

(Study Scheme - English)

Programme Title Computer Science and Engineering	
Study Scheme <p style="text-align: center;">Applicable to students admitted in 2019-20 and thereafter</p> Major Programme Requirement Students are required to complete a minimum of 72 units of courses as follows:	
	Units
1. School Package: BIO1001, CHM1001, CSC1001,1002, MAT1001/1003, 1002/1004, 2040, PHY1001, STA2001	25
2. Required Courses: CSC3001, 3002, 3050, 3100, 3150, 3170, 4001, 4005, EIE2050, PHY1002	29
3. Elective Courses: Six courses selected from two groups, at least 3 from (a) and 2 from (b), with the total of 18 credit units.	
(a) CSC3180, 3185, 3200, 4008, 4020, 4120, 4150, 4160, 4170, 4180, 4190, EIE3001,3080, 4001, 4007, 4180, 4190	9-12
(b) BIM3001, DME3004, 3007, 4004, 4006, ECO2011, EIE3280, ERG3001, 3010, 4001, MAT3007, 3220, PHY2001	6-9
Total:	72
Notes:	
[1] EIE2050, all CSC courses, and all elective courses will be included in the calculation of Major GPA for honours classification.	

(Study Scheme - Chinese)

課程名稱 計算機科學與技術	
修讀辦法 二〇一九至二〇年度及以後入學學生適用	
主修課程要求	
學生須至少修畢以下科目共 72 學分：	
	學分
1. 學院課程： BIO1001, CHM1001, CSC1001, 1002, MAT1001/1003, 1002/1004, 2040, PHY1001, STA2001	25
2. 必修科目： CSC3001, 3002, 3050, 3100, 3150, 3170, 4001, 4005 EIE2050, PHY1002	29
3. 選修科目： 從以下課程中選修6科，(a)項的科目中選修至少3科，(b)項的科目中選修至少2科，選修科目總學分為18學分	
(a) CSC3180, 3185, 3200, 4008, 4020, 4120, 4150, 4160, 4170, 4180, 4190, EIE3001,3080, 4001, 4007, 4180, 4190	9-12
(b) BIM3001, DME3004, 3007, 4004, 4006, ECO2011, EIE3280, ERG3001, 3010, 4001,MAT3007, 3220, PHY2001	6-9
共:	72
註： [1] EIE2050,CSC全部科目以及全部專業選修科目將會計入主修科目之平均績點，並用以釐定學位等級。	

(Recommended Course Pattern - English)

Recommended Course Pattern

- Sufficient units should be allowed in each term for students to fulfill the University Core Requirements, which include: (i) 3 units of Chinese; (ii) 12 units of English; (iii) 1 unit of IT; (iv) 18 units of General Education; and (v) 2 units of Physical Education and Health.
- Programmes with different streams/concentrations are required to provide the recommended pattern for each stream/concentration.

Major Programme Requirement of <u>Computer Science and Engineering</u>		
	Recommended Course Pattern	Units
First Year of Attendance	1 st term School Package: CHM1001, MAT1001/1003, PHY1001	9
	2 nd term School Package: CSC1001, 1002, MAT1002/1004, STA2001	10
Second Year of Attendance	1 st term School Package: MAT2040 Major Required: CSC3001, EIE2050, PHY1002	3 8
	2 nd term School Package: BIO1001 Major Required: CSC3002, 3050	3 6
Third Year of Attendance	1 st term Major Required: CSC3100, 3150 Major Elective(s): Any one elective course	6 3
	2 nd term Major Required: CSC3170, 4001 Major Elective(s): Any one elective course	6 3
Fourth Year of Attendance	1 st term Major Required: CSC4005 Major Elective(s): Any two elective courses	3 6
	2 nd term Major Elective(s): Any two elective courses	6
Total (Major Requirement including School Package):		72

(Recommended Course Pattern – Chinese)

修課推介

1. 每學期均須預留足夠學分讓同學符合大學核心課程要求，包括：(一) 中文三學分；(二) 英文十二學分；(三) 資訊科技一學分；(四) 通識教育十八學分及(五) 體育與健康兩學分。
2. 有不同專修範圍的課程須為每項專修範圍提供課推介。

計算機科學與技術主修課程要求		
	修課推介	學分
第一修業學年	第一學期 學院課程: CHM1001, MAT1001/1003, PHY1001	9
	第二學期 學院課程: CSC1001, 1002, MAT1002/1004, STA2001	10
第二修業學年	第一學期 學院課程: MAT2040 主修必修科目: CSC3001, EIE2050, PHY1002	3 8
	第二學期 學院課程: BIO1001 主修必修科目: CSC3002, 3050	3 6
第三修業學年	第一學期 主修必修科目: CSC 3100, 3150 主修選修科目: 任何一科選修科目	6 3
	第二學期 主修必修科目: CSC3170, 4001 主修選修科目: 任何一科選修科目	6 3
第四修業學年	第一學期 主修必修科目: CSC4005 主修選修科目: 任何兩科選修科目	3 6
	第二學期 主修選修科目: 任何兩科選修科目	6
合共 (主修要求包括學院課程):		72

Course List

I. School Package for the School of Science and Engineering

Course Code	Course Title (English)	Course Title (Chinese)	Unit(s)
BIO1001	General Biology	普通生物	3
CHM1001	General Chemistry	普通化學	3
CSC1001	Introduction to Computer Science: Programming Methodology	計算機科學導論：程序設計方法	3
CSC1002	Computational Laboratory	計算機實驗	1
Option A*	MAT1001	Calculus I	微積分（一）
	MAT1002	Calculus II	微積分（二）
Option B*	MAT1003	Mathematical Analysis I	數學分析（一）
	MAT1004	Mathematical Analysis II	數學分析（二）
MAT2040	Linear Algebra	線性代數	3
PHY1001	Mechanics	力學	3
STA2001	Probability and Statistics I	概率及統計（一）	3

*Students must complete either Option A or Option B.

II. Major Required Courses

Course Code	Course Title (English)	Course Title (Chinese)	Unit(s)
CSC3001	Discrete Mathematics	離散數學	3
CSC3002	Introduction to Computer Science: Programming Paradigms	計算機科學導論：程序設計範式	3
CSC3050	Computer Architecture	計算機體系結構	3
CSC3100	Data Structures	數據結構	3
CSC3150	Operating System	操作系統	3
CSC3170	Database System	數據庫系統	3
CSC4001	Software Engineering	軟件工程	3
CSC4005	Distributed and Parallel Computing	分佈式及並行式計算	3
EIE2050	Digital Logic and Systems	數字邏輯與系統	3
PHY1002	Physics Laboratory	物理實驗	2

III. Major Elective Courses

Course Code	Course Title (English)	Course Title (Chinese)	Unit(s)
BIM3001	Bioinformatics	生物信息學	3
CSC3180	Fundamentals of Artificial Intelligence	人工智能之基本原理	3
CSC3185	Introduction to Multimedia Systems	多媒體系統導論	3

CSC3200	Video Games Design and Development	電子遊戲設計與開發	3
CSC4008	Techniques for Data Mining	數據挖掘技術	3
CSC4020	Fundamentals of Machine Learning	機器學習之基礎課程	3
CSC4120	Design and Analysis of Algorithms	算法設計及分析	3
CSC4150	Mobile Computing and Applications Development	流動計算和應用開發	3
CSC4160	Cloud Computing	雲端計算	3
CSC4170	Social Networks	社交網絡	3
CSC4180	Compiler Construction	編譯器設計	3
CSC4190	Internet Programming and Applications	互联网编程与应用	3
DME3004	Aesthetic and Human Values in Engineering Product Design	工程產品設計審美與人類價值	3
DME3007	Simulation	仿真	3
DME4004	Production Planning and Project Management	生產策劃與項目管理	3
DME4006	Organizational Behaviour	組織行為學	3
ECO2011	Basic Microeconomics	基本個體經濟學	3
EIE3001	Signals and Systems	信號與系統	3
EIE3080	Microprocessors and Computer Systems	微處理與計算機系統	3
EIE3280	Networks: Technology, Economics and Society	网络: 技术、经济和社会	3
EIE4001	Introduction to Internet Engineering	網絡工程導論	3
EIE4007	Computer and Network Security	計算機及網絡安全	3
EIE4180	Network Software Design and Programming	網絡軟件之程序設計	3
EIE4190	Multimedia Coding and Processing	多媒體編碼和處理	3
ERG3001	Engineering Ethics, Safety and Practice	工程倫理、安全及實務	3
ERG3010	Data and Knowledge Management	數據與知識管理	3
ERG4001	Principles of Entrepreneurship	創業原則	3
MAT3007	Optimization	最優化	3
MAT3220	Operations Research	運籌學	3
PHY2001	Electricity and Magnetism	電磁學	3