

Bachelor of Science

Major in Mathematics

ASSUMED KNOWLEDGE

- For Astronomy and Astrophysics, Mathematics, Statistical Data Science and Applied 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 Applied Physics majors: HSC Physics.
- For Mathematics major: HSC Mathematics Extension 1 (Band E2) or HSC Mathematics Extension 2, or equivalent.

COURSE STRUCTURE

ESSENTIAL UNITS: Complete each unit below **20 cp**

FOSE1000 Becoming a Scientist

FOSE2000 The Science Practitioner

CAPSTONE UNIT: Complete each unit below **10 cp**

FOSE3000 Making Science Work for You and Society: Capstone

ELECTIVE UNITS: Statistics (choose one) **10 cp**

STAT1170 Introductory Statistics

STAT1371 Statistical Data Analysis

ELECTIVE UNITS: Data & Computing **10 cp**

- Students enrolling in Astronomy and Astrophysics, Applied Physics, Mathematics or Statistical Data Science majors must enrol in FOSE1030.
- Students enrolling in Biology, Biotechnology, Chemistry, Human Biology, and Earth and Environmental Sciences majors must enrol in FOSE1025.
- Students enrolling in double majors that require 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

ELECTIVE UNITS: Other Science (Choose one) **20 cp**

Complete 20 credit points from Any 1000 or 2000 level unit coded: ASTR, BIOL, CHEM, EESC, ENVS, MATH, PHYS, STAT, BMOL, MOLS, FOSE.

ELECTIVE UNITS: PACE (Choose one) **10 cp**

MATH3599 PACE: Professional Practice for Mathematical Sciences

MOLS3002 PACE: Engaging the Community in Science

Core Zone = 80 Credit Points

MAJOR in Mathematics: **80 cp**

Elective units: Choose 1 unit from the following options. **10 cp**

MATH1010 Calculus and Linear Algebra I

MATH1015 Calculus and Linear Algebra I (Advanced)

Elective units: Choose 1 unit from the following options. **10 cp**

MATH1020 Calculus and Linear Algebra II

MATH1025 Calculus and Linear Algebra II (Advanced)

Essential Units: Complete each unit below **60 cp**

MATH2010 Calculus and Linear Algebra III

MATH2020 Vector Calculus and Complex Analysis

MATH2030 Modelling with Differential Equations

MATH3010 Algebra and Analysis

MATH3020 Partial Differential Equations

MATH3030 Discover and Innovate in Mathematics

Major = 80 Credit Points

MAJOR

FLEXIBLE ZONE

Flexible zone **80 cp**

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, listed below, or a minor(s).

Options include: Ancient History, Anthropology, Applied Physics, Astronomy and Astrophysics, Biology, Biotechnology, Business Administration, Business Analytics, Business Information Systems, Chemistry, Chinese Studies, Creative Writing, Criminology, Critical Indigenous Studies, Cyber Security Governance, Earth and Environmental Sciences, Economics, English, French and Francophone Studies, Gender Studies, Geography, German Studies, Health, Wellbeing and Society, Human Biology, Human Resource Management, Interactive Design, International Business, International Relations, Japanese Studies, Journalism and Non-Fiction Writing, Management and Leadership, Marine Science, Mathematics, Media, Culture and Communications, Modern History, Music Studies, Performing Arts and Entertainment Industries, Philosophy, Politics, Psychological Science, Public Relations and Social Media, Radio, Podcasting, and Audio Media, Screen Practice and Production, Sociology, Spanish and Latin American Studies, Statistical Data Science, Strategy, Innovation and Entrepreneurship, Work, Life and Technology.

Flexible Zone = 80 Credit Points

Degree = 240 Credit Points

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