

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)									3 ^③	
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									
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 ^①						2				
MT1003	Military Training		2								
WPEX1013	Emotional Intelligence			1							
WPEX2013	Experiential Arts ^②					1					
WPEX2023/ WPEX2033	Voluntary Service ^② , or Environmental Awareness ^②				1						
UCHL1XX3	Healthy Lifestyle ^②	1		1		1					
IV. General Education Courses (18 Units)											
Level 1 Foundational Courses	History and Civilization ^②				3						
	Quantitative Reasoning ^②	3									
	Values and the Meaning of Life ^②			3							
Level 2 Interdisciplinary Thematic Courses	Culture, Creativity and Innovation ^② , or Science, Technology and Society ^② , or Sustainable Communities ^②							3	3		
Level 3 GE Capstone Courses	Service-Learning Course ^② , or Service Leadership Education Course ^② , or Experiential Learning Course ^② , or Interdisciplinary Independent Study ^②										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.

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

Rev 20260227

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)									3	
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									
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 ^①						2				
MT1003	Military Training		2								
WPEX1013	Emotional Intelligence			1							
WPEX2013	Experiential Arts ^②					1					
WPEX2023/ WPEX2033	Voluntary Service ^② , or Environmental Awareness ^②				1						
UCHL1XX3	Healthy Lifestyle ^②	1		1		1					
IV. General Education Courses (18 Units)											
Level 1 Foundational Courses	History and Civilization ^③				3						
	Quantitative Reasoning ^③			3							
	Values and the Meaning of Life ^③			3							
Level 2 Interdisciplinary Thematic Courses	Culture, Creativity and Innovation ^③ , or Science, Technology and Society ^③ , or Sustainable Communities ^③							3	3		
Level 3 GE Capstone Courses	Service-Learning Course ^③ , or Service Leadership Education Course ^③ , or Experiential Learning Course ^③ , or Interdisciplinary Independent Study ^③										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 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.

*** Common Core Course (Required) - CCR**

④ Students are required to take MATH1053 Linear Algebra I under MR.

⑤ Students are required to take MATH1073 Calculus I under MR.

⑥ Students are required to take COMP1023 Foundations of C Programming under MR.

⑦ Students are required to take MATH1063 Linear Algebra II under MR.

⑧ Students are required to take MATH1083 Calculus II under MR.

⑨ Students are required to take STAT2063 Probability Theory under MR.

⑩ Students are required to take MATH4123 Final Year Project I (MATH) under MR.

⑪ Students are required to take MATH4163 Final Year Project II (MATH) under ME.

Common Core Course (Elective) - CCE:

The CCE courses listed below are strongly recommended for students of the Math plus Applied Mathematics Programme.

AI3003	Neural Networks and Deep Learning	FE
AI3133	Natural Language Processing	FE
STAT3033	Bayesian Statistics	FE
STAT4073	Data Mining	ME

ME Course List of AM (2025 cohort)

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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

Except for the Math plus Applied Mathematics Programme, 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.