Curriculum for BSc in Computer Science

This BSc program in Computer Science is designed for students who wish to graduate with a BSc degree with dual program designation. It is not intended to lead to a standalone BSc degree in Computer Science. When enrolling in this BSc program in Computer Science, students are required to declare study in another BSc program. They are then required to complete the requirements of both BSc degrees, and will receive a BSc degree with two program designations upon graduation.

Students who have already registered in the BEng in Computer Science (or other undergraduate programs) and wish to study the BSc in Computer Science as their first major must apply for transfer into this program. They are required to declare study in another BSc program (second major) at the same time. Transfer applications should normally be submitted no earlier than the second semester of their first year of study and at the latest before the end of the add/drop period of their final semester of study.

Students who wish to study the BSc in Computer Science as their second major should follow the declaration procedures set by their (first) major department. Enrollment in this program (whether as first major or second major) requires a CGA of B+ or above, and is subject to the availability of a feasible study plan for the two BSc programs concerned. Applicants with lower qualifications may be considered on individual case basis.

Students who wish to discontinue study in the BSc in Computer Science as their first major may apply for transferring to the BEng program in Computer Science or other program. Application for the former must be submitted to the Department of Computer Science no later than the last day of the add/drop period in the first semester of their final year of study. Application for the latter with be considered and approved by the program department concerned.

Major Program Requirements

Core courses

	COMP	104	Programming Fundamentals and Methodology	[3-1-2:4]
	COMP	151	Object-Oriented Programming	[3-0-2:3]
(1)	COMP	170	Discrete Mathematical Tools for Computer Science	[3-1-0:4]
	COMP	171	Data Structures and Algorithms	[3-2-0:3]
	COMP	180	Computer Organization	[3-0-1:3]
	COMP	251	Principles of Programming Languages	[3-0-1:3]
	COMP	252	Operating Systems	[3-0-2:3]
	COMP	271	Design and Analysis of Algorithms	[3-1-0:3]

Required courses

	COMP	211	Introduction to Software Engineering	[3-1-1:4]
	MATH	111	Linear Algebra	[3-1-0:4]
	MATH	241	Probability	[3-1-0:4]
or	MATH	144	Applied Statistics	[3-1-0:4]

Elective courses

	Elective types		Minimum no. of courses	Minimum total credits
(2)	COMP	Computer Science Elective	5	15
(3,4)	FREE	Free Elective	-	27

General Education Requirements

Electives must be selected from amongst those general education courses that are listed under the section “Designated General Education Courses”.

	Elective types		Minimum no. of courses	Minimum total credits
(3,5)	GEE(SCIE)	Science General Education Elective	-	18
	or GEE(SB&M)	Business and Management General Education Elective		
	or GEE(H&SS)	Humanities and Social Science General Education Elective		

Required Courses in English Communication

(6)	LANG	106	English for Engineering Students I	[0-2-0:1]
	LANG	206	English for Engineering Students II	[0-2-0:1]
	LANG	306	English for Engineering Students III	[0-2-0:1]

Other Requirements

	COMP	001	Academic and Professional Development I	[0 credit]
	COMP	002	Academic and Professional Development II	[0 credit]
	COMP	003	Academic and Professional Development III	[0 credit]
(7)	HLTH	001	Healthy Life Style	[0 credit]

Notes:

(1) With prior approval from the COMP UG Coordinator, students may take MATH 132 to fulfill the requirement of COMP 170.

(2) COMP 101, COMP 102 and COMP 103 cannot be used to count toward the COMP elective requirement. At least twelve credits must be at 200-level or higher, among which at least six credits must be at 300-level or higher. With prior approval of the COMP UG Coordinator, up to two COMP electives can be satisfied by taking computer science related courses in a non-COMP department. Students on the COMP honors study track may earn one extra credit through taking COMP 151H or COMP 271H in replacement of COMP 151 and COMP 271 respectively. Students who have earned a total of 3 extra credits through taking COMP 151H, COMP 271H, COMP 190, COMP 290 or COMP 390 may reduce the COMP elective requirements by one course and three credits.
(3) Certain courses cannot be used to count toward the GEE or FREE elective requirements. Students must check the departmental web site at *http://www.cs.ust.hk/ug/faq-registration/* for the list of such courses.
(4) Students in this program are expected to also complete another BSc program and graduate with a dual program designation. Most of the Free electives are expected to be used for satisfying the requirements of the other BSc program.
(5) Of these courses, at least one course in Humanities and one in Social Science are required. SOSC 111 is a recommended elective. Students who have declared another major in a non-Engineering program may be waived 3 credits of the GEE requirements from the school offering the second program and take 3 credits of FREE elective instead.
(6) The LANG requirement may be fulfilled by completing the language courses required by the other declared BSc program. Approval from the COMP UG Coordinator is required at the time the dual program designation is declared.
(7) Students are required to take and pass this course in their first year of study. Details of the course and its requirements are announced on the course website *http://www.ab.ust.hk/sao/HLTH001* managed by the Student Affairs Office.

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

Recommended Pattern of Study for BSc in Computer Science and Mathematics

Note: This study pattern is for students who have declared a COMP-MATH dual program designation; it is one way to simultaneously satisfy the requirements of both the BSc COMP and the BSc MATH (General Mathematics Option). Please contact the COMP UG Coordinator for other possible study patterns.

1st year	Fall	C	COMP 104, COMP 170	
		R	LANG 106	
		E	MATH 101, GEE	
		O	COMP 001, HLTH 001	(Total: 15 credits)
	Spring	C	COMP 151, COMP 171, COMP 180	
		R	LANG 106, MATH 111	
		E	MATH 201	
		O	COMP 001, HLTH 001	(Total: 18* credits)
2nd year	Fall	C	COMP 251, COMP 252, COMP 271	
		R	LANG 206	
		E	MATH 110, MATH 301	
		O	COMP 002	(Total: 17 credits)
	Spring	R	COMP 211, LANG 206, MATH 144/MATH 241	
		E	COMP, MATH 151, GEE	
		O	COMP 002	(Total: 19* credits)
3rd year	Fall	R	LANG 306	
		E	two COMP, two MATH, GEE	
		O	COMP 003	(Total: 17 credits)
	Spring	R	LANG 306	
		E	two COMP, MATH 304, two GEE	
		O	COMP 003	(Total: 17* credits)

* *LANG 106, LANG 206 and LANG 306 are two-semester courses. The course credit (1 credit) will be earned on completion of the courses at the end of the respective Spring Semester.*

C = core course; R = required course; E = elective course; O = other course