

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 transfer to the BEng program in Computer Science or other program. Application for transfer to the BEng program in Computer Science must be submitted to the Department of Computer Science and Engineering no later than the last day of the add/drop period in the first semester of their final year of study. Application for transfer to another program should be submitted to 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 for Undergraduate Students”.

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

Required Courses in English Communication

(6,7)	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

(8)	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]
(9)	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) The course can also be replaced by LANG 101.
- (8) COMP 001 is meant for Fall and Spring semester year one students, COMP 002 for Fall and Spring semester year two students, COMP 003 for Fall and Spring semester year three students. Students are required to register for the appropriate section during semesters they are in residence at UST in the program. As an example, students who enter the program in the Spring semester of year one and go on exchange in Spring semester of year two will be expected to register for COMP 001 (Spring), COMP 002 (Fall) and COMP 003 (Fall and Spring).
- (9) 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 COMP 001 [#] , HLTH 001, LANG 106 E MATH 101, GEE	(Total: 15 credits)
	Spring	C COMP 151, COMP 171, COMP 180 R COMP 001 [#] , HLTH 001, LANG 106, MATH 111 E MATH 201	(Total: 18* credits)
2nd year	Fall	C COMP 251, COMP 252, COMP 271 R COMP 002 [#] , LANG 206 E MATH 110, MATH 301	(Total: 17 credits)
	Spring	R COMP 002 [#] , COMP 211, LANG 206, MATH 144/MATH 241 E COMP, GEE, MATH 151	(Total: 19* credits)
3rd year	Fall	R COMP 003 [#] , LANG 306 E two COMP, GEE, two MATH	(Total: 17 credits)
	Spring	R COMP 003 [#] , LANG 306 E two COMP, two GEE, MATH 304	(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.

Students are required to register for the appropriate section during semesters they are in residence at UST in the program.

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