(For students admitted in 2012-13 under the 4-year degree)

BEng in Civil and Environmental Engineering

In addition to the requirements of their major programs, students are required to complete the University requirements for graduation. For details please refer to the respective section on this website.

Some courses can be used to fulfill both Major and University Common Core Requirements. Students may reuse a maximum of 9 credits of these courses to count towards both Requirements.

Major Requirements

			Credit(s)
Engineering Fundamental Course(s)			
COMP		Note: COMP 1021 OR COMP 1022P OR COMP 1022Q	3
COMP	1021	Introduction to Computer Science	3
COMP	1022P	Introduction to Computing with Java	3
COMP	1022Q	Introduction to Computing with Excel VBA	3
ENGG	1010	Academic Orientation	0
CHEM		Note: CHEM 1010 OR CHEM 1020	2-3
CHEM	1010	General Chemistry IA	3
CHEM	1020	General Chemistry IB	2
LANG	2030	Technical Communication I	3
MATH		Note: [(MATH 1013 OR MATH 1023) AND (MATH 1014 OR MATH 1024)] OR [MATH 1020]	4-6
MATH	1013	Calculus I	3
MATH	1014	Calculus II	3
MATH	1020	Accelerated Calculus	4
MATH	1023	Honors Calculus I	3
MATH	1024	Honors Calculus II	3
MATH	2011	Introduction to Multivariable Calculus	3
MATH	2111	Matrix Algebra and Applications	3
PHYS		Note: PHYS 1112 OR PHYS 1152 OR PHYS 1312	2-3
PHYS	1112	General Physics I with Calculus	3
PHYS	1152	Accelerated General Physics I with Calculus	2
PHYS	1312	Honors General Physics I	3
Required Course(s)			
CIVL	1100	Discovering Civil and Environmental Engineering	3
CIVL	2020	Industrial Training	0
CIVL	2110	Statics	3
CIVL	2120	Mechanics of Materials	3

CIVL	2160	Modeling Systems with Uncertainties		3
CIVL	2170	Infrastructure Systems Engineering and Management		3
CIVL	2410	Environmental Assessment and Management		3
CIVL	2420	Water and Wastewater Engineering		3
CIVL	2510	Fluid Mechanics		3
CIVL	2810	Construction Materials		3
CIVL	3020	Internship Training		0
CIVL		Note: CIVL 3210 OR CIVL 3610		3
CIVL	3210	Introduction to Construction Management	3	
CIVL	3610	Traffic and Transportation Engineering	3	
CIVL	3310	Structural Analysis		3
CIVL	3320	Reinforced Concrete Design		3
CIVL	3510	Hydrosystems Engineering		3
CIVL	3730	Fundamentals of Geotechnics		3
CIVL	4720	Geotechnical Analysis and Design		3
CIVL		Note: CIVL 4930 OR CIVL 4940 (Students taking the Research Option must take CIVL 4940)		6
CIVL	4930	Civil and Environmental Engineering Final Year Project	6	
CIVL	4940	Civil and Environmental Engineering Final Year Thesis	6	
CIVL	4950	Integrated Civil Engineering Design Project**		2**
LANG	4033	Technical Communication II for Civil and Environmental Engineering		3

Elective(s)

CIVL/SENG		CIVL (Environmental) Electives [3 courses from the specified elective list, of which at least 2 courses (6 credits) should be selected from the "Restricted Electives".]		9
Restricted Electives				
CIVL	4430	Environmental Impact Assessment	3	
CIVL	4520	Municipal Hydrosystems Engineering and Management	3	
CIVL	5410	Physical-Chemical Water/Wastewater Treatment	3	
CIVL	5420	Biological Waste Treatment	3	
CIVL	5430	Aquatic Chemistry	3	
CIVL	5450	Hazardous Waste Treatment and Site Remediation	3	
CIVL	5460	Landfill Engineering and Design	3	
CIVL	5470	Industrial Wastewater Treatment	3	
CENG	4710	Environmental Control	3	
CENG	4720	Environmental Impact Assessment and Management Systems	3	
Others				
CIVL		Any CIVL courses at 4000-level or above except those listed as "Restricted Electives" above		
SENG		Any 3000-level or above courses offered by the Engineering School or engineering departments other than CIVL		

Student may opt to graduate with or without an option. Students who take an option MUST complete all requirements specified in addition to the major requirements.

Option(s)

Research Option

Students with CGA of 3.15 or above may apply for enrollment in the Research Option. They should declare their intention to enroll in the Option no later than the first term of their third year of study. In addition, students should take CIVL 4940 as specified in the major requirements.

Required Course(s)

CIVL/UROP		CIVL 4900 OR UROP 1100	1
CIVL	4900	Directed Studies	1
UROP	1100	Undergraduate Research Opportunities Series 1	1

Elective Course(s)

Advanced Electives (Courses at 4000- or PG level. Students should seek approval of their advisor for the choices of courses.)	3

***Remarks on course(s):*

- CIVL 4950: The course title will be changed to "Civil Engineering Capstone Design Project" starting from Fall, 2015-16.
- CIVL 4950: The credit value will be changed to 3 starting from Fall, 2015-16.