

# Four-Year Study Plan of Computer Science and Technology Programme (2022 cohort)

Rev 20231106

Rev 2023/100

Course Code	Course Title	Year One		Year Two		Year Three		Year Four	
		Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2
I. Major Required Courses (54 Units)									
COMP1023	Foundations of C Programming	3							
MATH1003	Linear Algebra	3							
MATH1123	Calculus for Science and Engineering	3							
COMP1033	Systems and Web Development Workshop		3						
COMP2013	Object-Oriented Programming		3						
MATH2003	Discrete Structures		3						
COMP1003	Computer Organisation			3					
COMP2003	Data Structures and Algorithms			3					
COMP3013	Database Management Systems			3					
COMP2073	Data Programming Workshop				3				
COMP3003	Data Communications and Networking				3				
COMP3023	Design and Analysis of Algorithms				3				
COMP3033	Operating Systems				3				
COMP3173	Compiler Construction					3			
DS4023	Machine Learning					3			
COMP3063	Software Engineering						3		
COMP3253	Advanced Software Development Workshop						3		
COMP4004	Final Year Project I (COMP)							3	
II. Major Elective Courses (21 Units)									
ME01 ME02 ME03 ME04 ME05 ME06 ME07						6	6	6	3 <sup>③</sup>
III. University Core Courses (37 Units)									
UCLC1003	University Chinese	3							
UCLC1013	English for Academic Purposes I	3							
UCLC1023	English for Academic Purposes II		3						
UCLC1033	English for Academic Purposes III				3				
CHI1103	Introduction to Modern Social Theories					3			
CHI1203	Morality and Foundations of Law			3					
CHI1063	Chinese Culture and Modern China				3				
CHI1073	Contemporary Chinese Society and Thought I		3						
CHI1253	Contemporary Chinese Society and Thought II		3						
CHI1193	Contemporary World and China <sup>①</sup>				2				
MT1003	Military Training	2							
WPEX1013	Emotional Intelligence		1						
WPEX2013	Experiential Arts <sup>②</sup>				1				
WPEX2023/ WPEX2033	Voluntary Service <sup>②</sup> , or Environmental Awareness <sup>②</sup>			1					
UCHL1XX3	Healthy Lifestyle <sup>②</sup>	1	1		1				
IV. General Education Courses (18 Units)									
Level 1	History and Civilization <sup>②</sup>			3					
Foundational Courses	Quantitative Reasoning <sup>②</sup>	3							
	Values and the Meaning of Life <sup>③</sup>		3						
Level 2 Interdisciplinary Thematic Courses	Culture, Creativity and Innovation <sup>④</sup> , or Science, Technology and Society <sup>④</sup> , or Sustainable Communities <sup>④</sup>					3 <sup>④</sup>	3 <sup>④</sup>		
Level 3 GE Capstone Courses	Service-Learning Course <sup>⑤</sup> , or Service Leadership Education Course <sup>⑤</sup> , or Experiential Learning Course <sup>⑤</sup> , or Interdisciplinary Independent Study <sup>⑤</sup>								3
V. Free Elective Courses (18 Units)									
FE01 FE02 FE03 FE04 FE05 FE06				3		3	3	6	3
Total Units: 148		21	23	19	22	21	18	15	9

<sup>①</sup> This 2-unit course requires student to attend at least 10 lectures within his/her first two years of study.

<sup>②</sup> This denotes a course category in which a list of courses may be developed for students' selection. Students are expected to refer to the Online Course Selection System for courses available under each category.

<sup>③</sup> Students who continue with the final year project in the second semester of Year 4 should register COMP4005 Final Year Project II (COMP) as a major elective during the Online Course Selection (or Course Add/Drop) period.

<sup>④</sup> Students are required to take GFVM1033 Ethics in An Era of Artificial Intelligence and Robotics or GFVM1043 Ethics in Daily Life and Life Sciences under this category.

<sup>⑤</sup> Students are not allowed to take GTSC2093 IT for Success in Everyday Life and Work under this category.

## ME Course List of CST (2022 cohort)

Rev 20250512

Course Code	Course Title	Units
<b>Intelligence Technology Stream</b>		
COMP3073	Introduction to Robotics	3
COMP3083	Numerical Computation	3
COMP3103	Design Patterns	3
COMP3123	Software Testing	3
COMP3163	Mobile Application Development	3
COMP3183	Financial Computing	3
COMP3193	Cloud Computing	3
COMP3213	Internet of Things	3
COMP3223	Mobile Computing	3
COMP4003	Theory of Computation	3
COMP4005	Final Year Project II (COMP)	3
COMP4023	Computer and Network Security	3
COMP4033	Computer Graphics	3
COMP4043	Data Mining and Knowledge Discovery	3
COMP4053	Database System Implementation	3
COMP4063	Digital Media Computing	3
COMP4073	Distributed Computing Systems	3
COMP4083	E-technology Architectures, Tools and Applications	3
COMP4093	Internet and the World Wide Web	3
COMP4103	Artificial Intelligence and Machine Learning	3
COMP4113	Computer Vision and Pattern Recognition	3
COMP4123	Information Retrieval and Search Engine	3
COMP4133	System Analysis and Design	3
COMP4143	Introduction to Web Intelligence	3
COMP4153	Quantum Finance and Intelligent Financial Trading Systems	3
COMP4163	Neural Networks and Deep Learning	3
COMP4173	Digital Image Processing	3
COMP4213	Wireless Communication and Mobile Computing	3
DS3023	Digital Logic Design	3
DS4033	Text Mining and Analytics	3
DS4053	Introduction to Bioinformatics	3
GCAP3123	Computer Technology and AI Project	3
STAT3003	Survey Sampling	3
STAT3073	Statistical Computing	3
STAT4013	Multivariate Analysis	3
<b>Game Design Technology Stream</b>		
COMP3233	Video Game Programming	3
COMP4033	Computer Graphics	3
COMP4063	Digital Media Computing	3
COMP4183	Game Engine Design	3
COMP4193	Multiplayer Games and Accessories	3
DS3023	Digital Logic Design	3
GCAP3123	Computer Technology and AI Project	3
MAD3033	3D Design Fundamentals	3
MAD3063	Animation	3
MAD3103	Computer Game Design	3
<b>Other Common Major Elective Courses</b>		
AI3043	Bayesian Networks	3
AI3073	Introduction to Bioinformatics	3
AI3133	Natural Language Processing	3
AI3153	Human-Computer Interaction	3
AI4023	Deep Reinforcement Learning	3
BIOL2003	General Biology	3
COMP4203	Linear Systems	3
COMP4223	Deep Learning for Computer Vision	3
COMP4233	Functional Programming	3
COMP4243	Mathematical and Computing Methods	3
COMP4253	AI-Generated Content	3
COMP4263	3D Computer Vision	3
DS3053	Requirements Engineering for Data Science Projects	3
DS3063	Computational Statistics and Programming	3
DS4073	Introduction to Data Visualisation	3
DS4083	Big Data Analytics	3
DS4093	Introduction to Recommender System	3
MATH1163	Advanced Calculus	3
PHYS2003	Principles of Physics	3

\* Students who continue with the final year project in the second semester of Year 4 should register COMP4005 Final Year Project II (COMP) as a major elective during the Online Course Selection (or Course Add/Drop) period.