MAJOR STRUCTURE AND CURRICULUM

A. General

1. Students entering this major in 2019-20 will include normative 4-year degree students already completed their first year in the Department of Electrical Engineering; newly-admitted Advanced Standing I (ASI) and Advanced Standing II (ASII) students. The structure of the major is illustrated in the Major Flowchart.

2. Under the credit unit system, the relationship among the courses is defined by pre-requisite, co-requisite and pre-cursor requirements. A pre-requisite is a requirement that must be fulfilled before a student can register in a particular course. A co-requisite is a course that must be taken before or together with a particular course (a pass is not required). A pre-cursor is not a requirement, but students are advised to complete the pre-cursor before registering in that course. Students should check the Course Assessment Table for such requirements carefully to ensure they are eligible for registering certain courses. The Course Assessment Table also provides useful information on the credit unit load, teaching pattern, assessment methods and passing requirement of individual courses in the major.

3. Normative 4-year degree students are advised to follow the Recommended Study Plan to ensure that they can progress smoothly through the major and graduate within the normal study period. Advanced Standing students may adjust your study plan according to your backgrounds and closely monitor your study progress through DegreeWorks.

4. As courses and curriculum details are subject to review from time to time, students should check emails sent from the EE Department regularly and refer to section "Major Structure and Curriculum" under "Programme/ Major Information" of EE Student Intranet for details.

B.   Pathway to achievement of aims:

The pathway to achieve the aims of the major and its contents follows three parallel routes that encompass practical work, technical studies and complimentary studies.

1.   The technical contents in our year 2 curriculum are broad based covering topics in engineering mathematics, electronic design, logic circuits, electronic circuit, computer programming, data structures and algorithms, data engineering, microcomputer systems, modelling techniques. In the following year, the contents specialize more on database systems, data communications and networking, data engineering and learning systems, Java programming and applications, embedded system design, signal and systems, operating systems and internet technology that lead to more specialized electives in the final year studies.

2.   The practical laboratory work in earlier years of curriculum is relatively more structured, which will be gradually replaced by more open-ended practical work in later years, culminating in a final year project that allows them to practice solving problems in an independent way.

3.   Complimentary studies encompass (i) Gateway Education of specified areas, (ii) College-specified Courses, (iii) English Language and (iv) Chinese Civilization, which allow students to explore across disciplines, acquire skills in English and knowledge in Chinese Civilization. Together with the other parts of the curriculum, these help students become socially and professionally aware, communicate better and operate more effectively in a team.

C. Degree Requirements

To attain the degree award, students must have successfully completed the following curriculum requirements, AND achieved a cumulative Grade Point Average (CGPA) of 1.70 or above.

Degree Requirement		Normative 4-year Degree	Advanced Standing I	Advanced Standing II
Major Requirements [h]	Core Courses [a]	69	60	45-57
	Technical Electives [b]	15	15	15
Gateway Education Requirements	English [c] *(GE1401 and GE2410)*	6	6	3 *(GE2410)*
	Chinese Civilization *(GE1501)*	3	3	Not required
	Gateway Education [e] (Area Requirements)	12	6	3
	College-specified Courses [f]	9	6^	6^
College Requirements	College Requirements [g]	6	0	0
Minimum Number of Credits Required for the Award [d]		**120**	**96**	**72-84**

Notes:

a. i/ Including non-credit-bearing courses EE4096 Engineering Training I, and EE4097 Engineering Training II.

   ii/ EE1001, EE1002 and GE1354 are not required for Advanced Standing I & II students.

   iii/ CS2311 is not required for Advanced Standing II students.

   iv/ Requirements on EE2000, EE2004, EE2301 and EE2331 will be considered case by case based on ASII students' backgrounds in the subjects.

b. Students are required to take at least FIVE electives (15 CUs) of which TWO must be from each group. For details of the course pre-requisite requirement, please refer to major and course information page.

c. Normative 4-year degree and ASI students entering without Level 4 in HKDSE English Language are required to take EL0200A English for Academic Purposes 1 and EL0200B English for Academic Purposes 2 (EAP) of 6 credit units before progressing to GE1401 University English and GE2410 English for Engineering. Early exit arrangement is available that students achieving a grade B or above in their overall course results for EL0200A will be permitted to exit at this point and progress to the GE English courses.

The credits earned from the EAP course(s) will not be counted towards the minimum credit units required for graduation nor be calculated in students' CGPA. Non-JUPAS students are invited upon enrolment to take the English Placement Test or to provide proof of alternative qualifications to be exempted from the EAP courses (click here for details).

ASII students are not required to take GE1401 nor EL0200A & EL0200B.

d. Normative 4-year degree and ASI students entering without Level 4 in HKDSE Chinese Language are required to take a 3-credit-unit course CHIN1001 University Chinese I. The credits earned will not be counted towards the minimum credit units required for graduation nor be calculated in students' CGPA.

e. Normative 4-year degree students are required to take a minimum of 3 CUs from each of the following specified areas – 1/ Arts and Humanities, 2/ Study of Societies, Social and Business Organizations, and 3/ Science and Technology.

Advanced Standing I students are required to take their 6 CUs from two different areas above.

f. College-specified courses for fulfilling the Gateway Education requirements:

MA1200/ MA1300	Calculus and Basic Linear Algebra I/ Enhanced Calculus and Linear Algebra I	3 credit units
MA1201/ MA1301	Calculus and Basic Linear Algebra II/ Enhanced Calculus and Linear Algebra II	3 credit units
CS1102/ CS1302	Introduction to Computer Studies/ Introduction to Computer Programming	3 credit units

^ ASI and ASII students are required to take 6 credit units of MA courses from the above pairs. Students exempted from either one or both of the above MA courses should take any course(s) not within the Major Requirement (including core courses and electives) to make up for the minimum curriculum requirement.

g. Normative 4-year Degree students are required to take two courses (6 CUs) out of three for their College requirements. Courses include PHY1201 General Physics I, BCH1100 Chemistry and BCH1200 Discovery in Biology.

h. Students having completed EE4081 Professional Internship Program (6 CUs) will take one less technical elective (3 CUs) and are not required to take EE3012

Engineers in Society (3 CUs). For those who have completed 12-month internship in EE4081 are not required to take EE4097 Engineering Training II.

D.   Core Courses

Students must pass all the core courses in order to graduate. Students who have failed a course for the first time must retake the course or its equivalent, if any. Students' studies will be terminated if they fail a required course (or its equivalent/substitute course) in the third attempt.

E.   Elective Courses

Elective courses offered are under continuous review. The electives available in any particular year are therefore subject to change. Students are advised to refer to the most updated major and course information here. Offering of an elective course is subject to the minimum enrolment requirement stipulated by the Department/University.

F.   Engineering Training

Students are required to take EE4096 Engineering Training I (2-week in-house training) and EE4097 Engineering Training II (Part A: 9-13 weeks of Industrial Attachment Scheme; or Part B: 5-week in-house training) before they can graduate.

G.   Laboratory Work

In general, laboratory work takes a number of different forms, e.g. conventional laboratory exercises, extended laboratories, or mini projects. Students are required to maintain a laboratory log-book in which they should record the work performed during each session. Students may be required to submit typed written reports on a number of these laboratory exercises. Details can be found in the laboratory manuals at the Student Intranet.

1.   Integrated Laboratory Courses

In this kind of courses, there is a high level of integration between lecture materials, tutorial topics and supporting laboratory work. It is the departmental policy that a student must (i) achieve at least 30% in course work, (ii) at least 30%

in examination marks, and (iii) achieve a laboratory attendance of at least 75% in order to pass these courses.

2. Elective Courses with Laboratory Component

These courses are similar in nature to Integrated Laboratory Courses but are less constrained with regard to the way in which the contact hours are used. Similarly, a student must (i) achieve at least 30% in course work, (ii) 30% in examination marks, and (iii) achieve a laboratory attendance of at least 75% in order to pass these courses.

H. Final Year Project

1. The Final Year Project is a major component of the major. One of the objectives of the project is to provide a vehicle whereby the student can integrate ideas, concepts and skills obtained during the study and channel them into the production of a novel idea or a product.

2. Each student will select an individual project from a wide range of options provided by academic staff. Alternatively, a student may propose his/her own project, which is subject to approval. The project is of one year duration and is treated as the most important contribution to the final award. Each student is required to introduce his/her project in a poster session to panel members that may include industrialists, academic staff, and fellow students. In the presentation, the student is expected to explain the objectives of the project, the method used, the results obtained, and the conclusions reached from the investigation. Marks are awarded according to the proficiency of the student in achieving the project objectives.

3. Course Code and Pre-requisites of the Project

Students may register for EE4080 Project upon completion of at least 63 CUs (Normative 4-year degree) of the Major Requirement, College Requirement and College-specified GE courses / 39 CUs* of the Major Requirement (Advanced Standing I) / 36 CUs* of the Major Requirement (Advanced Standing II).

For Advanced Standing students*

Note 1: Credits of exempted courses are counted regardless of the completion time of replacement courses.

Note 2: Corresponding reduction in credit requirement applies to ASII students granted with waiver arrangement on courses upon admission.

Note 3: Students completed full requirement in College-specified GE courses (MA1200/MA1201/MA1300/MA1301) can have one course counted towards the credit unit requirement specified above.

4. Duration of Project

The project is of one year duration normally starting from Semester A (or Semester B in minority cases) of the final year and culminating in the following Semester B (or Semester A). Cases under extenuating circumstances such as students coming back from exchange will be allowed to conduct the second part of projects in summer term subject to approval.

I. Year-long Internship Schemes

1. EE 4081 Professional Internship Program

EE4081 Professional Internship Program (6CUs) provides students with an option to undertake a one-year internship to gain real work experience in industry during their university years, normally in their final year. While taking their courses in the University on a day-release basis, students will have the opportunity to gain a one-year solid work experience and become more conversant with the operations and practice in a specific industry. Students successfully completed the one-year internship course EE4081 can take one less technical elective (3CUs) and are not required to take EE3012 Engineers in Society (3CUs). For those who have completed full 12 months in EE4081 are not required to take EE4097 Engineering Training II.

2. Co-operative Education Scheme

Co-operative Education Scheme (CES) is another optional placement programme for final year students as a continuation of summer internship offered under Industrial Attachment Scheme (IAS). Students will be informed of more details on how to join the CES when they apply for IAS in March each year.

Students who conduct their Final Year Project at the training company under CES will also register on EE4080 Project.

J. Academic Records

Students can view their Grade Display from AIMS. If students wish to know whether they have fulfilled the major requirements or not, they may check their Degree Works reports on AMIS which provide an overview of their major requirements and whether the requirements have been met or not.

K. Progression and Graduation

Please refer to the University Academic Regulations for more details on grading of courses, review of course grades, academic standing, course repeat, conferment and classification of awards, termination of studies, and review of examination board decisions.

Students should file an application for graduation during their intended graduation semester/term in accordance with the procedures announced by the University. Any late application or its omission will cause delay in graduation.

L. Minimum Assessment Requirement

To pass any courses offered by EE (including EE and GE courses), students should obtain at least 30% in course work and/or 30% in examination where such component(s) exist in the assessment. For courses with lab components, 75% laboratory attendance rate must be obtained.