(For students admitted in 2024-25 under the 4-year degree)

BEng in Electronic 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.

Students may use no more than 6 credits earned from courses offered in self-paced online delivery mode to satisfy the graduation requirements of a degree program. This 6-credit limit does not apply to credits obtained through the credit transfer procedures of the University.

For students graduating with an additional major, they must take all the requirements specified for that major, within which they must complete at least 20 single-counted credits. These 20 credits cannot be used to fulfill any other requirements for graduation except for the 120-credit degree requirement.

Under the new 30-credit Common Core Program which is applicable to students admitted to the University in 2022-23 and thereafter, courses that have been counted towards Major Requirements are not allowed to be reused for fulfilment of the University Common Core Requirements. Students should look up the details of the Common Core Program including the general and School-/program-specific distributional requirements posted on the Common Core website where the link to it is available on this website.

Major Requirements

Engineering Fundamental Course(s)

			Credit(s) attained
ELEC/MATH		Note: (ELEC 2600 OR ELEC 2600H) OR MATH 2011 OR MATH 2111 OR MATH 2350 OR MATH 2351 (3 courses out of 6)	9-10
ELEC	2600	Probability and Random Processes in Engineering	4
ELEC	2600H**	Honors Probability and Random Processes in Engineering	4
MATH	2011	Introduction to Multivariable Calculus	3
MATH	2111	Matrix Algebra and Applications	3
MATH	2350	Applied Linear Algebra and Differential Equations	3
MATH	2351	Introduction to Differential Equations	3
COMP		Note: COMP 1021 OR COMP 1022P	3
COMP	1021	Introduction to Computer Science	3
COMP	1022P	Introduction to Computing with Java	3
COMP		Note: COMP 2011 OR COMP 2012H	4-5
COMP	2011	Programming with C++	4
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5
MATH		Note: [(MATH 1012 OR MATH 1013 OR MATH 1023) AND (MATH 1014 OR MATH 1024)] OR [MATH 1020]	4-7
MATH	1012	Calculus IA	4
MATH	1013	Calculus IB	3
MATH	1014	Calculus II	3
MATH	1020	Accelerated Calculus	4
MATH	1023	Honors Calculus I	3
MATH	1024	Honors Calculus II	3

PHYS		Note: PHYS 1112 OR PHYS 1312	3
PHYS	1112	General Physics I with Calculus	3
PHYS	1312	Honors General Physics I	3
PHYS		Note: PHYS 1114 OR PHYS 1314	3
PHYS	1114	General Physics II	3
PHYS	1314	Honors General Physics II	3
SENG		Engineering Introduction course (If the students take an introduction course included in their major, this course can be counted towards their major requirement.)	3-4
ELEC	1100	Introduction to Electro-Robot Design	4
ELEC	1200	A System View of Communications: from Signals to Packets	4
BIEN	1010	Introduction to Biomedical Engineering	3
CENG	1000	Introduction to Chemical and Biological Engineering	3
CENG	1500	A First Course on Materials Science and Applications	3
CENG	1700	Introduction to Environmental Engineering	3
CIVL	1100	Discovering Civil and Environmental Engineering	3
CIVL	1210	Fundamental of Green Buildings	3
COMP	1021	Introduction to Computer Science	3
ENGG	1100	First Year Cornerstone Engineering Design Project Course	3
IEDA	2010	Introduction of Industrial Engineering and Decision Analytics	3
MECH	1902	Energy Systems in a Sustainable World	3
MECH	1906	Mechanical Engineering for Modern Life	3
MECH	1907	Introduction to Aerospace Engineering	3

Required Course(s)

			Credit(s) attained
ELEC	1100	Introduction to Electro-Robot Design	4
ELEC	1200	A System View of Communications: from Signals to Packets	4
ELEC		Note: ELEC 2100 OR ELEC 2100H	4
ELEC	2100	Signals and Systems	4
ELEC	2100H**	Honors Signals and Systems	4
ELEC	2350	Introduction to Computer Organization and Design	4
ELEC	2400	Electronic Circuits	4
ELEC	2910	Academic and Professional Development I	0
ELEC		Note: [ELEC 2991 AND (ELEC 4900 OR ELEC 4901)] OR [ELEC 4910] (Students taking the Research Option must take ELEC 4901)	6
ELEC	2991	Industrial Experience (Electronic Engineering)	0
ELEC	4900	Final Year Design Project	6
ELEC	4901	Final Year Thesis	6
ELEC	4910	Co-op Program	6
ELEC	3910	Academic and Professional Development II	0
ENGG	2010	Engineering Seminar Series	0

Elective(s)

		Minimum credit(s) required
ELEC	ELEC 3000-level or above Electives (Courses of the subject and level as specified, out of which at least 2 courses must be at 4000-level. ELEC 4940 cannot be used to count towards this elective requirement)	21

Students 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 in the Research Option should also take ELEC 4901 as specified in the major requirements.

Required Course(s)

			Credit(s) attained
ELEC	5900	Modern Engineering Research Methodologies	3

Elective Course(s)

			Minimum credit(s) required
		Advanced Elective Courses approved by advisor (at least one UROP course taken prior to the commencement of Final Year Thesis, and one PG-level course)	6
UROP	1000	Undergraduate Research Opportunities	0
UROP	1100	Undergraduate Research Opportunities Series 1	1
UROP	2100	Undergraduate Research Opportunities Series 2	1
UROP	3100	Undergraduate Research Opportunities Series 3	1

***Remarks on course(s):*

- ELEC 2100H: The course was last offered in 2017-18 and was deleted subsequently.
- ELEC 2600H: The course was last offered in 2021-22 and was deleted subsequently.