousan