



College: **ENGINEERING**
Department: **CIVIL AND ARCHITECTURAL ENGINEERING**
Cohort: **2004**
Degree: **B. ENG.**
Major: **CIVIL ENGINEERING**

<u>Summary of Credits:</u>	
University Requirements (UR)	18
Arabic	3
English	6
Contemporary Omani Society	1
Oman & Islamic Civilization or Islamic Culture	2
Free Elective	6
College Requirements (CR)	35
Math	17
Physics	8
Computer Programming	3
Chemistry	3
Introduction to Engineering	2
Workshop I	1
Elective	1
Industrial Training	0
Department Requirements (DR)	87
Department Core	72
Electives	15
TOTAL	140

For reference contact: Professor Ramzi Taha Ext. 1332

HoD

Date

Dean's Office

Date

Registrar's Office

Date

Department of Civil and Architectural Engineering
Civil Engineering Degree Plan: 2004 Cohort (Scheme I)

	Course Code	Course Title	Cr.	Lec.	Lab.	Tut.	Pre-req./Co-req.*	Cat.
Semester 1 Fall 2004		University English	0					UR
	Total		0					

Semester 2 Spring 2005	ARAB1001	Arabic	3	3				UR
	HIST1010	Oman & Islamic Civilization or						
	ISLM1010	Islamic Culture	2	2				UR
	LANC2160	English for Engineering I	3	3				UR
	ENGR1500	Introduction to Engineering	2	1		2		CR
	ENGR1600	Workshop I	1		2			CR
	MATH1106	Pre-Calculus Mathematics	4	3		2		CR
Total		15						

Semester 3 Fall 2005	LANC2161	English for Engineering II	3	3			LANC2160	UR
	SOCI3320	Contemporary Omani Society	1	1				UR
	CHEM1071	General Chemistry for Engineers	3	3				CR
	MATH2107	Calculus I	4	3		2	MATH1106	CR
	PHYS2107	General Physics I	4	3	3		MATH2107*	CR
Total		15						

Semester 4 Spring 2006		College Elective ^a	1		2			CR
	COMP2216	Programming in Fortran	3	2	2			CR
	MATH2108	Calculus II	3	2		2	MATH 2107	CR
	PHYS2108	General Physics II	4	3	3		PHYS 2107	CR
	CIVL3216	Basic Mechanics	4	3		2	PHYS2107	DR
Total		15						

Semester 5 Fall 2006	MATH3171	Linear Algebra & Multivariate	3	2		2	MATH2108	CR
	CIVL3002	Drawing I	2		2			DR
	CIVL3056	Surveying	3	2	2		MATH2107	DR
	CIVL3086	Mechanics of Materials	3	2		2	CIVL3216	DR
	CIVL3096	Construction Materials	3	2	2		CIVL3086*	DR
	PETM3006	Engineering Geology	3	2	2			DR
Total		17						

January 2007	ENGR3006	Industrial Training I	0				CIVL3056	CR
	Total		0					

Semester 6 Spring 2007		University Elective I	3					UR
	MATH4174	Differential Equations for Engineers	3	2		2	MATH2108	CR
	CIVL3036	Structures I	3	2	2		CIVL3086	DR
	CIVL3046	Drawing II	2		4		CIVL3002	DR
	CIVL3106	Geotechnical Engineering I	3	2	2		PETM3006*	DR
	CIVL4046	Fluid Mechanics	3	2	2		CIVL3216	DR
Total		17						

^a CIVL2400: Professional Practice & Ethics
Last Modification: February 2006.

Department of Civil and Architectural Engineering
Civil Engineering Degree Plan: 2004 Cohort (Scheme I)

	Course Code	Course Title	Cr.	Lec.	Lab.	Tut.	Pre-req./Co-req.*	Cat.
Semester 7 Fall 2007	CIVL4036	Highway Engineering	3	2	2		CIVL3106	DR
	CIVL4136	Environmental Engineering I	3	2	2		CIVL4046, CHEM1071	DR
	CIVL4146	Hydraulics	3	2		2	CIVL4046	DR
	CIVL4206	Concrete Design	3	2	2		CIVL3036,3046,3096	DR
	CIVL5146	Numerical Methods	3	2	2		COMP2XXX	DR
	Total			15				
Semester 8 Spring 2008		Department Elective I ^b	3					DR
		Department Elective II ^b	3					DR
	CIVL3066	Engineering Hydrology	3	2		2	MATH 3171, CIVL4046	DR
	CIVL4016	Structures II	3	2		2	CIVL 3036, MATH 4174	DR
	CIVL5204	Engineering Economics	3	2		2	MATH2107	DR
	Total			15				
Summer 2008	ENGR4006	Industrial Training II	0				ENGR3006	CR
	Total			0				
Semester 9 Fall 2008		Department Elective III ^b	3					DR
		Department Elective IV ^b	3					DR
	CIVL4216	Steelwork Design	3	2	2		CIVL3036 & 3046	DR
	CIVL4226	Foundation Engineering	3	2		2	CIVL3106 & 4206	DR
	CIVL5336	Construction Management	3	3			CIVL5204	DR
	CIVL5995	Project I	2				CIVL4206, CIVL4216*	DR
	Total			17				
Semester 10 Spring 2009		University Elective II	3					UR
		Department Elective V ^b	3					DR
	CIVL4006	Prob. & Statistics for Engineers	3	2		2	MATH2107	DR
	CIVL5997	Research Project	3				Semester 10 Status	DR
	CIVL5996	Project II	2				CIVL5995	DR
	Total			14				

^b Departmental Electives-a student must choose five courses from elective courses offered in semesters 8, 9 and 10.

Last Modification: February 2006.

Department of Civil and Architectural Engineering
Civil Engineering Degree Plan: 2004 Cohort (Scheme II)

Semester	Course Code	Course Title	Cr.	Lec.	Lab.	Tut.	Pre-req./Co-req.*	Cat.
	Semester 1 Fall 2004		University English	0				
Total		0						
Semester 2 Spring 2005			University English	0				
	Total		0					
	Semester 3 Fall 2005		University Elective	3				
LANC2160		English for Engineering I	3	3				UR
CHEM1071		General Chemistry for Engineers	3	3				CR
ENGR1500		Introduction to Engineering	2	1		2		CR
ENGR1600		Workshop I	1		2			CR
MATH1106		Pre-Calculus Mathematics	4	3		2		CR
Total		16						
Semester 4 Spring 2006	ARAB1001	Arabic	3	3				UR
	HIST1010	Oman & Islamic Civilization or						
	ISLM1010	Islamic Culture	2	2				UR
	LANC2161	English for Engineering II	3	3			LANC 2160	UR
	SOCI3320	Contemporary Omani Society	1	1				UR
	MATH2107	Calculus I	4	3		2	MATH1106	CR
	PHYS2107	General Physics I	4	3	3		MATH2107*	CR
	Total		17					
Summer 2006	MATH2108	Calculus II	3				MATH2107	CR
	CIVL3216	Basic Mechanics	4	3		2	PHYS2107	DR
	Total		7					
Semester 5 Fall 2006		College Elective ^a	1		2			CR
	MATH3171	Linear Algebra & Multivariate	3	2		2	MATH2108	CR
	PHYS2108	General Physics II	4	3	3		PHYS 2107	CR
	CIVL3002	Drawing I	2		2			DR
	CIVL3056	Surveying	3	2	2		MATH2107	DR
	CIVL3086	Mechanics of Materials	3	2		2	CIVL3216	DR
	Total		16					
January 2007	ENGR3006	Industrial Training I	0				CIVL3056	CR
	Total		0					

^a CIVL2400: Professional Practice & Ethics
Last Modification: February 2006.

Department of Civil and Architectural Engineering
Civil Engineering Degree Plan: 2004 Cohort (Scheme II)

	Course Code	Course Title	Cr.	Lec.	Lab.	Tut.	Pre-req./Co-req.*	Cat.
Semester 6 Spring 2007	COMP2216	Programming in Fortran	3	2	2			CR
	MATH4174	Differential Equations for	3	2		2	MATH2108	CR
	CIVL3036	Structures I	3	2	2		CIVL3086	DR
	CIVL3046	Drawing II	2		4		CIVL3002	DR
	CIVL3096	Construction Materials	3	2	2		CIVL3086*	DR
	PETM3006	Engineering Geology	3	2	2			DR
	Total			17				
Summer 2007	CIVL3106	Geotechnical Engineering I	3	2	2		PETM3006*	DR
	CIVL4046	Fluid Mechanics	3	2	2		CIVL3216	DR
	Total			6				
Semester 7 Fall 2007	CIVL4036	Highway Engineering	3	2	2		CIVL3106	DR
	CIVL4136	Environmental Engineering I	3	2	2		CIVL4046, CHEM1071	DR
	CIVL4146	Hydraulics	3	2		2	CIVL4046	DR
	CIVL4206	Concrete Design	3	2	2		CIVL3036,3046,3096	DR
	CIVL5146	Numerical Methods	3	2	2		COMP2XXX	DR
	Total			15				
Semester 8 Spring 2008		Department Elective I ^b	3					DR
		Department Elective II ^b	3					DR
	CIVL3066	Engineering Hydrology	3	2		2	MATH 3171, CIVL4046	DR
	CIVL4016	Structures II	3	2		2	CIVL3036, MATH4174	DR
	CIVL5204	Engineering Economics	3	2		2	MATH2107	DR
	Total			15				
Summer 2008	ENGR4006	Industrial Training II	0				ENGR3006	CR
	Total			0				
Semester 9 Fall 2008		Department Elective III ^b	3					DR
		Department Elective IV ^b	3					DR
	CIVL4216	Steelwork Design	3	2	2		CIVL3036 & 3046	DR
	CIVL4226	Foundation Engineering	3	2		2	CIVL3106 & 4206	DR
	CIVL5336	Construction Management	3	3			CIVL5204	DR
	CIVL5995	Project I	2				CIVL4206, CIVL4216*	DR
	Total			17				
Semester 10 Spring 2009		University Elective II	3					UR
		Department Elective V ^b	3					DR
	CIVL4006	Prob. & Statistics for Engineers	3	2		2	MATH 2107	DR
	CIVL5997	Research Project	3				Semester 10 Status	DR
	CIVL5996	Project II	2				CIVL5995	DR
	Total			14				

^b Departmental Electives-a student must choose five courses from elective courses offered in semesters 8, 9 and 10.

Last Modification: February 2006.

Civil Engineering Electives

Technical Elective Courses - 15 credit hours

The student should select 5 courses (15 credit hours) to be taken from: (1) Civil Engineering optional technical electives; (2) courses from the technical electives offered in the Environmental and Construction Engineering Streams; or (3) one course (max. 3 credits) offered in the M.Sc. Program in Civil Engineering after approval of advisor.

Civil Engineering: General

Course Code	Course Name	Credit Hours	Prerequisite
CIVL5104	Special Topics in Civil Engineering	3	Department Council Approval
CIVL 5376	Conservation of Structures	3	

Civil Engineering: Water Resources

Course Code	Course Name	Credit Hours	Prerequisite
CIVL5076	Coastal Engineering	3	CIVL4146
CIVL5142	Groundwater	3	CIVL 3066
CIVL5246	Hydraulic Structures	3	CIVL4146
CIVL5346	Water Resources Engineering	3	CIVL3066, CIVL4046

Civil Engineering: Geotechnical

Course Code	Course Name	Credit Hours	Prerequisite
CIVL4106	Geotechnical Engineering II	3	CIVL3106
CIVL5106	Slope Stability	3	CIVL3106
CIVL5132	Environmental Geotechnics	3	CIVL3106
CIVL5133	Soil Improvement	3	CIVL3106

Civil Engineering: Transportation

Course Code	Course Name	Credit Hours	Prerequisite
CIVL3076	Transportation Engineering	3	
CIVL5122	Highway Materials	3	
CIVL5206	Traffic Engineering	3	CIVL3076
CIVL5216	Pavement Design and Maintenance	3	CIVL4036

Civil Engineering: Structures

Course Code	Course Name	Credit Hours	Prerequisite
CIVL5096	Concrete Structures	3	CIVL4016, CIVL4206
CIVL5126	Concrete Materials and Technology	3	CIVL3036, 3086, 3096
CIVL5214	Computer Applications in Structural Engineering	3	CIVL4016, CIVL4206
CIVL5236	Prestressed Concrete	3	CIVL4206
CIVL5296	Design of Masonry Structures	3	CIVL3086

Construction Engineering Stream

Course Code	Course Name	Credit Hours	Prerequisite
CIVL5102	Construction Engineering	3	
CIVL5156	Estimating Construction Cost	3	CIVL3046,CIVL4206
CIVL5306	Specifications and Contracts	3	CIVL4206

Environmental Engineering Stream

Course Code	Course Name	Credit Hours	Prerequisite
CIVL5151	Solid Waste Management	3	CIVL5326
CIVL5152	Microbiology for Engineers	3	CIVL4136
CIVL5153	Chemistry for Environmental Engineering	3	CIVL4136
CIVL5186	Water and Wastewater Management	3	CIVL4136
CIVL5254	Environmental Pollution	3	CIVL5326
CIVL5255	Environmental Management Systems	3	CIVL5326
CIVL5326	Environmental Engineering II	3	CIVL4136