(For students admitted in 2017-18 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.

Some courses can be used to fulfill both Major and University Common Core Requirements. Students may reuse a maximum of 6 credits of these courses to count towards both Requirements.

Students may use no more than 6 credits earned from courses offered in pure 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.

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 2351 (3 courses out of 5)	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	2351	Introduction to Differential Equations	3
COMP		Note: COMP 1021 OR COMP 1022P OR COMP 1022Q OR COMP 2011	3-4
COMP	1021	Introduction to Computer Science	3
COMP	1022P	Introduction to Computing with Java	3
COMP	1022Q	Introduction to Computing with Excel VBA	3
COMP	2011	Programming with C++	4
ENGG	1010	Academic Orientation	0
LANG	2030	Technical Communication I	3
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
CENG	1000	Introduction to Chemical and Biological Engineering	3
CIVL	1100	Discovering Civil and Environmental Engineering	3
COMP	1021	Introduction to Computer Science	3
ENGG	1100	First Year Cornerstone Engineering Design Project Course	3
IEDA	2010	Industrial Engineering and Decision Analytics	3
IEDA	2200	Engineering Management	3
MECH	1901	Automotive Engineering	3
MECH	1902	Energy Systems in a Sustainable World	3
MECH	1905	Buildings for Contemporary Living	3
MECH	1906	Mechanical Engineering for Modern Life	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	1991	Industrial Experience (Electronic Engineering)	0
ELEC		Note: ELEC 2100 OR ELEC 2100H	4
ELEC	2100	Signals and Systems	4
ELEC	2100H	Honors Signals and Systems	4
ELEC	2200	Digital Circuits and Systems	4
ELEC	2300	Computer Organization	4
ELEC	2400	Electronic Circuits	4
ELEC	2910	Academic and Professional Development I	0
ELEC	3910	Academic and Professional Development II	0
ELEC		Note: ELEC 4900 OR ELEC 4901 (Students taking the Research Option must take ELEC 4901)	6
ELEC	4900	Final Year Design Project	6
ELEC	4901	Final Year Thesis	6
ENGG	2010	Engineering Seminar Series	0
LANG	4031	Technical Communication II for ECE & CPEG	3

Elective(s)

			Minimum credit(s) required
ELEC		ELEC 4000-level Electives (Any 2 courses of the subject and level as specified. ELEC 4940 cannot be used to count towards this elective requirement)	6
ELEC		Area Courses (3 courses from the specified elective list)	12
ELEC	3100	Signal Processing and Communications	4
ELEC	3200	System Modeling, Analysis and Control	4
ELEC	3300	Introduction to Embedded Systems	4
ELEC	3400	Introduction to Integrated Circuits and Systems	4
ELEC	3500	Microelectronic Devices and Technology	4
ELEC	3600	Electromagnetics: From Wireless to Photonic Applications	4

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 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	1

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