Four-Year Study Plan of Applied Mathematics Programme (2025 cohort)

Rev 20250422

Course Code	Course Title	Year One			Year Two			Year Three		Year Four	
		Sem 1	Winter	Sem 2	Sem 1	Sem 2	Summer	Sem 1	Sem 2	Sem 1	Sem 2
I. Major Required Courses (51 Units)											
MATH1053	Linear Algebra I	3									
MATH1073	Calculus I	3									
COMP1023	Foundations of C Programming			3							
MATH1063	Linear Algebra II			3							
MATH1083	Calculus II			3							
COMP2003	Data Structures and Algorithms				3						
MATH2043	Ordinary Differential Equations				3						
MATH2053	Mathematical Analysis				3						
STAT2063	Probability Theory				3						
MATH4083	Numerical Analysis					3					
OR4023	Optimization					3					
STAT3083	Applied Statistics					3					
MATH4093	Complex Analysis							3			
MATH4103	Mathematical Modelling							3			
MATH3033	Partial Differential Equations								3		
MATH3163	Real Analysis								3		
MATH4123	Final Year Project I (MATH)									3③	
II. Major Elective Courses (15 Units)											
ME01 ME02 ME03 ME04 ME05						3		3	3	3	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							
UCAI1003	Introduction to AI Literacy	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 China①						2				
MT1003	Military Training		2								
WPEX1013	Emotional Intelligence			1							
WPEX2013	Experiential Arts②					1					
WPEX2023/ WPEX2033	Voluntary Service②, or Environmental Awareness②				1						
UCHL1XX3	Healthy Lifestyle②	1		1		1					
IV. General Education Courses (18 Units)											
Level 1 Foundational Courses	History and Civilization②				3						
	Quantitative Reasoning②	3									
	Values and the Meaning of Life④			3							
Level 2 Interdisciplinary Thematic Courses	Culture, Creativity and Innovation②, or Science, Technology and Society②, or Sustainable Communities②							3	3		
Level 3 GE Capstone Courses	Service-Learning Course②, or Service Leadership Education Course②, or Experiential Learning Course②, or Interdisciplinary Independent Study②										3
V. Free Elective Courses (27 Units)											
FE01 FE02 FE03 FE04 FE05 FE06 FE07 FE08 FE09					3			9	6	9	
Total Units: 148		**19**	**2**	**23**	**22**	**20**	**2**	**21**	**18**	**15**	**6**

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

② 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.

③ Students who continue with the final year project in the second semester of Year 4 should register MATH4163 Final Year Project II (MATH) as a major elective during the Online Course Selection (or Course Add/Drop) period.

④ 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.

ME Course List of AM (2025 cohort)

Rev 20260120

Course Code	Course Title	Units
BIOL2003	General Biology	3
DS4023	Machine Learning	3
FINM2073	Introduction to Python for Mathematical Computing	3
FINM3013	Introduction to Financial Derivatives	3
FINM3113	Financial Engineering Workshop	3
FINM3123	Introduction to Econometrics	3
FINM3133	Time Series for Finance and Macroeconomics	3
FINM3143	Financial Mathematics	3
FINM4053	Numerical and Simulation Techniques in Finance	3
FINM4063	Stochastic Calculus for Finance	3
MATH3013	Discrete Mathematics	3
MATH3143	Differential Geometry	3
MATH3173	Applied Stochastic Process	3
MATH4003	Graph Theory	3
MATH4033	Computational Finance	3
MATH4113	Selected Topics in Applied Analysis	3
MATH4143	Functional Analysis	3
MATH4153	Numerical Methods for Differential Equations	3
MATH4163	Final Year Project II (MATH)#	3
OR3013	Linear Programming and Integer Programming	3
OR3023	Simulation	3
PHYS2003	Principles of Physics	3
STAT4013	Multivariate Analysis	3
STAT4073	Data Mining	3

Students who continue with the final year project in the second semester of Year 4 should, with the approval of the Programme, register MATH4163 Final Year Project II (MATH) as a major elective in that semester.