Bachelor of Science [40165] – Mathematics and Statistics majors

TRANSITION ARRANGEMENTS - INFORMATION FOR STUDENTS WHO COMMENCED IN THE PROGRAM PRIOR TO 2021

Changes have been made to the Bachelor of Science majors from 2021 onwards, including the Statistics and Mathematics majors. Information regarding the changes to the Statistics and Mathematics majors can be found in the following pages. If you are completing a double major please also refer to the transition arrangements for your second major.

Frequently Asked Questions

Can I still complete my major?
Yes, you will still be able to complete your major.

Can I still complete my double major?
Yes, you can still complete your double major but you must ensure that you refer to transition information related to your second major for information on any changes occurring in your second major. Please email programadvice@newcastle.edu.au before enrolment to check that the courses you plan to complete will make you eligible for the double major.

Does this change what I need to enrol in?
The courses you need to enrol in may have changed, however, you will not be required to complete more than the 240 units required for your program.

Do I follow the pre-2021 major structure or the 2021 major structure?
You should continue to follow the pre-2021 major structure.

Will this delay my graduation?
No. As the changes do not increase the total number of courses you need to complete, these changes will not delay your graduation.

I have completed a course that is no longer offered or a course that has had a name change. Does it still count?
Yes, all courses successfully completed prior to 2021 will continue to count towards your program and major requirements. Please see the transition table information to check your remaining major requirements.

If you have any questions, please contact your Academic Program Advisor at programadvice@newcastle.edu.au.

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Mathematics Major Pre-2021			Mathematics Major Structure 2021 onwards Students must complete MATH1110 as their Math Directed course.		
Compulsory courses – 10 units			**Compulsory courses – 50 units**		
			#MATH1120	Mathematics for Engineering, Science and Technology 2	10 units
MATH2310	Calculus of Science and Engineering	10 units	MATH2310	Calculus of Science and Engineering	10 units
^MATH2320	Linear Algebra	10 units			
			#*MATH2340	Linearity and Continuity 1	10 units
			*MATH2242	Complex Analysis	10 units
			*MATH2800	Ordinary Differential Equations	10 units
Directed course pair – Complete 20 units from either [MATH1120 and MATH2340]; or [MATH1210 and MATH1220]. Pair chosen depends on mathematical background. Students who completed MATH1120 or MATH1210 as their Mathematics Directed course can count this towards their Major.					
#MATH1120	Mathematics for Engineering, Science and Technology 2	10 units			
^MATH1210	Mathematical Discovery 1	10 units			
^MATH1220	Mathematical Discovery 2	10 units			
#*MATH2340	Linearity and Continuity 1	10 units			
Directed courses – Complete 40 units			**Directed courses – Complete 30 units**		
^MATH3010	Logic and Set Theory	10 units			
MATH3120	Algebra	10 units	MATH3120	Algebra	10 units
MATH3170	Number Theory Through Algorithms	10 units	MATH3170	Number Theory Through Algorithms	10 units
+MATH3205	Fourier Analysis	10 units	+MATH3205	Fourier Analysis	10 units
^MATH3210	Directed Studies in Mathematics	10 units			
^MATH3242	Complex Analysis	10 units			
^MATH3400	Research Topics in Mathematics	10 units			
+MATH3700	Partial Differential Equations and Modelling	10 units	+MATH3700	Partial Differential Equations and Modelling	10 units
^MATH3800	Optimisation	10 units			
MATH3820	Numerical Methods	10 units	MATH3820	Numerical Methods	10 units
+SCIE3500	Research Integrated Learning	10 units	+SCIE3500	Research Integrated Learning	10 units
+STAT3800	Deterministic and Stochastic Optimisation	10 units	+STAT3800	Deterministic and Stochastic Optimisation	10 units
Key					
# Compulsory course for students who commence in 2021 onwards.					
^ Course no longer offered, if you have already completed this course it still counts towards your major.					
+ Course added to major.					
* Prior to 2021 MATH2340 was named Linearity and Continuity.					

Course discontinued (no longer offered)	Students who have not completed the discontinued course must complete
MATH2320 Linear Algebra	MATH2242 Complex Analysis OR MATH2800 Ordinary Differential Equations
MATH1210 Mathematical Discovery 1	MATH1110 Mathematics for Engineering, Science and Technology 1
MATH1220 Mathematical Discovery 2	MATH1120 Mathematics for Engineering, Science and Technology 2

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Statistics Major Pre-2021				Statistics Major 2021 onwards Students must complete MATH1110 as their Math Directed course.			
Compulsory courses – 30 units				**Compulsory courses – 70 units**			
				+MATH1120	Mathematics for Engineering, Science and Technology 2	10 units	
				+STAT1300	Fundamentals of Statistics	10 units	
STAT2000	Applied Statistics and Research Methods	10 units		STAT2000	Applied Statistics and Research Methods	10 units	
^STAT2010	Fundamentals of Statistics	10 units					
~STAT2020	Predictive Analytics	10 units					
				#STAT3030	Generalised Linear Models	10 units	
				#STAT3040	Forecasting with Linear Time Series Models	10 units	
				#STAT3100	Systems Thinking for an Integrated Workforce	10 units	
				+STAT3800	Deterministic and Stochastic Optimisation	10 units	
Programming Directed course – Complete 10 units							
ENGG1003	Introduction to Procedural Programming	10 units					
INFT1004	Introduction to Programming	10 units					
SENG1110	Object Oriented Programming	10 units					
+MATH1120	Mathematics for Engineering, Science and Technology 2	10 units					
				Directed course – Complete 10 units			
				~STAT2020	Predictive Analytics	10 units	
				STAT2300	Statistical Inference	10 units	
Directed courses – Complete 40 units							
+SCIE3500	Research Integrated Learning	10 units					
^STAT3010	Statistical Inference	10 units					
#STAT3030	Generalised Linear Models	10 units					
#STAT3040	Forecasting with Linear Time Series Models	10 units					
#STAT3100	Systems Thinking for an Integrated Workforce	10 units					
^STAT3120	Applied Bayesian Methods	10 units					
+STAT3800	Deterministic and Stochastic Optimisation	10 units					
+STAT6001	Data Wrangling and Visualisation	10 units					

Key
Directed course to become Compulsory for students who commence in 2021 or beyond.
^ Course no longer offered, if you have already completed this course it still counts towards your major.
+ Course added to major.
~ Compulsory course to become Directed for students who commence in 2021 or beyond. Students who commenced prior to 2021 must still complete STAT2020.

Course discontinued (no longer offered)	Students who have not completed the discontinued course must complete
STAT2010 Fundamentals of Statistics	STAT1300 Fundamentals of Statistics *This will count towards your program as a 2000 level course.*