

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

BEng in Civil 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 <u>OR</u> COMP 1022P <u>OR</u> 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 <u>OR</u> 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 <u>OR</u> MATH 1023) <u>AND</u> (MATH 1014 <u>OR</u> MATH 1024)] <u>OR</u> [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	2**
MATH	2111	Introduction to Linear Algebra**	2**
PHYS		Note: PHYS 1112 <u>OR</u> PHYS 1152	2-3
PHYS	1112	General Physics I with Calculus	3
PHYS	1152	Accelerated General Physics I with Calculus	2

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 Engineering and Management	3
CIVL	2510	Fluid Mechanics	3

CIVL	2810	Construction Materials	3
CIVL	3020	Internship Training	0
CIVL	3210**	Introduction to Construction Management	3
CIVL	3310	Structural Analysis	3
CIVL	3320	Reinforced Concrete Design	3
CIVL	3510**	Hydrosystems Engineering	3
CIVL	3610	Traffic and Transportation Engineering	3
CIVL	3720	Soil Mechanics	3
CIVL	4720	Geotechnical Analysis and Design	3
CIVL		Note: CIVL 4910 <u>OR</u> CIVL 4920 (Students taking the Research Option must take CIVL 4920)	8
CIVL	4910**	Final Year Project	8
CIVL	4920**	Final Year Thesis	8
CIVL	4950	Integrated Civil Engineering Design Project**	2**

Elective(s)

CIVL		CIVL Electives (3 courses from the elective list as specified by the department. Details of the electives will be provided by the department.)	9
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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 4920 as specified in the major requirements.

Required Course(s)

CIVL/UROP		CIVL 4900 <u>OR</u> 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
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****Remarks on course(s):**

- CIVL 2170: This is a new course to take effect in Spring, 2013-14.
- CIVL 3210: This is a new course subject to approval.
- CIVL 3510: This is a new course subject to approval.
- CIVL 4910: This is a new course subject to approval.
- CIVL 4920: This is a new course subject to approval.
- CIVL 4950: The course title will be changed to "Civil Engineering Capstone Design Project" subject to approval.
- CIVL 4950: The credit value will be changed to 4 subject to approval.
- MATH 2011: The credit value will be changed to 3 starting from Fall, 2013-14.
- MATH 2111: The course title will be changed to "Matrix Algebra and Applications" starting from Fall, 2013-14.
- MATH 2111: The credit value will be changed to 3 starting from Fall, 2013-14.