

Energy and Environmental Engineering
Applicable to students admitted in 2017-18 and thereafter

Major Programme Requirement (for Associate Degree holders admitted to senior-year places)

Students are required to complete a minimum of 54 units of courses as follows:

	Units
1. Faculty Package: ENGG2601, 2602	3
2. Foundation Science Course: CHEM1380	3
3. Foundation Mathematics Courses: ENGG1410/ESTR1004, ENGG2420/ESTR2000	6
4. Required Courses:	
(a) EEEN2020, 3010, ELEG2202#/3207#[a], ESSC2800#, MAEG2030/ESTR2402, MAEG3030, SEEM2540#	21
(b) Research Component Courses[b]: EEEN4998, 4999	6
5. Elective Courses (select a total of 15 units from Core Electives and Non-core Electives, in which at least 6 units should be from Core Electives):	15
(a) Core Electives: ARCH3424#, EEEN3030/ESTR3402, EEEN4020/ESTR4402, ESSC4240#	
(b) Non-core Electives[c]: ARCH5431#, CHEM4280#, CSCI1020, 1040, 1050, CSCI2100#/ESTR2102, EEEN3020/ESTR3400, EEEN4010/ESTR4400, EEEN4030/ESTR4404, EEEN4050/ESTR4422, EEEN4060/ESTR4424, ELEG3601#, ENGG1820, ENSC3230#, 4240#, ESSC2020, 3200#, 3220#, 3320#, 3600#, 3800#, 4540#, GRMD2404, 3202#, 3203#, 3403#, 4202#, 4204#, 4401#, MAEG3050/ESTR3406, MAEG3920, MAEG4030/ESTR4412, MAEG4080/ESTR4420, PHYS4420#	

Streams

Students may specialize in any of the three streams by completing a minimum of 12 units of courses prescribed by that stream. Students may choose not to specialize in any stream or to specialize in more than one stream.

Sustainable Energy Technology

- (a) Required Courses:
EEEN3030/ESTR3402, EEEN4020/ESTR4402
- (b) Elective Courses:
CHEM4280, EEEN4010/ESTR4400, EEEN4030/ESTR4404,
EEEN4050/ESTR4422, EEEN4060/ESTR4424, ELEG3601

Green Building Technology

- (a) Required Courses:
ARCH3424, 5431
- (b) Elective Courses:
EEEN3020/ESTR3400, MAEG3050/ESTR3406, MAEG3920,
MAEG4030/ESTR4412

Environmental Engineering

- (a) Required Courses:
ESSC4240, GRMD3203
- (b) Elective Courses:
ARCH5431, ENSC3230, 4240, ESSC2020, GRMD4204,
MAEG4080/ESTR4420

Total: 54

In addition to fulfilling the above Major Programme Requirement, students may also challenge themselves by taking the following stream offered by the Faculty:

Engineering Leadership, Innovation, Technology and Entrepreneurship (ELITE) Stream[d]

Elective Courses:

15 units of courses[e]:

- i) 12 units of ESTR courses of which at most 6 units of courses at 1000 or 2000 level and at least 6 units of courses at 3000 or 4000 level[f]
- ii) 3 units of BMEG/CENG/CSCI/ELEG/ENGG/IERG/MAEG/SEEM courses at 5000 level[g]

Explanatory Notes:

1. EEEN, ENGG and MAEG courses at 2000 and above level as well as those labeled as #, and their reciprocal ESTR courses will be included in the calculation of Major GPA for honours classification, excluding courses in Faculty Package, Foundation Science course and Foundation Mathematics courses.
2. Students satisfying all the requirements of a stream (except the ELITE Stream, which will be officially recorded on the academic transcript) will be given a certifying letter upon request. Further information is available from the Department.

[a] Based on the admission qualifications of the Associate Degree holders, students will be recommended by the Department to take either ELEG2202 or 3207.

[b] Students who have declared to specialize in the ELITE Stream will be required to complete 6 units of ESTR4998 and 4999 to substitute for EEEN4998 and 4999.

[c] Students are allowed to take a maximum of 3 units from the following elective list: CSCI1020, 1040, 1050, CSCI2100/ESTR2102.

[d] Details of the entrance and coursework requirements, and declaration procedures for the ELITE Stream can be found at the ELITE website (www.erg.cuhk.edu.hk/elite).

Non-ELITE Engineering students may be allowed to take ESTR courses. Students are required to seek approval from their respective Major Programmes for using ESTR courses taken to fulfill the Major Programme Requirement. Details are available at the ELITE website.

[e] Students can use up to 9 units of courses which have been taken to fulfill the requirements of items 1 to 5 above (excluding item 4(b) Research Component Courses) to fulfill the elective requirements of the ELITE Stream. A full list of ESTR courses is available at the ELITE website.

[f] Students can use BMEG/CENG/CSCI/ELEG/ENGG/IERG/MAEG/SEEM courses

at 5000 level to substitute for ESTR courses at 3000 or 4000 level, subject to the approval of the Stream Director and the Associate Dean (Education).

[g] The requirement of at least 3 units of Engineering courses at 5000 level is a requirement for the ELITE Stream only. It should not be interpreted as a requirement of the Major programme.

	Recommended Course Pattern (for Associate Degree holders admitted to senior-year places)	Units
First Year of Attendance	1 st term Major Required: CHEM1380, EEEN2020, ELEG2202 or 3207, ENGG2420/ESTR2000 Major Elective(s):	12
	2 nd term Faculty Package: ENGG2601 Major Required: ENGG1410/ ESTR1004, MAEG2030/ESTR2402, MAEG3030, SEEM2540 Major Elective(s):	2 12
	Summer session Faculty Package: ENGG2602	1
Second Year of Attendance	1 st term Major Required: EEEN4998, ESSC2800 Major Elective(s): 3 courses	6 9
	2 nd term Major Required: EEEN3010, 4999 Major Elective(s): 2 courses	6 6
	Total (including Faculty Package):	54

Major Programme Requirement (for Higher Diploma holders admitted to senior-year places)

Students are required to complete a minimum of 51 units of courses as follows:

	Units
1. Faculty Package: ENGG2601, 2602	3
2. Foundation Science Course: CHEM1380	3
3. Foundation Mathematics Courses: ENGG1410/ESTR1004, ENGG2420/ESTR2000	6
4. Required Courses:	
(a) EEEN2020, 3010, ELEG2202#/3207#[a], ESSC2800#, MAEG2030/ESTR2402, MAEG3030, SEEM2540#	21
(b) Research Component Courses[b]: EEEN4998, 4999	6
5. Elective Courses (select a total of 12 units from Core Electives and Non-core Electives, in which at least 6 units should be from Core Electives):	12
(a) Core Electives:	

ARCH3424#, EEEN3030/ESTR3402, EEEN4020/ESTR4402, ESSC4240#

- (b) Non-core Electives[c]:
ARCH5431#, CHEM4280#, CSCI1020, 1040, 1050,
CSCI2100#/ESTR2102, EEEN3020/ESTR3400,
EEEN4010/ESTR4400, EEEN4030/ESTR4404,
EEEN4050/ESTR4422, EEEN4060/ESTR4424, ELEG3601#,
ENGG1820, ENSC3230#, 4240#, ESSC2020, 3200#, 3220#,
3320#, 3600#, 3800#, 4540#, GRMD2404, 3202#, 3203#, 3403#,
4202#, 4204#, 4401#, MAEG3050/ESTR3406, MAEG3920,
MAEG4030/ESTR4412, MAEG4080/ESTR4420, PHYS4420#

Streams

Students may specialize in any of the three streams by completing a minimum of 12 units of courses prescribed by that stream. Students may choose not to specialize in any stream or to specialize in more than one stream.

Sustainable Energy Technology

- (a) Required Courses:
EEEN3030/ESTR3402, EEEN4020/ESTR4402
- (b) Elective Courses:
CHEM4280, EEEN4010/ESTR4400, EEEN4030/ESTR4404,
EEEN4050/ESTR4422, EEEN4060/ESTR4424, ELEG3601

Green Building Technology

- (a) Required Courses:
ARCH3424, 5431
- (b) Elective Courses:
EEEN3020/ESTR3400, MAEG3050/ESTR3406, MAEG3920,
MAEG4030/ESTR4412

Environmental Engineering

- (a) Required Courses:
ESSC4240, GRMD3203
- (b) Elective Courses:
ARCH5431, ENSC3230, 4240, ESSC2020, GRMD4204,
MAEG4080/ESTR4420

Total: 51

In addition to fulfilling the above Major Programme Requirement, students may also challenge themselves by taking the following stream offered by the Faculty:

Engineering Leadership, Innovation, Technology and Entrepreneurship (ELITE) Stream[d]

Elective Courses:

15 units of courses[e]:

- i) 12 units of ESTR courses of which at most 6 units of courses at 1000 or 2000 level and at least 6 units of courses at 3000 or 4000 level[f]
- ii) 3 units of BMEG/CENG/CSCI/ELEG/ENGG/IERG/MAEG/SEEM courses at 5000 level[g]

Explanatory Notes:

1. EEEN, ENGG and MAEG courses at 2000 and above level as well as those labeled as #, and their reciprocal ESTR courses will be included in the calculation of

	Major GPA for honours classification, excluding courses in Faculty Package, Foundation Science course and Foundation Mathematics courses.
2.	Students satisfying all the requirements of a stream (except the ELITE Stream, which will be officially recorded on the academic transcript) will be given a certifying letter upon request. Further information is available from the Department.
[a]	Based on the admission qualifications of the Higher Diploma holders, students will be recommended by the Department to take either ELEG2202 or 3207.
[b]	Students who have declared to specialize in the ELITE Stream will be required to complete 6 units of ESTR4998 and 4999 to substitute for EEEN4998 and 4999.
[c]	Students are allowed to take a maximum of 3 units from the following elective list: CSCI1020, 1040, 1050, CSCI2100/ESTR2102.
[d]	Details of the entrance and coursework requirements, and declaration procedures for the ELITE Stream can be found at the ELITE website (www.erg.cuhk.edu.hk/elite). Non-ELITE Engineering students may be allowed to take ESTR courses. Students are required to seek approval from their respective Major Programmes for using ESTR courses taken to fulfill the Major Programme Requirement. Details are available at the ELITE website.
[e]	Students can use up to 9 units of courses which have been taken to fulfill the requirements of items 1 to 5 above (excluding item 4(b) Research Component Courses) to fulfill the elective requirements of the ELITE Stream. A full list of ESTR courses is available at the ELITE website.
[f]	Students can use BMEG/CENG/CSCI/ELEG/ENGG/IERG/MAEG/SEEM courses at 5000 level to substitute for ESTR courses at 3000 or 4000 level, subject to the approval of the Stream Director and the Associate Dean (Education).
[g]	The requirement of at least 3 units of Engineering courses at 5000 level is a requirement for the ELITE Stream only. It should not be interpreted as a requirement of the Major programme.

	Recommended Course Pattern (for Higher Diploma holders admitted to senior-year places)	Units
First Year of Attendance	1 st term Major Required: CHEM1380, EEEN2020, ELEG2202 or 3207, ENGG2420/ESTR2000 Major Elective(s):	12
	2 nd term Faculty Package: ENGG2601 Major Required: ENGG1410/ ESTR1004, MAEG2030/ESTR2402, MAEG3030, SEEM2540 Major Elective(s):	2 12
	Summer session Faculty Package: ENGG2602	1
Second Year of Attendance	1 st term Major Required: EEEN4998, ESSC2800 Major Elective(s): 2 courses	6 6
	2 nd term Major Required: EEEN3010, 4999 Major Elective(s): 2 courses	6 6
	Total (including Faculty Package):	51