

## Four-Year Study Plan of Artificial Intelligence Programme (2021 cohort)

Rev 20231214

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Course Code	Course Title	Year One				Year Two		Year Three		Year Four	
		Sem 1	Winter	Sem 2	Summer	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							
AI1033	Introduction to Computer Systems			3							
AI2003	Data Structures and Algorithm Analysis					3					
AI2013	Introduction to Artificial Intelligence					3					
AI2033	Probability and Statistics					3					
MATH2003	Discrete Structures					3					
AI2023	Artificial Intelligence Workshop						3				
AI2043	Operating Systems						3				
AI3013	Machine Learning						3				
AI3003	Neural Networks and Deep Learning							3			
AI3023	Machine Learning Workshop							3			
AI3043	Bayesian Networks								3		
AI4003	Optimization for Machine Learning								3		
AI4004	Final Year Project I (AI) <sup>③</sup>									3	
AI4005	Final Year Project II (AI) <sup>④</sup>										3
II. Major Elective Courses (21 Units)											
ME01 ME02 ME03 ME04 ME05 ME06 ME07								6	9 6	6	3
III. University Core Courses (36 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 Thoughts (Theories)			3							
CHII183	Contemporary Chinese Society and Thoughts (Social Practice)				2						
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					
UCLH1XX3	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	3			
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								6	6	6	
Total Units: 147		19	5	20	2	19	22	21	18	15	6

<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.

## ME Course List of AI (2021 cohort)

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Code	Course Title	Units
AI2053	Introduction to Cognitive Science	3
AI2063	Game Theory	3
<del>AI2073</del>	<del>Pereception</del>	<del>3</del>
AI3033	Introduction to Robotics	3
<del>AI3043</del>	<del>Bayesian Networks</del>	<del>3</del>
AI3053	Intelligent Agent Technology	3
AI3063	Neuroscience in Artificial Intelligence	3
AI3073	Introduction to Bioinformatics	3
<del>AI3083</del>	<del>Artificial Intelligence Project</del>	<del>3</del>
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
<del>AI4005</del>	<del>Final Year Project II (AI)<sup>#</sup></del>	<del>3</del>
AI4013	Knowledge Graph Engineering	3
AI4023	Deep Reinforcement Learning	3
AI4033	Large-Scale Distributed Multi-Agent Systems	3
<del>AI4043</del>	<del>Artificial Intelligence Internship</del>	<del>3</del>
AI4053	Fintech	3
AI4063	Pattern Recognition	3
AI4083	Multimedia Mining and Analytics	3
AI4093	Design and Implementation of Intelligent Vision System	3
<del>COMP3023</del>	<del>Design and Analysis of Algorithms</del>	<del>3</del>
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
<del>COMP4243</del>	<del>Mathematical and Computing Methods</del>	<del>3</del>
<del>COMP4253</del>	<del>AI-Generated Content</del>	<del>3</del>
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.