



Course Distribution Plan

(Two Semesters Plan)

College: **Engineering**

Department: **Civil and Environmental**

Program: **B.S. in Civil Engineering**

The general structure of the distribution of academic units on the academic program

Requirements	Courses	No. of Units
University Requirements (8)	Required	4
	Elective	4
College Requirements (54)	Required	54
	Elective	0
Program Requirements (74)	Required	61
	Supportive (if any)	0
	Electives	9
	Graduation Project (if any)	4
Free Elective Courses		0
Field Training		0
The total number of units approved for the academic program		136

Academic Levels:

First Year: Level-1

#	Course Number	Course Code	Course Name (English)	Course Name (Arabic)	Course Nature* (U, C, P)*	Credit Units	Contact Hours	Nature of Contact Hours		Pre-requisite(s) (if any)	Co-requisite(s) (if any)
								Theoretical	Practical		
1	0814-140	PHY140	General Physics I	فيزياء عامة 1	Required (C)	3	3	3		None	0817-144 0814-144
2	0814-144	PHY144	General Physics I Lab	مختبر فيزياء عامة 1	Required (C)	1	3		3	None	0814-140
3	0815-140	CHEM140	General Chemistry I	كيمياء عامة 1	Required (C)	3	3	3		None	None
4	0817-144	MATH144	Calculus I	تفاضل وتكامل 1	Required (C)	4	4	4		None	None
5	1722-133	ENG133	English Composition I	تعبير انجليزي 1	Required (C)	2	2	2		None	None
6	2200-100	ENGR100	Introduction to Engineering	مدخل الى الهندسة	Required (C)	1	1	1		None	None
7	2200-106	ENGR106	Engineering Graphics	الرسم الهندسي	Required (C)	2	3	1	2	None	None
Total :						16	19	14	5		

*(Required or Elective)

* U: University requirements, C: College Requirements, P: Program Requirements

First Year: Level-2

#	Course Number	Course Code	Course Name (English)	Course Name (Arabic)	Course Nature* (U, C, P)*	Credit Units	Contact Hours	Nature of Contact Hours		Pre-requisite(s) (if any)	Co-requisite(s) (if any)
								Theoretical	Practical		
1	0814-141	PHYS141	General Physics II	فيزياء عامة 2	Required (C)	3	3	3		0814-140	0814-145
2	0814-145	PHYS145	General Physics II Lab	مختبر فيزياء عامة 2	Required (C)	1	3		3	None	0814-141
3	0815-142	CHEM142	General Chemistry II	كيمياء عامة 2	Required (C)	3	3	3		0815-140	0815-143
4	0815-143	CHEM143	General Chemistry Lab	مختبر كيمياء عامة	Required (C)	1	3		3	None	0815-142
5	0817-145	MATH145	Calculus II	تفاضل وتكامل 2	Required (C)	4	4	4		0817-144	None
6	1722-134	ENG134	English Composition II	تعبير انجليزي 2	Required (C)	2	2	2		1722-133	None
7	2200-105	ENGR105	Engineering Computing & Skills	مهارات حاسوبية هندسية	Required (C)	2	2	2		2200-100	0817-145
8	1900-102	SSC102	Islamic culture	الثقافة الإسلامية	Required (U)	2	2	2		None	None
Total :						18	22	16	6		

*(Required or Elective)

* U: University requirements, C: College Requirements, P: Program Requirements

Second Year: Level-3

#	Course Number	Course Code	Course Name (English)	Course Name (Arabic)	Course Nature* (U, C, P)*	Credit Units	Contact Hours	Nature of Contact Hours		Pre-requisite(s) (if any)	Co-requisite(s) (if any)
								Theoretical	Practical		
1	0817-244	MATH244	Multivariate Calculus	رياضيات متعددة المتغيرات	Required (C)	3	3	3		0817-145	None
2	1722-138	ENG138	Fundamentals of Speech Communication	أساسيات التواصل الخطابي	Required (C)	2	2	2		None	1722-134
3	2200-201	ENGR201	Statics	ستاتيكا	Required (P)	3	3	3		0814-140	None
4	2203-101	CEE101	Geology	جيولوجيا	Required (P)	3	3	3		None	None
5	2203-272	CEE272	Surveying and GPS	المساحة ونظام تحديد المكاني	Required (P)	3	5	2	3	0817-14 2200-106	None
6	1900-101	SSC101	Creed and doctrines	والمذاهب العقيدة	Required (P)	2	2	2		None	None
Total :						16	18	15	3		

*(Required or Elective)

* U: University requirements, C: College Requirements, P: Program Requirements

Second Year: Level-4

#	Course Number	Course Code	Course Name (English)	Course Name (Arabic)	Course Nature* (U, C, P)*	Credit Units	Contact Hours	Nature of Contact Hours		Pre-requisite(s) (if any)	Co-requisite(s) (if any)
								Theoretical	Practical		
1	0817-240	MATH240	Differential Equations	المعادلات التفاضلية	Required (C)	3	3	3		0817-145	None
2	0901-204	CS204	Engineering Programming	البرمجة الحاسوبية لطلبة الهندسة	Required (C)	3	3	3		0817-144	None
3	1722-137	ENG137	Technical Writing	الكتابة التقنية	Required (C)	2	2	2		1722-134 1722-138	None
4	2200-202	ENGR202	Strength of Materials	مقاومة المواد	Required (P)	3	3	3		2200-201	None
5	2200-203	ENGR203	Dynamics	ديناميكا	Required (P)	3	3	3		2200-201	None
6	2203-281	CEE281	Construction Materials Lab	مختبر مواد انشاء	Required (P)	1	3		3	None	2203-282
7	2203-282	CEE282	Construction Materials	مواد انشاء	Required (P)	3	3	3		0815-140 2203-101	2203-281 2200-202
Total :						18	20	17	3		

*(Required or Elective)

* U: University requirements, C: College Requirements, P: Program Requirements

Third Year: Level-5

#	Course Number	Course Code	Course Name (English)	Course Name (Arabic)	Course Nature* (U, C, P)*	Credit Units	Contact Hours	Nature of Contact Hours		Pre-requisite(s) (if any)	Co-requisite(s) (if any)
								Theoretical	Practical		
1	0817-246	MATH246	Linear Algebra	الجبر الخطي	Required (P)	3	3	3		0817-145	None
2	2200-209	ENGR209	Strength of Materials Lab	مختبر مقاومة المواد	Required (P)	1	3		3	2200-202	None
3	2200-309	ENGR309	Fluid Mechanics	ميكانيكا الموائع	Required (P)	3	3	3		2200-203 0817-240	None
4	2200-310	ENGR310	Numerical Methods	طرق الحل العددية	Required (C)	3	3	3		0817-240 0901-204 2200-105	None
5	2203-310	CEE310	Structural Analysis	التحليل الإنشائي	Required (P)	3	3	3		2200-202 0817-244	None
6	2203-360	CEE360	Geotechnical Engineering	الهندسة الجيوتقنية	Required (P)	3	3	3		2203-282 2200-202	2200-309 2203-361
7	2203-361	CEE361	Geotechnical Engineering Lab	مختبر الهندسة الجيوتقنية	Required (P)	1	3		3	None	2203-360 1722-137
Total :						17	21	15	6		

*(Required or Elective)

* U: University requirements, C: College Requirements, P: Program Requirements

Third Year: Level-6

#	Course Number	Course Code	Course Name (English)	Course Name (Arabic)	Course Nature* (U, C, P)*	Credit Units	Contact Hours	Nature of Contact Hours		Pre-requisite(s) (if any)	Co-requisite(s) (if any)
								Theoretical	Practical		
1	2200-307	ENGR307	Engineering Economics	الاقتصاد الهندسي	Required (C)	3	3	3		2200-100	None
2	2200-312	ENGR312	Fluid Mechanics Lab	مختبر ميكانيكا الموائع	Required (P)	1	3		3	2200-309	None
3	2203-309	CEE309	Introduction to Probability & Statistics	مقدمه في الإحصاء والاحتمالات	Required (P)	2	2	2		0817-145	None
4	2203-330	CEE330	Reinforced Concrete Design	تصميم خرسانة مسلحة	Required (P)	3	3	3		2203-310 2203-282	None
5	2203-335	CEE335	Hydrology	هيدرولوجيا	Required (P)	3	3	3		2200-309	None
6	2203-340	CEE340	Highway Engineering	هندسة الطرق	Required (P)	3	3	3		2203-272 2203-282	2203-341
7	2203-341	CEE341	Highway Engineering Lab	مختبر هندسة الطرق	Required (P)	1	3		3	None	2203-340
8	1900-XXX	SSCxxx	General Education Elective	اختياري جامعة	Elective (U)	2	2	2		None	None
9	2200-399	ENGR399	Engineering Training	التدريب الهندسي	Required (C)	0	0			مستوى تاسع فما فوق 1722-137	None
Total :						18	22	16	6		

*(Required or Elective)

* U: University requirements, C: College Requirements, P: Program Requirements

Fourth Year: Level-7

#	Course Number	Course Code	Course Name (English)	Course Name (Arabic)	Course Nature* (U, C, P)*	Credit Units	Contact Hours	Nature of Contact Hours		Pre-requisite(s) (if any)	Co-requisite(s) (if any)
								Theoretical	Practical		
1	0622-292	MGT292	Management Fundamentals & Skills	مبادئ الإدارة ومهاراتها	Required (C)	3	3	3		None	None
2	2203-345	CEE345	Construction Management	إدارة مشاريع	Required (P)	3	3	3		None	2203-330
3	2203-350	CEE350	Environmental Engineering	هندسة البيئة	Required (P)	3	4	2	2	0815-142 2200-309	None
4	2203-390	CEE390	Civil Engineering Drawings	رسم هندسي مدني	Required (P)	1	3		3	2200-106	None
5	2203-470	CEE470	Contracts and Specifications	مواصفات وعقود	Required (P)	2	2	2		None	2203-330
6	2203-4XX	CEExxx	Technical Elective I	اختياري قسم #1	Required (P)	3	3	3		None	None
7	2203-495	CEE495	Senior Design I	مشروع تخرج 1	Required (P)	2	4	1	3	مستوى ثامن فما فوق 2200-307	None
Total :						17	22	14	8		

*(Required or Elective)

* U: University requirements, C: College Requirements, P: Program Requirements

Fourth Year: Level-8

#	Course Number	Course Code	Course Name (English)	Course Name (Arabic)	Course Nature* (U, C, P)*	Credit Units	Contact Hours	Nature of Contact Hours		Pre-requisite(s) (if any)	Co-requisite(s) (if any)
								Theoretical	Practical		
1	2200-206	ENGR206	Electric Circuits	الدوائر الكهربائية	Required (P)	3	3	3		0814-141	None
2	2201-202	ME202	Thermodynamics I	ديناميكا حرارية 1	Required (P)	3	3	3		0815-140 0814-141 0817-145	None
3	2203-4XX	CEExxx	Technical Elective II	اختياري قسم #2	Elective (P)	3	3	3		None	None
4	2203-4XX	CEExxx	Technical Elective III	اختياري قسم #3	Elective (P)	3	3	3		None	None
5	2203-496	CEE496	Senior Design II	مشروع تخرج 2	Required (P)	2	4	1	3	2203-495	None
6	1900-XXX	SSCxxx	General Education Elective	اختياري جامعة	Elective (U)	2	2	2		None	
Total :						16	18	15	3		

*(Required or Elective)

* U: University requirements, C: College Requirements, P: Program Requirements

Field Training

#	Course Number	Course Code	Course Name (English)	Course Name (Arabic)	Course Nature* (U, C, P)*	Credit Units	Contact Hours	Nature of Contact Hours		Pre-requisite(s) (if any)	Co-requisite(s) (if any)
								Theoretical	Practical		
1	2200-399	ENGR 399	Engineering Technical Training	التدريب الهندسي	Required (C)	0	40	0	40	6th Level and above 1722-137	
Total :						0	40	0	40		

*(Required or Elective)

* U: University requirements, C: College Requirements, P: Program Requirements

- **Program Elective Courses** (Student must select at least 3 course)

#	Course Number	Course Code	Course Name (English)	Course Name (Arabic)	Course Nature*	Credit Units	Contact Hours	Academic Level (if any)	Pre-requisite(s) (if any)	Co-requisite(s) (if any)
1	2203-410	CEE410	Advanced Structural Analysis	تحليل انشائي متقدم	Elective	3	3	7-8	CEE 310	
2	2203-411	CEE411	Transportation Engineering	هندسة المواصلات	Elective	3	3	7-8	CEE 272 CEE 309	
3	2203-427	CEE427	Foundation Engineering	هندسة الاساسات	Elective	3	3	7-8	CEE 360	CEE 330
4	2203-430	CEE430	Steel Design	تصميم منشآت معدنية	Elective	3	3	7-8	CEE 310	
5	2203-436	CEE436	Bridge Engineering	هندسة الجسور	Elective	3	3	7-8	CEE 330	
6	2203-439	CEE439	Finite Element Method	العناصر بواسطة التحليل المحددة	Elective	3	3	7-8	CEE 310 CS 204 Math 246	
7	2203-451	CEE451	Water Supply and Sewerage System	شبكات المياه ومياه الصرف صحي	Elective	3	3	7-8	CEE 335	

8	2203-452	CEE452	Air Pollution	الهواء تلوث	Elective	3	3	7-8	CEE 350	
9	2203-453	CEE453	Solid Waste Management	الصلبة النفايات ادارة	Elective	3	3	7-8	CEE 350	
10	CEE 460	CEE460	Rock Mechanics & Underground Structures	والمنشآت الصخور ميكانيكا أرضية تحت	Elective	3	3	7-8	CEE 360	
11	2203-462	CEE462	Advanced Concrete Design	متقدم خرسانة تصميم	Elective	3	3	7-8	CEE 330	
12	2203-472	CEE472	Applications of GIS in Civil Engineering	المعلومات نظم تطبيق المدنية في الهندسة الجغرافية	Elective	3	3	7-8	Level 7 CEE 272	
13	2203-480	CEE480	Advanced Concrete Technology	متقدمة خرسانة تكنولوجيا	Elective	3	3	7-8	CEE 330	
14	2203-493	CEE493	Estimating Construction Cost	تقدير تكلفة البناء	Elective	3	3	7-8	CEE 282	CEE 390
15	2203-494	CEE494	Safety and Risk Management in Construction	اداره الامان والمخاطر الإنشائية	Elective	3	3	7-8	Engr 307 CEE 345	
16	2203-485	CEE485	Special Topics in Civil Engineering	موضوعات خاصة	Elective	3	3	7-8	7 th Semester or above	
17	2203-488	CEE488	Advanced Asphalt Materials	مواد اسفلتية متقدمة	Elective	3	3	7-8	CEE 340 CEE 341	
18	2203-86	CEE486	Undergraduate Research	مقرر بحثي	Elective	3	3	7-8	7 th Semester or above	
Total Credit Units Required						9	9			

*(Required or Elective)

- **University Requirements** (Student must select 2 electives)

	Course Number	Course Code	Course Name (English)	Course Name (Arabic)	Course Nature*	Credit Units	Contact Hours	Academic Level (if any)	Pre-requisite(s) (if any)	Co-requisite(s) (if any)
1	1900-101	SSC101	Creed and doctrines	و العقيدة المذاهب	Required	2	2	1-8		
2	1900-102	SSC102	Islamic culture	الثقافة الإسلامية	Required	2	2	1-8		
3	1900-103	SSC103	Islamic Morals and Ethics	الأخلاق الإسلامية وآداب المهنة	Elective	2	2	1-8		
4	1900-104	SSC104	Studies in the Biography of the Prophet	دراسات في السيرة النبوية	Elective	2	2	1-8		
5	1900-105	SSC105	Medical jurisprudence	الفقه الطبي	Elective	2	2	1-8		
6	1900-106	SSC106	Economics & Politics in Islam	الاقتصاد والسياسة في الإسلام	Elective	2	2	1-8		
7	1900-107	SSC107	Islamic Social & Family Behavior	النظام الاجتماعي السلوك و الاسري	Elective	2	2	1-8		
8	1900-108	SSC108	Management & Entrepreneurship	الإدارة وريادة الاعمال	Elective	2	2	1-8		
9	1900-109	SSC109	Health & Fitness	صحة ولياقة	Elective	2	2	1-8		
10	1900-110	SSC110	Research skills	مهارات البحث	Elective	2	2	1-8		
11	1900-111	SSC111	Volunteer work	العمل التطوعي	Elective	2	2	1-8		
12	1900-112	SSC112	Medicine: Type and use	الدواء: النوع والاستخدام	Elective	2	2	1-8		
13	1900-113	SSC113	Human Rights in Islam	حقوق الانسان في الإسلام	Elective	2	2	1-8		
14	1900-114	SSC114	Food and Nutrition	الغذاء والتغذية	Elective	2	2	1-8		
Total Credit Units Required						8	8			

*(Required or Elective)