Joint Bachelor's Degree Programme between City University of Hong Kong and The University of Edinburgh

Tentative Study Plan for CityU students of Computing Mathematics **(Intake cohort 2022 and thereafter)**

The matching programme at UoE: **Bachelor of Science in Mathematics**

	City U - Computing Mathematics		UoE - Mathematics (BSc Hons)	
	Minimum: 121 Credit units		Minimum: 480	
	Maximum: 144 Credit units			
	Gateway Education: 30			
	College requirement: 6			
	Major: 63		Major:	
	- Core: 45		- Compulsory: 210	
	- Elective: 18		- Course options: 270	
	Free elective: 22 (Minimum Req't 22)			
	Courses	**Credit Units**	**Courses**	**SCQF Credits**
Year 1 (30 credits earned in CityU)	**[GE-English] GE1401 University English**	3		
	[GE-Chinese] GE1501 Chinese Civilization – History & Philosophy	3		
	[GE-Col Specified] MA1300 Enhanced Calculus and Linear Algebra I	3	[Major-Compulsory] MATH08057 Introduction to Linear Algebra	20
	[GE-Col Specified] MA1301 Enhanced Calculus and Linear Algebra II	3	[Major-Compulsory] MATH08058 Calculus and its Applications	20
	[GE-Col Specified] CS1302 Introduction to Computer Programming	3		
	[CSCI-Col Requirement] CSCI1001 Employability for Scientists	0		
	[CSCI-Col Requirement] CSCI1002 Career Lab for Scientists	0		
	[CSCI-Col Requirement] College Requirement Course#	6		
	[GE-English] GE2401 English for Science	3		
	[GE] Gateway Education 1 - Area 1	3		
	[GE] Gateway Education 2 - Area 2	3		
			[Major-Options] Any Level 7 or 8 courses in Schedules A-Q, S, T and W	60
Year 2 (33 credits earned in CityU)	**[Major-Core] MA2503 Linear Algebra**	4	[Major-Compulsory] MATH08065 Computing and Numerics	10
	[Major-Core] MA2507 Computing Mathematics Laboratory	1	[Major-Compulsory] MATH08063 Several Variable Calculus and Differential Equations	20
	[Major-Core] MA2508 Multi-variable Calculus	4		
	[Major-Core] MA2509 Discrete Mathematics	3	[Major-Compulsory] MATH08059 Proofs and Problem Solving (Normal year taken: Year 1)	20
	[Major-Core] MA2510 Probability and Statistics	3	[Major-Compulsory] MATH08066 Probability	10
	[Major-Core] MA3511 Ordinary Differential Equations	3	[Major-Compulsory] MATH08051 Statistics	10
	[Major-Core] MA3526 Analysis	3	[Major-Compulsory] MATH08064 Fundamentals of Pure Mathematics	20
	[Major-Core] CS2360 Java Programming	3	[Major-Options] Any Level 7 or 8 courses in Schedules A-Q, S, T and W	10
	[Major-Core] CS2468 Data structures and Data Management	3	[Major-Options] Any Level 7 or 8 courses in Schedules A-Q, S, T and W	10
	[GE] Gateway Education 3 - Area 3	3		
	[GE] Gateway Education 4 - Area 1/2/3	3		
			[Major-Options] Any Level 7 or 8 courses in Schedules A-Q, S, T and W	30
	Total Credits earned in CityU	**63**	**Total Credits transferred from CityU**	**240**
	[Major-Core] MA3512 Partial Differential Equations	3	**[Major-Compulsory] MATH10066 Honours Differential Equations**	**20**
	[Major-Core] MA3515 Introduction to Optimization	3	**[Major-Compulsory] MATH10068 Honours Analysis**	**20**
	[Major-Core] MA3517 Complex Analysis	3	**[Major-Compulsory] MATH10067 Honours Complex Variables**	**20**
	[Major-Elective] MA3523 Introduction to Abstract Algebra	3	**[Major-Compulsory] MATH10069 Honours Algebra**	**20**

		Courses	Credit Units	Courses	SCQF Credits
Year 3 (30 credits transfer from Edinburgh)		[Major-Core] MA3514 Numerical Methods for Differential Equations	3	[Major-Options] MATH10098 Numerical Linear Algebra	10
		[Major-Core] MA3518 Applied Statistics	3	[Major-Options] MATH10095 Statistical Methodology or [Major-Options] MATH10096 Applied Statistics (Normal year taken: Year 4) or [Major-Options] Any Level 9 or 10 courses in Schedules A to Q, T and W. Students need to seek pre-approval from BSCM Major Leader.	10
		[Major-Core] MA3525 Elementary Numerical Methods	3	[Major-Options] MATH10060 Numerical Ordinary Differential Equations and Applications	10
		Major Elective	3	[Major-Options] Any Level 9 or 10 courses in Schedules A to Q, T and W	10
		Major Elective	3		
		Major Elective	3		
Year 4 (30 credits transfer from Edinburgh)		Major Elective	3	[Major-Options] Select between 20 and 40 credits of the following courses: MATH10010 Mathematical Education (20 credits) MATH10063 Mathematics Project (20 credits) MATH11127 Mathematics Dissertation (40 credits)	20/40
		Major Elective	3		
		Free Elective	3		
		Free Elective	3		
		Free Elective	3	[Major-Options] Any Level 10 or 11 courses in Schedules A to Q, T and W	80/100
		Free Elective	3		
		Free Elective	3		
		Free Elective	3		
		Free Elective	3		
		Free Elective	3		
		Total Credits transferred from Edinburgh	**60^**	**Total Credits earned in Edinburgh**	**240**
		Credit units earned towards CityU degree	**123**	**Credit units earned towards Edinburgh degree**	**480**

^ Maximum 60 credits can be transferred to CityU.

\# For details of the college requirements, please refer to ARRO's website at:

http://www.cityu.edu.hk/catalogue/ug/current/catalogue/catalogue_UC.htm?page=B/col_sch_CSCI.htm

Joint Bachelor's Degree Programme between City University of Hong Kong and The University of Edinburgh

Tentative Study Plan for CityU students of Computing Mathematics **(Intake cohort 2022 and thereafter)**

The matching programme at UoE: **Bachelor of Science in Applied Mathematics**

	City U - Computing Mathematics		UoE - Applied Mathematics (BSc Hons)	
	Minimum: 121 Credit units		Minimum: 480	
	Maximum: 144 Credit units			
	Gateway Education: 30			
	College requirement: 6			
	Major: 63		Major:	
	- Core: 45		- Compulsory: 250	
	- Elective: 18		- Course options: 230	
	Free elective: 22 (Minimum Req't 22)			
	Courses	**Credit Units**	**Courses**	**SCQF Credits**
Year 1 (30 credits earned in CityU)	**[GE-English] GE1401 University English**	3		
	[GE-Chinese] GE1501 Chinese Civilization – History & Philosophy	3		
	[GE-Col Specified] MA1300 Enhanced Calculus and Linear Algebra I	3	[Major-Compulsory] MATH08057 Introduction to Linear Algebra	20
	[GE-Col Specified] MA1301 Enhanced Calculus and Linear Algebra II	3	[Major-Compulsory] MATH08058 Calculus and its Applications	20
	[GE-Col Specified] CS1302 Introduction to Computer Programming	3		
	[CSCI-Col Requirement] CSCI1001 Employability for Scientists	0		
	[CSCI-Col Requirement] CSCI1002 Career Lab for Scientists	0		
	[CSCI-Col Requirement] College Requirement Course#	6		
	[GE-English] GE2401 English for Science	3		
	[GE] Gateway Education 1 - Area 1	3		
	[GE] Gateway Education 2 - Area 2	3		
			[Major-Options] Any Level 7 or 8 courses in Schedules A-Q, S, T and W	60
Year 2 (33 credits earned in CityU)	**[Major-Core] MA2503 Linear Algebra**	4	[Major-Compulsory] MATH08065 Computing and Numerics	10
	[Major-Core] MA2507 Computing Mathematics Laboratory	1	[Major-Compulsory] MATH08063 Several Variable Calculus and Differential Equations	20
	[Major-Core] MA2508 Multi-variable Calculus	4		
	[Major-Core] MA2509 Discrete Mathematics	3	[Major-Compulsory] MATH08059 Proofs and Problem Solving (Normal year taken: Year 1)	20
	[Major-Core] MA2510 Probability and Statistics	3	[Major-Compulsory] MATH08066 Probability	10
	[Major-Core] MA3511 Ordinary Differential Equations	3	[Major-Compulsory] MATH08051 Statistics	10
	[Major-Core] MA3526 Analysis	3	[Major-Compulsory] MATH08064 Fundamentals of Pure Mathematics	20
	[Major-Core] CS2360 Java Programming	3	[Major-Options] Any Level 7 or 8 courses in Schedules A-Q, S, T and W	10
	[Major-Core] CS2468 Data structures and Data Management	3	[Major-Options] Any Level 7 or 8 courses in Schedules A-Q, S, T and W	10
	[GE] Gateway Education 3 - Area 3	3		
	[GE] Gateway Education 4 - Area 1/2/3	3		
			[Major-Options] Any Level 7 or 8 courses in Schedules A-Q, S, T and W	30
	Total Credits earned in CityU	**63**	**Total Credits transferred from CityU**	**240**
	[Major-Core] MA3512 Partial Differential Equations	3	**[Major-Compulsory] MATH10066 Honours Differential Equations**	**20**
	[Major-Core] MA3515 Introduction to Optimization	3	**[Major-Compulsory] MATH10068 Honours Analysis**	**20**
	[Major-Core] MA3517 Complex Analysis	3	**[Major-Compulsory] MATH10067 Honours Complex Variables**	**20**
	[Major-Core] MA3525 Elementary Numerical Methods	3	**[Major-Compulsory] MATH10060 Numerical Ordinary Differential Equations and Applications**	**10**

	Courses	Credit Units	Courses	SCQF Credits
Year 3 (30 credits transfer from Edinburgh)	[Major-Core] MA3514 Numerical Methods for Differential Equations	3	**[Major-Compulsory] MATH10098 Numerical Linear Algebra**	**10**
	[Major-Core] MA3518 Applied Statistics	3	**[Major-Options] MATH10095 Statistical Methodology** **or** **[Major-Options] MATH10096 Applied Statistics (Normal year taken: Year 4)** **or** **[Major-Options] Any Level 9 or 10 courses in Schedules A to Q, T and W. Students need to seek pre-approval from BSCM Major Leader.**	**10**
	Major Elective	3	**[Major-Options] Any Level 9 or 10 courses in Schedules A to Q, T and W**	**30**
	Free Elective	3		
	Free Elective	3		
	Free Elective	3		
Year 4 (30 credits transfer from Edinburgh)	[Major Elective] MA4530 Project	6	**[Major-Compulsory] MATH10031 Project in Mathematics (Double)**	**40**
	Major Elective	3	**[Major-Options] MATH10007 Stochastic Modelling (10 credits)**	**20**
	Major Elective	3	**[Major-Options] MATH10013 Mathematical Biology (10 credits)**	
	Major Elective	3	**[Major-Options] MATH10053 Applied Stochastic Differential Equations (10 credits)**	
	Free Elective	3	**[Major-Options] MATH10086 Advanced Methods of Applied Mathematics (20 credits)**	
	Free Elective	3	**[Major-Options] MATH11140 Applied Dynamical Systems (10 credits)**	
	Free Elective	3	**[Major-Options] MATH11141 Multi-scale Methods in Mathematical Modelling (10 credits)**	
	Free Elective	3	**[Major-Options] MATH11206 Data Assimilation (10 credits)**	
	Free Elective	3	**[Major-Options] MATH11207 Numerical Partial Differential Equations (10 credits)**	
			[Major-Options] Any Level 10 or 11 courses in Schedules A to Q, T and W	**60**
	Total Credits transferred from Edinburgh	**60^**	**Total Credits earned in Edinburgh**	**240**
	Credit units earned towards CityU degree	**123**	**Credit units earned towards Edinburgh degree**	**480**

^ Maximum 60 credits can be transferred to CityU.

For details of the college requirements, please refer to ARRO's website at:

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Joint Bachelor's Degree Programme between City University of Hong Kong and The University of Edinburgh

Tentative Study Plan for CityU students of Computing Mathematics **(Intake cohort 2022 and thereafter)**

The matching programme at UoE: **Bachelor of Science in Mathematics and Statistics**

<table>
<tr><td colspan="3" align="center">City U - Computing Mathematics</td><td colspan="2" align="center">UoE - Mathematics and Statistics (BSc Hons)</td></tr>
<tr><td colspan="3">Minimum: 121 Credit units</td><td colspan="2">Minimum: 480</td></tr>
<tr><td colspan="3">Maximum: 144 Credit units</td><td colspan="2"></td></tr>
<tr><td colspan="3">Gateway Education: 30</td><td colspan="2"></td></tr>
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<tr><td colspan="3">- Core: 45</td><td colspan="2">- Compulsory: 150</td></tr>
<tr><td colspan="3">- Elective: 18</td><td colspan="2">- Course options: 330</td></tr>
<tr><td colspan="3">Free elective: 22 (Minimum Req't 22)</td><td colspan="2"></td></tr>
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<tr><td rowspan="11">Year 1 (30 credits earned in CityU)</td><td>[GE-English] GE1401 University English</td><td>3</td><td></td><td></td></tr>
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<tr><td></td><td></td><td>[Major-Compulsory] MATH10093 Statistical Computing</td><td>10</td></tr>
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	Courses	Credit Units	Courses	SCQF Credits
Year 3 (30 credits transfer from Edinburgh)	[Major-Core] MA3515 Introduction to Optimization	3	**[Major-Options] MATH10068 Honours Analysis**	**20**
	[Major-Core] MA3517 Complex Analysis	3	**[Major-Options] MATH10067 Honours Complex Variables**	**20**
	[Major-Core] MA3514 Numerical Methods for Differential Equations	3	**[Major-Options] MATH10098 Numerical Linear Algebra**	**10**
	[Major-Core] MA3525 Elementary Numerical Methods	3	**[Major-Options] MATH10060 Numerical Ordinary Differential Equations and Applications**	**10**
	Major Elective	3	**[Major-Options] Any Level 9 or 10 courses in Schedules A to Q, T and W**	**10**
	Major Elective	3		
	Major Elective	3	**[Major-Options] Any Level 9 or 10 courses in Schedules A to Q, T and W**	**10**
	Major Elective	3		
Year 4 (30 credits transfer from Edinburgh)	Major Elective	3	**[Major-Options] Select between 20 and 40 credits of the following courses:** **MATH10010 Mathematical Education (20 credits)** **MATH10063 Mathematics Project (20 credits)** **MATH11127 Mathematics Dissertation (40 credits)**	**20/40**
	Major Elective	3		
	Free Elective	3		
	Free Elective	3		
	Free Elective	3	**[Major-Options] Any Level 10 or 11 courses in Schedules A to Q, T and W**	**80/100**
	Free Elective	3		
	Free Elective	3		
	Free Elective	3		
	Free Elective	3		
	Free Elective	3		
	Total Credits transferred from Edinburgh	**60^**	**Total Credits earned in Edinburgh**	**240**
	Credit units earned towards CityU degree	**123**	**Credit units earned towards Edinburgh degree**	**480**

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