

## Four-Year Study Plan of Artificial Intelligence Programme (2024 cohort)

Rev 20240724

Rev 202407/24

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)									
AI1003	Python Programming	3							
MATH1003	Linear Algebra	3							
MATH1123	Calculus for Science and Engineering	3							
AI1013	Object-Oriented Programming		3						
AI1023	Database Management Systems		3						
AI2033	Probability and Statistics		3						
AI2003	Data Structures and Algorithm Analysis			3					
AI2013	Introduction to Artificial Intelligence			3					
MATH2003	Discrete Structures			3					
AI2023	Artificial Intelligence Workshop			3					
AI3013	Machine Learning				3				
AI3023	Machine Learning Workshop				3				
COMP3023	Design and Analysis of Algorithms				3				
AI3003	Neural Networks and Deep Learning					3			
AI3163	Computer Architecture and Operating Systems					3			
AI3043	Bayesian Networks						3		
AI4003	Optimization for Machine Learning						3		
AI4004	Final Year Project I (AI) <sup>③</sup>							3	
II. Major Elective Courses (21 Units)									
ME01 ME02 ME03 ME04 ME05 ME06 ME07						6	6	6	3
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				
CHII103	Introduction to Modern Social Theories					3			
CHII203	Morality and Foundations of Law			3					
CHII063	Chinese Culture and Modern China				3				
CHII073	Contemporary Chinese Society and Thought I		3						
CHII253	Contemporary Chinese Society and Thought II		3						
CHII193	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>②</sup>		3						
Level 2 Interdisciplinary Thematic Courses	Culture, Creativity and Innovation <sup>②</sup> , or Science, Technology and Society <sup>②</sup> , or Sustainable Communities <sup>②</sup>				3 <sup>②</sup>	3 <sup>②</sup>			
Level 3 GE Capstone Courses	Service-Learning Course <sup>②</sup> , or Service Leadership Education Course <sup>②</sup> , or Experiential Learning Course <sup>②</sup> , or Interdisciplinary Independent Study <sup>②</sup>								3
V. Free Elective Courses (18 Units)									
FE01 FE02 FE03 FE04 FE05 FE06						3	6	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> If students select a specific concentration, they must complete the final year's project for the specific concentration, i.e., students from AI in Business and Finance Concentration are required to complete a project using AI to solve a problem in Business and Finance, students from AI in Multimedia Concentration are required to complete a project using AI to solve a problem in Multimedia.

<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 AI (2024 cohort)**

Rev 20241202

Code	Course Title	Units
AI2053	Introduction to Cognitive Science	3
AI2063	Game Theory	3
AI3033	Introduction to Robotics	3
AI3053	Intelligent Agent Technology	3
AI3063	Neuroscience in Artificial Intelligence	3
AI3073	Introduction to Bioinformatics	3
AI3093	Decision Theory	3
AI3103	Regression Analysis	3
AI3113	Speech Processing and Recognition	3
AI3123	Digital Image Processing	3
AI3133	Natural Language Processing	3
AI3143	Computer Vision	3
AI3153	Human-Computer Interaction	3
AI4005	Final Year Project II (AI) <sup>#</sup>	3
AI4013	Knowledge Graph Engineering	3
AI4023	Deep Reinforcement Learning	3
AI4033	Large-Scale Distributed Multi-Agent Systems	3
AI4053	Fintech	3
AI4063	Pattern Recognition	3
AI4083	Multimedia Mining and Analytics	3
AI4093	Design and Implementation of Intelligent Vision System	3
COMP3263	Intelligent Internet of Things	3
COMP3273	5G Networks and Mobile Computing	3
COMP4003	Theory of Computation	3
COMP4043	Data Mining and Knowledge Discovery	3
COMP4153	Quantum Finance and Intelligent Financial Trading Systems	3
COMP4243	Mathematical and Computing Methods	3
COMP4253	AI-Generated Content	3
DS4073	Introduction to Data Visualisation	3
DS4083	Big Data Analytics	3
DS4093	Introduction to Recommender System	3
MATH1153	Applied Linear Algebra and Linear Dynamics	3
MATH1163	Advanced Calculus	3
MATH3153	Advanced Probability	3
PHYS2003	Principles of Physics	3
STAT4013	Multivariate Analysis	3

<sup>#</sup> Students who continue with the final year project in the second semester of Year 4 should register AI4005 Final Year Project II (AI) as a major elective during the Online Course Selection (or Course Add/Drop) period.