Bachelor of Science

Major in Mathematics

ENTRY REQUIREMENTS

Assumed Knowledge	For astronomy and astrophysics, mathematics, statistical data science and physics majors: HSC Mathematics Advanced (Band 4), or equivalent. If you haven't met the required minimum level of achievement (Band 4 or equivalent), you can undertake an alternative introductory unit of study in that area.
Recommended Studies	HSC Mathematics Advanced or equivalent, at least 2 units of science. For astronomy and astrophysics, and physics majors: HSC Physics. For mathematics major: HSC Mathematics Extension 1 (Band E2) or HSC Mathematics Extension 2, or equivalent.

CORE ZONE

Essential units = Each unit is 10 credit points.

Capstone unit = 10 credit points

FOSE3000	Making Science Work for You and Society: Capstone

Essential units = 20 credit points

FOSE1000	Becoming a Scientist
FOSE2000	The Science Practitioner

Statistics Elective units = 10 credit points

Complete 10 credit points from the following units

STAT1103	Introduction to Psychological Design and Statistics
STAT1170	Introductory Statistics
STAT1371	Statistical Data Analysis

Data and Computing Elective units = 10 credit points

Complete 10 credit points from the following options.

- Students enrolling in Astronomy, Physics, Mathematics or Statistical Data Science majors must enrol in FOSE1030.
- Student enrolling in Biology, Biotechnology, Chemistry, Human Biology, Earth and Environmental Sciences, and Physiological Sciences major must enrol in FOSE1025.
- Students enrolling in double majors that requires both FOSE1025 and FOSE1030 can complete the other Data & Computing unit not selected below in the Other Science - 20 credit points option set.

FOSE1025	Scientific Computing
FOSE1030	Introduction to Python Programming

Other Science Elective units = 20 credit points

20 credit points from ASTR, BIOL, CHEM, EESC, ENVS, MATH, PHYS, PSYU, STAT, BMOL, MOLS, FOSE units at 1000 or 2000 level

Elective unit = 10 credit points

Complete 10 credit points from the following PACE units

MATH3599	PACE: Professional Practice for Mathematical Sciences
MOLS3002	PACE: Engaging the Community in Science

MAJOR

Major requirements = 80 credit points

Elective Units = 10 credit points

Complete 10 credit points from the following options.

MATH1010	Calculus and Linear Algebra I
MATH1015	Calculus and Linear Algebra I (Advanced)

Elective Units = 10 credit points

Complete 10 credit points from the following options.

MATH1020	Calculus and Linear Algebra II
MATH1025	Calculus and Linear Algebra II (Advanced)

Essential Units = 20 credit points

Complete all of the following units

MATH2010	Calculus and Linear Algebra III
MATH2020	Vector Calculus and Complex Analysis

Elective Units = 10 credit points

Complete 10 credit points from the following options.

MATH2110	Mathematical Modelling and Differential Equations
MATH2210	Pure Mathematics

Elective Units = 30 credit points

Complete 30 credit points from the following options.

MATH3900	Geometry and Topology
MATH3902	Nonlinear Dynamics and Chaos
MATH3905	Methods for Mathematical Computation
MATH3906	Partial Differential Equations
MATH3907	Algebra IIIA
MATH3909	Real and Functional Analysis

FLEXIBLE ZONE

Flexible Zone = 80 credit points

You can use your flexible zone to enrol in any Undergraduate unit for which you meet the requisites. You may also use your flexible zone to complete a second major or minor(s)