

# COLLEGE OF ENGINEERING

## Bachelor of Science in Electrical Engineering for Full Time Students Four Year Study Plan as of Academic Year 2019/2020

FRESHMAN YEAR (34 Credit Hours)											
FIRST "FALL" SEMESTER						SECOND "SPRING" SEMESTER					
Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lecture	Lab / Tutorial					Lecture	Lab / Tutorial	
<b>ALIS 1211</b>	Introduction to Islamic culture	2	2	0		<b>Social Science</b>	Elective	3	3	0	<i>Select one from List</i>
<b>COMM 1311</b>	Written Communication	3	3	0		<b>PHED 1111</b>	Active Living Lifestyle	1	1	0	
<b>UNIV 1211</b>	Professional Development and Competencies	2	2	0		<b>COMM 1312</b>	Writing and Research	3	3	0	<i>COMM 1311</i>
<b>MATH 1422</b>	Calculus I	4	4	1	<i>PRPM 0022</i>	<b>UNIV 1212</b>	Critical Thinking & Problem Solving	2	2	0	
<b>PHYS 1421</b>	Physics for Engineers I	4	3	3	<i>PRPM 0022</i>	<b>MATH 1423</b>	Calculus II	4	4	0	<i>MATH 1422</i>
<b>GEEN 1211</b>	Intro to Engineering	2	2	0	<i>PRPM 0022</i>	<b>PHYS 1422</b>	Physics for Engineers II	4	3	3	<i>PHYS 1421 MATH 1422</i>
<b>Total</b>		<b>17</b>	<b>16</b>	<b>4</b>		<b>Total</b>		<b>17</b>	<b>16</b>	<b>3</b>	

SOPHOMORE YEAR (33 Credit Hours)											
FIRST "FALL" SEMESTER						SECOND "SPRING" SEMESTER					
Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lecture	Lab / Tutorial					Lecture	Lab / Tutorial	
<b>ASSE 2111</b>	Learning Outcome Assessment I	1	1	0	<i>Sophomore Level</i>	<b>GEEN 2211</b>	Engineering Computing	2	1	3	<i>MATH 1423</i>
<b>COMM 2311</b>	Oral Communication	3	3	0	<i>COMM 1312</i>	<b>COMM 2312</b>	Technical & Professional Communication	3	3	0	<i>COMM 2311</i>
<b>EEEN 2411</b>	Circuits I	4	3	3	<i>MATH 1423 PHYS 1422</i>	<b>UNIV 1213</b>	Leadership & Teamwork	2	2	0	
<b>MATH 1324</b>	Calculus III	3	3	0	<i>MATH 1423</i>	<b>GEEN 2310</b>	Applied Linear Algebra for Engineers	3	3	0	<i>(c)MATH 2332</i>
<b>CHEM 1421</b>	Chemistry for Engineers I	4	3	3	<i>PRPM 0022</i>	<b>MATH 2332</b>	Ordinary Differential Equations	3	3	0	<i>MATH 1324</i>
<b>ALIS 1212</b>	The Social System in Islam	2	2	0		<b>EEEN 2312</b>	Circuits II	3	3	0	<i>EEEN 2411</i>
<b>Total</b>		<b>17</b>	<b>16</b>	<b>6</b>		<b>Total</b>		<b>16</b>	<b>15</b>	<b>3</b>	

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## Bachelor of Science in Electrical Engineering for Full Time Students Four Year Study Plan as of Academic Year 2019/2020

### JUNIOR YEAR (35 Credit Hours)

FIRST "FALL" SEMESTER						SECOND "SPRING" SEMESTER					
Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lecture	Lab / Tutorial					Lecture	Studio / Tutorial	
ASSE 3211	Learning Outcome Assessment II	2	2	0	ASSE 2111 & Junior Level	EEEN 3422	Electronics II	4	3	3	EEEN 3421
EEEN 3392	Advanced Applied Mathematics	3	3	0	GEEN 2310 & MATH 2332	EEEN 3432	Microcontroller Systems	4	3	3	EEEN 3331 GEEN 2211
EEEN 3361	Electromagnetic Fields and Waves	3	3	0	EEEN 2312	EEEN 3341	Signals and Systems	3	3	0	EEEN 2312 EEEN 3392
EEEN 3421	Electronics I	4	3	3	EEEN 2312	EEEN 3461	Electric Machinery	4	3	3	EEEN 3361
EEEN 3331	Digital Systems	3	2	3	EEEN 2411						
ALIS 2211	Linguistic Communication Skills (Arabic)	2	2	0		EEEN 3391	Probability and Random Signal Analysis	3	3	0	EEEN 2312 EEEN 3392
<b>Total</b>		<b>17</b>	<b>15</b>	<b>6</b>		<b>Total</b>		<b>18</b>	<b>15</b>	<b>9</b>	

### SUMMER OF JUNIOR YEAR (3 Credit Hours)

Course Number	Course Title	Credit Hours		Pre-requisite
EEEN 3301	Internship	3	8 weeks (320 hours) full time	End of Junior Year (summer before graduation) and department approval

### SENIOR YEAR (34 Credit Hours)

FIRST "FALL" SEMESTER						SECOND "SPRING" SEMESTER					
Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lecture	Lab / Tutorial					Lecture	Lab / Tutorial	
EEEN 4440	Communication Systems	4	3	3	EEEN 3391 EEEN 3341	EEEN 4394	Electrical Engineering Senior Design II	3	3	3	GEEN 4311 EEEN 4393
EEEN 4393	Electrical Engineering Senior Design I	3	3	3	EEEN 3301 EEEN 3432 (C) EEEN 4423 (C) EEEN 4440 (C)	EEEN 4451	Automatic Control Systems	4	3	3	EEEN 3341
EEEN 4423	Sensors and Instrumentation	4	3	3	EEEN 3422	EEEN 4XXX	Technical Elective II	3	3	0	**Grad year & Dept. Approval. Select from List
EEEN 4XXX	Technical Elective I	3	3	0	**Grad year & Dept. Approval. Select from List	EEEN 4424	Power Electronics	4	3	3	EEEN 3422
GEEN 4311	Engineering Economy	3	3	0	90 Student credit hours	PHED 1112	Healthy Behaviors and Management	1	1	0	
						ALIS 2212	The Biography of Prophet Mohammad	2	2	0	
<b>Total</b>		<b>17</b>	<b>15</b>	<b>9</b>		<b>Total</b>		<b>17</b>	<b>15</b>	<b>9</b>	

**TOTAL DEGREE CREDIT HOURS = 139**

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SOCIAL SCIENCE ELECTIVES			
Course Number	Course Title	Credit Hours	Pre-requisites
GEGR 1311	World Regional Geography	3	None
HIST 1311	World Civilizations	3	None
PSYC 1311	Introduction to Psychology	3	None
SUST 1311	Introduction to Sustainability	3	None
FREN 1311	Introduction to French Language	3	None
SPAN 1311	Introduction to Spanish Language	3	None
ECON 1311	Introduction to Macroeconomics	3	None
ECON 1312	Introduction to Microeconomics	3	None

ELECTRICAL ENGINEERING TECHNICAL ELECTIVES			
Course Number	Course Title	Credit Hours	Pre-requisites
EEEN 4371	Electric Power Systems	3	EEEN 3461: Electric Machinery
EEEN 4372	Electric Power Transmission & Distribution	3	EEEN 3461: Electric Machinery
EEEN 4342	Digital Communication Systems	3	EEEN 4440 Communication Systems
EEEN 4343	Wireless Communication Systems	3	EEEN 4440 Communication Systems

### NOTES:

- Completion of PRPM 0022 Pre-Calculus is required before entry into Electrical Engineering.
- This Program of Study applies to ONLY full time students. Minimum of 12 credit hours constitutes full time status.
- Student GPA determines maximum semester course load as per department advisement criteria.
- EEEN major courses may be offered only in the semester shown on this plan.
- EEEN major summer course offerings are not guaranteed.
- Internship experience may not be combined with any courses.

Chair Signature  
Dr. Samir El Nakla

COE Dean Signature  
Dr. Jamal F. Nayfeh

Core Dean Signature  
Dr. Mohammad Ashraf

October 1, 2019