Curriculum for CN Yang Scholars Programme
Mathematical Sciences
(For AY2020-21 intake)

Course Type	AU
Core Courses	74
Major Prescribed Electives	22
GER-Core	21
GER-PE	0
Unrestricted Electives	24
Total	**141**

	Course Code	Course Title	Type	AU
	CY1001	Introductory Biology	Core	3
	CY1101	Principles of Modern Chemistry	Core	3
Year 1 Semester 1	CY1308	Physics	Core	3
	CY1500	Introductory Research Methodology	Core	3
	CY1601	Mathematics I	Core	4
	PS0001	Introduction to Computational Thinking	GER-Core	3
			Total AUs	19

	Course Code	Course Title	Type	AU
	CY1007	Climate Change	Core	3
	CY1307	Relativity and Quantum Physics	Core	3
	CY1400	CNYSP Undergraduate Research Experience	Core	3
Year 1 Semester 2	CY1602	Mathematics II	Core	4
	MH1301	Discrete Mathematics	Core	3
	MH1403	New Algorithms & Computing	Core	3
	GC0001	Introduction to Sustainability: Multidisciplinary Approaches and Solutions	GER-Core	1
			Total AUs	20

	Course Code	Course Title	Type	AU
Year 1 Special Term	CY2003	Research Attachment 3 (Making & Tinkering)	Core	4
	Overseas Learning Trip			
			Total AUs	4

	Course Code	Course Title	Type	AU
	CY2001	Research Attachment 1	Core	4
	CY0002	Ethics	GER-Core	3
	MH1300	Foundations of Mathematics	Core	4
Year 2 Semester 1	MH2500	Probability and Introduction to Statistics	Core	4
	MH2200	Groups and Symmetries	Core	3
	ML0003	Kickstart your Career Success	GER-Core	1
	PS0003	Plan your career Path	GER-Core	1
	xxxxxx	Unrestricted Elective / Second Major	UE	3
			Total AUs	23

	Course Code	Course Title	Type	AU
Year 2 Semester 2	CY0001	Writing Across the Disciplines	GER-Core	3
	MH3100	Real Analysis I	Core	4
	MH3110	Ordinary Differential Equations	Core	4
	PS0002	Introduction to Data Science & AI	GER-Core	3
	xxxxxx	School Major PE (choose from Table B)	Major PE	4
	xxxxxx	Unrestricted Elective / Second Major	UE	3
			Total AUs	**21**

	Course Code	Course Title	Type	AU
Year 3 Semester 1	xxxxxx	School Major PE (choose from Table B)	Major PE	3
	xxxxxx	School Major PE (choose from Table B)	Major PE	4
	xxxxxx	Unrestricted Elective / Second Major	UE	3
	xxxxxx	Unrestricted Elective / Second Major	UE	3
	CY0006	Enterprise, Innovation and Leadership	GER-Core	3
	PS8001	Defence Science	GER-Core	3
			Total AUs	**19**

	Course Code	Course Title	Type	AU
Year 3 Semester 2	xxxxxx	School Major PE (choose from Table B)	Major PE	4
	xxxxxx	School Major PE (choose from Table B)	Major PE	3
	xxxxxx	Unrestricted Elective / Second Major	UE	3
	xxxxxx	Unrestricted Elective / Second Major	UE	3
			Total AUs	**13**

	Course Code	Course Title	Type	AU
Year 3 Special Term & Year 4 Semester 1	MH4111	Overseas Final Year Project	Core	12
			Total AUs	**12**

	Course Code	Course Title	Type	AU
Year 4 Semester 2	xxxxxx	School Major PE (choose from Table B)	Major PE	4
	xxxxxx	Unrestricted Elective / Second Major	UE	3
	xxxxxx	Unrestricted Elective / Second Major	UE	3
			Total AUs	**10**
			GRAND TOTAL	**141**

Table B: School Major PE (choose courses with a total of 22 AUs)

The Major PE can be any course of the form MH3*** or MH4*** not listed above. The explicit list of courses is:

School Major PE (22 AUs)	Type	AU
MH3101 Complex Analysis	Major PE	4
MH3200 Abstract Algebra I	Major PE	3
MH3210 Number Theory	Major PE	4
MH3300 Graph Theory	Major PE	4
MH3310 Mathematical Foundations of Game Theory	Major PE	4
MH3400 Algorithms for the Real World	Major PE	4
MH3500 Statistics	Major PE	4
MH3510 Regression Analysis	Major PE	4
MH3511 Data Analysis with Computer	Major PE	3
MH3512 Stochastic Analysis	Major PE	4
MH3600 Knots and Surfaces: Introduction to topology	Major PE	4
MH3700 Numerical Analysis I	Major PE	3
MH3701 Basic Optimization	Major PE	4
MH4100 Real Analysis II	Major PE	4
MH4110 Partial Differential Equations	Major PE	4
MH4200 Abstract Algebra II	Major PE	4
MH4300 Combinatorics	Major PE	4
MH4301 Set Theory and Logic	Major PE	4
MH4310 Coding Theory	Major PE	4
MH4311 Cryptography	Major PE	4
MH4320 Computational Economics	Major PE	4
MH4500 Time Series Analysis	Major PE	4
MH4501 Multivariate Analysis	Major PE	4
MH4510 Statistical Learning and Data Mining	Major PE	4
MH4511 Sampling and Survey	Major PE	4
MH4512 Clinical Trials	Major PE	4
MH4513 Survival Analysis	Major PE	4
MH4514 Financial Mathematics	Major PE	4
MH4600 Algebraic Topology	Major PE	4
MH4601 Differential Geometry	Major PE	4
MH4700 Numerical Analysis II	Major PE	4
MH4701 Mathematical Programming	Major PE	4
MH4702 Probabilistic Methods in OR	Major PE	4
MH4711 Mathematical Modelling in Imaging, Vision and Graphics	Major PE	4
MH4730 Mathematics in Biology and Medicine	Major PE	4
MH4920 Supervised Independent Study I	Major PE	4
MH4921 Supervised Independent Study II	Major PE	4
MH4930 Special Topics in Mathematics	Major PE	4
MH4931 Special Topics in Applied Mathematics	Major PE	4
MH4932 Special Topics in Statistics	Major PE	4

For an accurate list of Major PEs offered each semester, please check the SPMS-MAS website.