(For students admitted in 2011-12 under the 3-year degree)

Curriculum for BEng in Computer Engineering

Two options are offered in this program namely: the Embedded Systems Option and the Honors Research Option. Please refer to respective sections for program requirements of the two options.

Two program sequences, namely Sequence A and B, are designed to take care of students admitted with different mathematics background. Sequence A is intended for students with AL Mathematics background, while Sequence B is for those without AL Mathematics background who are required to take an additional mathematics course.

General Requirements

Students are required to complete the following general requirements for graduation in addition to program specific requirements:

Required Courses in English Communication
Common Core Requirements
Required Course in Physical Education

For details please refer to the section "General Requirements" on this website.

Program Specific Requirements

Credit(s)

Required courses

		COMP 1004**	Programming Fundamentals and Methodology	4
		COMP 2012	Object-Oriented Programming and Data Structures	4
	or	COMP 2012H	OOP and Data Structures (Honors Study Track)	4
		COMP 2611	Computer Organization	4
	or	ELEC 2300	Computer Organization	4
(1)		COMP 2711	Discrete Mathematical Tools for Computer Science	4
(1)	or	COMP 2711H	Honors Discrete Mathematical Tools for Computer Science	4
		COMP 3111	Software Engineering	4
	or	COMP 3111H	Honors Software Engineering	4
		COMP 3511	Operating Systems	3
		COMP 3711	Design and Analysis of Algorithms	3
	or	COMP 3711H	Honors Design and Analysis of Algorithms	4
	or	ELEC 3100	Signal Processing and Communications	4
		COMP 4611	Design and Analysis of Computer Architectures	3
		COMP 4621	Computer Communication Networks I	3
	or	ELEC 4120	Computer Communication Networks	3

(3)		COMP 4991	Computer Engineering Final Year Project	8
(3)	or	ELEC 4903	Computer Engineering Final Year Project	8
		ELEC 1100	Introduction to Electro-Robot Design	4
	or	ELEC 1200	A System View of Communications: from Signals to Packets	4
(2)		ELEC 1970	Industrial Training	0
		ELEC 2100	Signals and Systems	4
		ELEC 2200	Digital Circuits and Systems	4
		ELEC 2600	Probability and Random Processes in Engineering	4
		ELEC 3300	Introduction to Embedded Systems	4
		ELEC 4410	CMOS VLSI Design	3
		IELM 2200	Engineering Management	3
		IELM 4110	Engineers in Society	1
		MATH 2011	Introduction to Multivariable Calculus	3
		MATH 2111	Matrix Algebra and Applications	3
		For Sequence B:		
		MATH 1018	Concise Calculus	4

Elective courses

	Elective types		Minimum no. of courses	Minimum total credits
(4)	COMP/ ELEC	Computer Science Elective/ Electrical and Electronic Engineering Elective	2	6
(5,6)	ENGG/SCIE	Engineering Elective/Science Elective		
		For Sequence A	2	6-7
		For Sequence B	2	5-6

Other Requirements

(7)	ELEC 2930	Academic and Professional Development I	0
	ELEC 3930	Academic and Professional Development II	0
	ELEC 4930	Academic and Professional Development III	0

***Remarks on course(s):*

- COMP 1004: The course was last offered in 2012-13 and was deleted subsequently.

Notes:

(1) With prior approval from the CPEG UG coordinator, students may take MATH 2343 to fulfill the requirement of COMP 2711/COMP 2711H.

(2) Students are required to complete and pass a prescribed training program within the normal length of study. Details of the program, its requirements and schedule will be announced on the website of the Industrial Training Center (http://www.ust.hk/itc) or website of the department in the first year Fall term. Training normally takes place in the Winter and Summer terms starting from the first year of study. For recording the overall training results, students are normally registered for the course in their last term of study.

(3) Work normally commences in summer following the second year. CPEG students who follow the honors study track of COMP courses may choose to take COMP 4992/ELEC 4904 to fulfill the requirement of COMP 4991/ELEC 4903.

(4) Normally only ELEC or COMP courses at 3000-level or above will be accepted. COMP 3311 and COMP 4622 are recommended electives. Students with particular interest in the following areas are encouraged to take their respective courses:

Intelligent Robotic Systems: COMP 3211, COMP 4211, COMP 4421, COMP 5421, ELEC 3200, ELEC 341 (prior to 2007-08), ELEC 4210, ENGG 4950

Networks and Communications: COMP 4021, COMP 4622, COMP 4631, ELEC 4110, ELEC 4150, ELEC 4180

Multimedia Computing and Processing: COMP 4411, COMP 4421, COMP 4431, COMP 4441, ELEC 4130, ELEC 4170, ELEC 4820

VLSI and Computer Systems: COMP 3711, COMP 3711H, COMP 5712, COMP 5713, ELEC 3400, ELEC 3500, ELEC 4420, ELEC 4440, ELEC 4510, ELEC 4520

Speech Processing and Language Engineering: COMP 4211, COMP 5221, ELEC 3110, ELEC 4140, ELEC 4160

ENGG 4950, IELM 3010, IELM 3250 and IELM 4130 may count toward the COMP/ELEC elective requirement. Students who have earned a total of 3 extra credits through taking COMP 2971 (prior to 2012-13), COMP 3711H, COMP 3971 (prior to 2012-13) or COMP 4971 may reduce the COMP elective requirement by one course (three credits).

(5) Students opting for ELEC 3100 are required to take a minimum total of 6 credits (Sequence A) or 5 credits (Sequence B) of ENGG/SCIE electives. Students opting for COMP 3711 are required to take a minimum total of 7 credits (Sequence A) or 6 credits (Sequence B) of ENGG/SCIE electives. Only ENGG or SCIE courses at 2000-level or above can be used to satisfy the ENGG/SCIE elective requirement.

(6) Certain courses cannot be used to count toward the ENGG/SCIE requirement. Students must check the program website for the list of courses in concern.

(7) Students admitted through the School-based Admission Scheme do not need to enroll in ELEC 2930 for the Fall term of the first year.

A minimum of 102 credits is required for the BEng program in Computer Engineering. For students who are required to take MATH 1018, the minimum total required is 105 credits.