



College: **ENGINEERING**  
Department: **CIVIL & ARCHITECTURAL ENGINEERING**  
Cohorts: **2008 - 2009**  
Degree: **M.Sc.**  
Major: **CIVIL ENGINEERING**

<u>Summary of Credits:</u>	
College Requirements	6
Program Requirements	6
Elective Courses	12
Research Project	0
<b>TOTAL</b>	<b>24</b>

For reference contact: Dr. Ramzi Taha (HOD) Ext. 1332

HoD Date

Dean's Office Date

Registrar's Office Date

# M.Sc. in Civil Engineering

## Degree Plan

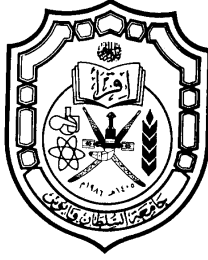
<b>Credits Required</b>	<b>: 24</b>
College Requirements	: 6
Program Requirements	: 6
Elective Courses	: 12
Research Project	: 0

Course Code	Course Title	Credit	Category	
			Core	Elective
<b>College Requirement (6 Cr.)</b>				
ENGR 6911	Advanced Engineering Management	3	*	
<b>Select any one (subject to the approval of the advisor)</b>				
ENGR6910 <b>or</b>	Advanced Engineering Probability & Statistics	3	*	
ENGR6913	Advanced Engineering Mathematics	3	*	
<b>Program Requirements (6 Cr.)</b>				
CIVL 6150	Finite Element Method	3	*	
CIVL 6380	Geoenvironmental Engineering	3	*	
CIVL 7000	Research Project	0	*	
<b>Elective Courses (Select any four courses from one of the following four options) (12 Cr.)*</b>				
<b>Structural Engineering</b>				
CIVL 6110	Advanced Concrete Structures	3		*
CIVL 6120	Bridge Structures	3		*
CIVL 6130	Structural Reliability	3		*
CIVL 6135	Advanced Concrete Technology	3		*
CIVL 6140	Theory of Plates and Shells	3		*
CIVL 6160	Advanced Steel Design	3		*
CIVL 6165	Rehabilitation of Structures	3		*
CIVL 6170	Structural Dynamics	3		*
CIVL 6180	Numerical Methods in Structural Engineering	3		*
CIVL 6190	Prestressed Concrete	3		*
CIVL 6195	Advanced Mechanics of Materials	3		*
CIVL 6100	Special Topics in Structural Engineering (To be offered as a structured course)	3		*
<b>Transportation Engineering</b>				
CIVL 6510	Advanced Traffic Engineering	3		*
CIVL 6520	Structural Design of Pavements	3		*
CIVL 6530	Pavement Management Systems	3		*
CIVL 6540	Highway Transportation Planning	3		*
CIVL 6550	Stabilization of Soil-Aggregate Systems	3		*
CIVL 6560	Bituminous Materials	3		*
CIVL 6570	Advanced Highway Geometric Design	3		*
CIVL 6580	Airport Engineering	3		*
CIVL 6500	Special Topics in Transportation Engineering	3		*

<b>Geotechnical Engineering</b>				
CIVL 6310	Advanced Soil Mechanics	3		*
CIVL 6320	Advanced Foundation Engineering	3		*
CIVL 6330	Earth Slopes and Embankments	3		*
CIVL 6340	Difficult Soils and Ground Improvement	3		*
CIVL 6350	Expansive Soils	3		*
CIVL 6360	Soil Dynamics	3		*
CIVL 6370	Retaining Structures	3		*
CIVL 6300	Special Topics in Geotechnical Engineering	3		*
<b>Environmental Engineering</b>				
CIVL 6715	Chemistry and Microbiology of Water and Wastewater	3		*
CIVL 6725	Physical-Chemical Treatment Processes	3		*
CIVL 6740	Industrial Waste Management	3		*
CIVL 6750	Air Pollution Engineering	3		*
CIVL 6760	Solid Waste Management	3		*
CIVL 6770	Advanced Wastewater Engineering	3		*
CIVL 6925	Groundwater Hydraulics	3		*
CIVL 6970	Environmental Impact Assessment	3		*
CIVL 6700	Special Topics in Env. Engineering	3		*

\* to be selected from:

- i. Only one course from the departmental electives of the undergraduate courses in the same specialization area (subject to the approval of the advisor).
- ii. Only one course offered by other postgraduate programs within the university upon the approval of the departmental board not including special topic courses or their likes, nor undergraduate courses (subject to the approval of the advisor).



College: **ENGINEERING**  
Department: **CIVIL & ARCHITECTURAL ENGINEERING**  
Cohorts: **2008-2009**  
Degree: **M.Sc.**  
Major: **CIVIL ENGINEERING (WATER RESOURCES)**

**Summary of Credits:**

College Requirements	6
Program Requirements	6
Elective Courses	12
Research Project	0
<b>TOTAL</b>	<b>24</b>

For reference contact: Dr. Ramzi Taha (HOD) Ext. 1332

HoD Date

Dean's Office Date

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## M.Sc. in Civil Engineering (WATER RESOURCES)

### Degree Plan

<b>Credits Required</b>	<b>: 24</b>
College Requirements	: 6
Program Requirements	: 6
Elective Courses	: 12
Research Project	: 0

Course Code	Course Title	Credit	Category	
			Core	Elective
<b>College Requirement (6 Cr.)</b>				
ENGR 6911	Advanced Engineering Management	3	*	
<b>Select any one (subject to the approval of the advisor)</b>				
ENGR6910	Advanced Engineering Probability & Statistics	3	*	
ENGR6913	Advanced Engineering Mathematics	3	*	
<b>Program Requirements (6 Cr.)</b>				
CIVL 6925	Groundwater Hydraulics	3	*	
CIVL 6935	Surface Water Hydrology	3	*	
CIVL 7000	Research Project	0	*	
<b>Elective Courses (Select any Four) (12 Cr.)*</b>				
<b>Water Resources</b>				
CIVL 6915	Stochastic Hydrology	3		*
CIVL 6920	Fluvial Hydraulics	3		*
CIVL 6940	Advanced Water Resources Engineering	3		*
CIVL 6945	Advanced Hydraulic Structures	3		*
CIVL 6950	Water Resources Planning and Management	3		*
CIVL 6955	Numerical Methods in Water Resources	3		*
CIVL 6960	Watershed Management	3		*
CIVL 6970	Environmental Impact Assessment	3		*
CIVL 6980	GIS Applications to Water Resources	3		*
CIVL 6990	Advanced Coastal Engineering	3		*
CIVL 6900	Special Topics in Water Resources	3		*

\* to be selected from:

- i. Only one course from the departmental electives of the undergraduate courses in the same specialization area (subject to the approval of the advisor).
- ii. Only one course offered by other postgraduate programs within the university upon the approval of the departmental board not including special topic courses or their likes, nor undergraduate courses (subject to the approval of the advisor).