

Bachelor of Advanced Mathematics (Honours)

(3956) - [Handbook](#)

2022 Commencing Students
Program Structure



Single Degree Mode

PROGRAM STRUCTURE	An approved Major	96 UOC (16 courses)	144 UOC	192 UOC
	Science Electives			
	Honours			
	Free Electives	36 UOC (4 courses)	48 UOC	
	General Education	12 UOC (2 courses)		

Science Electives are courses taken from within the Faculty of Science or as defined [here](#)

Free Electives are courses from any Faculty at UNSW including Science, but cannot be GEN-branded courses

General Education must taken from courses that are not considered [Science Electives](#)

Dual Degree Mode

PROGRAM STRUCTURE	An approved Major	96 UOC	144 UOC	240 UOC (ADA / BUS) 288 UOC (LAW / ENG)
	Science Electives			
	Honours	48 UOC		
	Other Degree Courses	96 UOC (ADA or BUS) 144 UOC (LAW or ENG)		

Science students cannot take GENS courses under any circumstance

Students in Single Degree Mode cannot complete more than 72 UoC of Level 1 courses including any GEN courses and Level 1 courses taken for General Education.

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2022 Commencing Students

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Approved Major	Page
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Applied Mathematics	5-6
Pure Mathematics	7-8

Science

Bachelor of Advanced Mathematics (Honours) (3956)



2022 Commencing Students – Single Degree – Major in Advanced Statistics ([MATHU1](#))

Choose from available proposed courses in each year

Year 1			Year 2			Year 3		
SCIF1131 Introductory Skills for Science (T1, T3)	MATH1241 Higher Mathematics 1B (T1,T2)	6 UOC Free Elective	MATH2111 Higher Several Variable Calculus (T1)	MATH2601 Higher Linear Algebra (T2)	MATH2931 Higher Linear Models (T3)	MATH3901 Higher Probability and Stochastic Processes (T1)	MATH3821 Statistical Modelling and Computing (T2)	6 UOC Any Level 3 Mathematics Course
MATH1141 Higher Mathematics 1A (T1,T3)	6 UOC Level 1 Computer Science Elective	6 UOC Free Elective	6 UOC Science Elective	MATH2901 Higher Theory of Statistics (T2)	6 UOC General Education	MATH3911 Higher Statistical Inference (T1)	6 UOC Mathematics level 3 (See Note 1)	
MATH1081 Discrete Mathematics (T1,T2, T3)	6 UOC Free Elective		6 UOC Free Elective	MATH2221 (T2) or MATH2621 (T3)		6UOC Free Elective	6 UOC General Education	

NOTES

This is intended as a guide only. Courses do not need to be studied in the exact structure that they appear here.

Note 1: 6 UOC Mathematics level 3: MATH3831 (T2), MATH3841 (TBC), MATH3851 (T3), MATH3871 (T3)

See Program Structure on page 1 for a guide on the terminology and colour codes used in this progression plan.

Note: All students in Advanced Mathematics (Hons) must complete an Honours year of 48 UoC. Please note the Honours component is not included in this template.

Bachelor of Advanced Mathematics (Honours) (3956)



2022 Commencing Students – Double Degree – Major in Advanced Statistics ([MATHU1](#))

Choose from available proposed courses in each year

Year 1			Year 2			Year 3		
SCIF1131 Introductory Skills for Science (T1, T3)	MATH1241 Higher Mathematics 1B (T1,T2)	Other Degree Course	MATH2111 Higher Several Variable Calculus (T1)	MATH2601 Higher Linear Algebra (T2)	MATH2931 Higher Linear Models (T3)	MATH3901 Higher Probability and Stochastic Processes (T1)	MATH3821 Statistical Modelling and Computing (T2)	6 UOC Any Level 3 Mathematics Course
MATH1141 Higher Mathematics 1A (T1,T3)	6 UOC Level 1 Computer Science Elective	Other Degree Course	6 UOC Science Elective	MATH2901 Higher Theory of Statistics (T2)	Other Degree Course	MATH3911 Higher Statistical Inference (T1)	6 UOC Mathematics level 3 (See Note 1)	
MATH1081 Discrete Mathematics (T1,T2, T3)		Other Degree Course	Other Degree Course	MATH2221 (T2) or MATH2621 (T3)		Other Degree Course	Other Degree Course	Other Degree Course
Year 4			NOTES This is intended as a guide only. Courses do not need to be studied in the exact structure that they appear here. Note 1: 6 UOC Mathematics level 3: MATH3831 (T2), MATH3841 (TBC), MATH3851 (T3), MATH3871 (T3) See Program Structure on page 1 for a guide on the terminology and colour codes used in this progression plan. In double degrees with Law or Engineering, a further 48uoc of other faculty course must be studied in addition to what is pictured here (Year 5) Note: All students in Advanced Mathematics (Hons) must complete an Honours year of 48 UoC. Please note the Honours component is not included in this template.					
Other Degree Course	Other Degree Course	Other Degree Course						
Other Degree Course	Other Degree Course	Other Degree Course						
Other Degree Course	Other Degree Course							

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Bachelor of Advanced Mathematics (Honours) (3956)



2022 Commencing Students – Single Degree – Major in Applied Mathematics ([MATHA1](#))

Choose from available proposed courses in each year

Year 1			Year 2			Year 3		
SCIF1131 Introductory Skills for Science (T1, T3)	MATH1241 Higher Mathematics 1B (T1,T2)	6 UOC Free Elective	MATH2111 Higher Several Variable Calculus (T1)	MATH2601 Higher Linear Algebra (T2)	MATH2621 Higher Complex Analysis (T3)	6 UOC from Level 3 Elective – List A (See Note 1)	6 UOC from Level 3 Elect ive – List B (See Note 2)	6 UOC from Level 3 Elective – List A OR B (See Note 1 OR 2)
MATH1141 Higher Mathematics 1A (T1,T3)	6 UOC Level 1 Computer Science Elective	6 UOC Free Elective	MATH2301 Mathematical Computing (T1)	MATH2901 Higher Theory of Statistics (T2)	6 UOC General Education	6 UOC Free Elective	6 UOC from Level 3 Elective (See Note 3)	6 UOC General Education
MATH1081 Discrete Mathematics (T1,T2, T3)	6 UOC Free Elective		6 UOC Free Elective	MATH2221 Higher Theory and Applications of Differential Equations (T2)		6 UOC from Level 3 Elective (See Note 3)	6 UOC Free Elective	

NOTES	This is intended as a guide only. Courses do not need to be studied in the exact structure that they appear here.
	Note 1: 6 UOC Level 3 Elective List A: MATH3041 (T2), MATH3051 (T3)
	Note 2: 6 UOC Level 3 Elective List B: MATH3101, MATH3121, MATH3161, MATH3171, MATH3191, MATH3201, MATH3261, MATH3261, MATH3311, MATH3361, MATH3371, MATH6781
	Note 3: Level 3 Elective: See Handbook
	See Program Structure on page 1 for a guide on the terminology and colour codes used in this progression plan.
	Note: All students in Advanced Mathematics (Hons) must complete an Honours year of 48 UoC. Please note the Honours component is not included in this template.

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2022 Commencing Students – Double Degree – Major in Applied Mathematics ([MATHA1](#))

Choose from available proposed courses in each year

Year 1		
SCIF1131 Introductory Skills for Science (T1, T3)	MATH1241 Higher Mathematics 1B (T1,T2)	Other Degree Course
MATH1141 Higher Mathematics 1A (T1,T3)	6 UOC Level 1 Computer Science Elective	Other Degree Course
MATH1081 Discrete Mathematics (T1,T2, T3)		Other Degree Course

Year 2		
MATH2111 Higher Several Variable Calculus (T1)	MATH2601 Higher Linear Algebra (T2)	MATH2621 Higher Complex Analysis (T3)
MATH2301 Mathematical Computing (T1)	MATH2901 Higher Theory of Statistics (T2)	Other Degree Course
	MATH2221 Higher Theory and Applications of Differential Equations (T2)	Other Degree Course

Year 3		
6 UOC from Level 3 Elective – List A (See Note 1)	6 UOC from Level 3 Elect ive – List B (See Note 2)	6 UOC from Level 3 Elective – List A OR B (See Note 1 OR 2)
6 UOC from Level 3 Elective (See Note 3)	6 UOC from Level 3 Elective (See Note 3)	
Other Degree Course	Other Degree Course	Other Degree Course

Year 4		
Other Degree Course	Other Degree Course	Other Degree Course
Other Degree Course	Other Degree Course	Other Degree Course
Other Degree Course	Other Degree Course	

NOTES

This is intended as a guide only. Courses do not need to be studied in the exact structure that they appear here.

Note 1: 6 UOC Level 3 Elective List A: MATH3041 (T2), MATH3051 (T3)

Note 2: 6 UOC Level 3 Elective List B: MATH3101, MATH3121, MATH3161, MATH3171, MATH3191, MATH3201, MATH3261, MATH3261, MATH3311, MATH3361, MATH3371, MATH6781

Note 3: Level 3 Elective: [See Handbook](#)

See Program Structure on page 1 for a guide on the terminology and colour codes used in this progression plan.

In double degrees with Law or Engineering, a further 48uoc of other faculty course must be studied in addition to what is pictured here (Year 5)

Note: All students in Advanced Mathematics (Hons) must complete an Honours year of 48 UoC. Please note the Honours component is not included in this template.

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Bachelor of Advanced Mathematics (Honours) (3956)



2022 Commencing Students – Single Degree – Major in Pure Mathematics ([MATHP1](#))

Choose from available proposed courses in each year

Year 1			Year 2			Year 3		
SCIF1131 Introductory Skills for Science (T1, T3)	MATH1241 Higher Mathematics 1B (T1,T2)	6 UOC Free Elective	MATH2111 Higher Several Variable Calculus (T1)	MATH2601 Higher Linear Algebra (T2)	MATH2621 Higher Complex Analysis (T3)	MATH3711 Higher Analysis (T1)	MATH3611 Higher Analysis (T2)	MATH3701 Higher Topology and Differential Geometry (T3)
MATH1141 Higher Mathematics 1A (T1,T3)	6 UOC Level 1 Computer Science Elective	6 UOC Free Elective	6 UOC General Education	MATH2901 Higher Theory of Statistics (T2)	MATH2701 Abstract Algebra and Fundamental Analysis (T3)	6 UOC Free Elective	6 UOC Any Level 3 Math course	6 UOC General Education
MATH1081 Discrete Mathematics (T1,T2, T3)	6 UOC Free Elective		6 UOC Free Elective	MATH2221 Higher Theory and Applications of Differential Equations (T2)		6 UOC Any Level 3 Math course	6 UOC Free Elective	

NOTES

This is intended as a guide only. Courses do not need to be studied in the exact structure that they appear here.

See Program Structure on page 1 for a guide on the terminology and colour codes used in this progression plan.

Note: All students in Advanced Mathematics (Hons) must complete an Honours year of 48 UoC. Please note the Honours component is not included in this template.

Science

Bachelor of Advanced Mathematics (Honours) (3956)



2022 Commencing Students – Double Degree – Major in Pure Mathematics ([MATHP1](#))

Choose from available proposed courses in each year

Year 1		
SCIF1131 Introductory Skills for Science (T1, T3)	MATH1241 Higher Mathematics 1B (T1,T2)	Other Degree Course
MATH1141 Higher Mathematics 1A (T1,T3)	6 UOC Level 1 Computer Science Elective	Other Degree Course
MATH1081 Discrete Mathematics (T1,T2, T3)		Other Degree Course

Year 2		
MATH2111 Higher Several Variable Calculus (T1)	MATH2601 Higher Linear Algebra (T2)	MATH2621 Higher Complex Analysis (T3)
Other Degree Course	MATH2901 Higher Theory of Statistics (T2)	MATH2701 Abstract Algebra and Fundamental Analysis (T3)
Other Degree Course	MATH2221 Higher Theory and Applications of Differential Equations (T2)	

Year 3		
MATH3711 Higher Analysis (T1)	MATH3611 Higher Analysis (T2)	MATH3701 Higher Topology and Differential Geometry (T3)
6 UOC Any Level 3 Math course	6 UOC Any Level 3 Math course	
Other Degree Course	Other Degree Course	Other Degree Course

Year 4		
Other Degree Course	Other Degree Course	Other Degree Course
Other Degree Course	Other Degree Course	Other Degree Course
Other Degree Course	Other Degree Course	

NOTES	This is intended as a guide only. Courses do not need to be studied in the exact structure that they appear here.
	See Program Structure on page 1 for a guide on the terminology and colour codes used in this progression plan.
	In double degrees with Law or Engineering, a further 48uoc of other faculty course must be studied in addition to what is pictured here (Year 5)
	Note: All students in Advanced Mathematics (Hons) must complete an Honours year of 48 UoC. Please note the Honours component is not included in this template.