

(For students admitted in 2012-13 under the 3-year degree)

## Curriculum for BEng in Computer Science

Two program sequences, namely Sequence A and Sequence 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

(1)	COMP 1004**	Programming Fundamentals and Methodology	4
	COMP 1999	Industrial Training	0
or	COMP 2012	Object-Oriented Programming and Data Structures	4
	COMP 2012H	OOP and Data Structures (Honors Study Track)**	4**
	COMP 2611	Computer Organization	4
(2)	COMP 2711	Discrete Mathematical Tools for Computer Science	4
(2)	or COMP 2711H	Honors Discrete Mathematical Tools for Computer Science	4
	COMP 3031	Principles of Programming Languages	3
	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
	COMP 4982	Final Year Project	7
or	COMP 4982H	Final Year Thesis (Honors Study Track)	7
	ELEC 1100	Introduction to Electro-Robot Design	4
or	ELEC 2410	Basic Electronics	4
	ELEC 2600	Probability and Random Processes in Engineering	4
or	IELM 2510	Engineering Probability and Statistics	4

or	MATH 2411	Applied Statistics	4
or	MATH 2421	Probability	4
	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
<i>For Sequence B:</i>			
	MATH 1018	Concise Calculus	4

#### Elective courses

	Elective types		Minimum no. of courses	Minimum total credits
(3,5)	COMP	Computer Science Elective	5	15
(3,5)	COMP/ ELEC/ MATH	Computer Science Elective/ Electrical and Electronic Engineering Elective/ Mathematics Elective	2	6
(4,5)	ENGG	Engineering Elective	1	3
(6)	SB&M	Business and Management Elective	1	3
(5,6)	FREE	Free Elective	-	4
		<i>For Sequence A</i>	-	4

#### Other Requirements

(7)	COMP 1900	Academic and Professional Development I	0
	COMP 2900	Academic and Professional Development II	0
	COMP 3900	Academic and Professional Development III	0

#### **\*\*Remarks on course(s):**

- COMP 1004: The course was last offered in 2012-13 and was deleted subsequently.
- COMP 2012H: The course title will be changed to "Honors Object-Oriented Programming and Data Structures" starting from Fall, 2014-15.
- COMP 2012H: The credit value will be changed to 5 starting from Fall, 2014-15.

#### **Notes:**

- (1) 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.
- (2) With prior approval from the COMP UG Coordinator, students may take MATH 2343 to fulfill the requirement of COMP 2711/COMP 2711H.
- (3) COMP 1001, COMP 1002 and COMP 1003 cannot be used to count toward the COMP elective requirement. At least twelve credits must be at 3000-level or higher, among which at least six credits must be at 4000-level or higher. ELEC and MATH electives must be at 2000-level or higher. Students on the COMP honors track may earn one extra credit through taking COMP 3711H in replacement of COMP 3711. 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 requirements by one course (three credits).

- (4) All COMP and certain courses cannot be used to count toward the ENGG elective requirement. Students must check the departmental website at <http://www.cse.ust.hk/ug/faq-registration/> for the list of courses in concern.
- (5) ENGG 4950 can be used to count toward the COMP, ENGG or FREE elective requirement.
- (6) Certain courses cannot be used to count toward the SB&M or FREE elective requirements. Students must check the departmental web site at <http://www.cse.ust.hk/ug/faq-registration/> for the list of courses in concern.
- (7) Students admitted through the School-based Admission Scheme are not required to take COMP 1900 in the Fall term of the first year.

A minimum of 101 credits is required for the BEng program in Computer Science.