

# COLLEGE OF ENGINEERING

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

FRESHMAN 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	Lab / Tutorial	
ALIS 1211	Introduction to Islamic Culture	2	2	0		PHED 1112	Healthy Behaviors and Management	1	1	0	
PHED 1111	Active Living Lifestyle	1	1	0		COMM 1312	Writing and Research	3	3	0	COMM 1311
COMM 1311	Written Communication	3	3	0		UNIV 1212	Critical Thinking & Problem Solving	2	2	0	
UNIV 1211	Professional Development and Competencies	2	2	0		MATH 1423	Calculus II	4	4	1	MATH 1422
MATH 1422	Calculus I	4	4	1	FRPM 0022	CHEM 1421	Chemistry for Engineers I	4	3	3	FRPM 0022
PHYS 1421	Physics for Engineers I	4	3	3	FRPM 0022	GEEN 2311	Engineering Mechanics I: Statics	3	3	0	PHYS 1421 (C)MATH 1423
GEEN 1211	Intro to Engineering	2	2	0	FRPM 0022						
Total		18	17	4		Total		17	16	4	

SOPHOMORE 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	
COMM 2311	Oral Communication	3	3	0	COMM 1312	CVEN 2311	CAD for Civil Engineering	3	2	3	MATH 1324
UNIV 1213	Leadership And Teamwork	2	2	0		GEEN 2313	Thermodynamics I	3	3	0	MATH 1324 CHEM 1421
MATH 1324	Calculus III	3	3	1	MATH 1423	MATH 2332	Ordinary Differential Equations	3	3	1	MATH 1324
PHYS 1422	Physics for Engineers II	4	3	3	PHYS 1421 MATH 1422	MEEN 2313	Solid Mechanics	3	2	3	GEEN 2311 MATH 1324
GEEN 2211	Engineering Computing	2	1	3	MATH 1423	COMM 2312	Technical & Professional Communication	3	3	0	COMM 2311
ASSE 2111	Learning Outcome Assessment I	1	1	0	Sophomore Level						
MEEN 2312	Engineering Mechanics II: Dynamics	3	3	0	GEEN 2311	ALIS 1212	The Social System in Islam	2	2	0	
Total		18	16	7		Total		17	15	7	

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### JUNIOR 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	Studio / Tutorial	
ASSE 3211	Learning Outcome Assessment II	2	2	0	ASSE 2111 & Junior Level	CVEN 3331	Environmental Engineering Fundamental	3	3	0	GEEN 3311
GEEN 3311	Intro to Fluid Mechanics	3	3	0	GEEN 2313	CVEN 3332	Hydraulic Engineering	3	2	3	GEEN 3311
CVEN 3322	Materials in Civil Engineering	3	2	3	MEEN 2313	CVEN 3343	Engineering Probability & Statistics	3	3	0	MATH 1324
CVEN 3311	Structural Analysis	3	3	0	MEEN 2313	CVEN 3312	Reinforced Concrete Design	3	3	0	CVEN 3311
CVEN 3323	Engineering Geology	3	3	0	GEEN 2313	CVEN 3344	Sustainable Engineering	3	3	0	CVEN 3322
CVEN 3341	Engineering Measurement	3	2	3	CVEN 2311	ALIS 2211	Linguistic Communication Skills (Arabic)	2	2	0	
<b>Total</b>		<b>17</b>	<b>15</b>	<b>6</b>		<b>Total</b>		<b>17</b>	<b>16</b>	<b>3</b>	

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

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

### SENIOR YEAR (32 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	
CVEN 4313	Design of Steel Structures	3	3	0	MEEN 2313 CVEN 3312	ALIS 2212	The Biography of Prophet Mohammad	2	2	0	
CVEN 4323	Intro to Geotechnical Engineering	3	2	3	CVEN 3322 CVEN 3323	CVEN 4314	Construction Management	3	3	0	GEEN 4311
CVEN 4396	Civil Engineering Senior Design I	3	2	3	CVEN 3301 CVEN 3312 & department approval	CVEN 4397	Civil Engineering Senior Design II	3	2	3	CVEN 4396 GEEN 4311
GEEN 4311	Engineering Economy	3	3	0	90 student credit hours	CVEN XXXX	CE Tech. Elective II	3	3	0	**Graduation year and department approval. Select from list.
CVEN 4342	Transportation Engineering	3	3	0	CVEN 3341	Social Science	Social Science Elective	3	3	0	Select one from list.
CVEN XXXX	CE Tech. Elective I	3	3	0	**Graduation year and dept. approval. Select from list.						
<b>Total</b>		<b>18</b>	<b>16</b>	<b>6</b>		<b>Total</b>		<b>14</b>	<b>13</b>	<b>3</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

CIVIL ENGINEERING TECHNICAL ELECTIVES			
Course Number	Course Title	Credit Hours	Pre-requisites
CVEN 4324	Foundation Analysis & Design	3	CVEN 4323: Introduction to Geotechnical Engineering
CVEN 4334	Air Pollution & Control	3	CVEN 3331: Environmental Engineering Fundamental
CVEN 4333	Water & Waste Water Treatment	3	CVEN 3331: Environmental Engineering Fundamental CVEN 3332: Hydraulic Engineering

### NOTES:

- Completion of PRPM 0022 Pre-Calculus is required before entry into Civil 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.
- CVEN major courses may be offered only in the semester shown on this plan.
- CVEN major summer course offerings are not guaranteed.
- Internship experience may not be combined with any courses.



Chair Signature  
Dr. Andi Asiz



COE Dean Signature  
Dr. Jamal F. Nayfeh



Core Dean Signature  
Dr. Mohammad Ashraf



Dr. Nidal Abu-Libdeh.