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

### MAJOR

**Major requirements = 80 credit points**

**Elective Units = 10 credit points**
- Complete all of the following units
  - 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)