Mathematics is one of the most enduring fields of study and is essential in an expanding number of disciplines and professions. Mathematicians combine their knowledge of mathematics and statistics with modelling and computational skills to solve problems in the physical and biological sciences, engineering, information technology, economics and business.

Why mathematics at The University of Queensland?
The UQ Bachelor of Mathematics gives you access to a broad range of courses, setting you up for a career in pure mathematics, applied mathematics, statistics, actuarial studies, quantitative finance, meteorology or teaching.

What you will study
You will develop a deep knowledge of mathematical topics and a high level of sophistication in the application of mathematics across a variety of industries. Specialise your studies with a major, or diversify your study with a minor or dual program study options.

Commencing:
Semester 1
Location:
St Lucia
Delivery Mode:
Internal
Duration:
3 years
Prerequisites:
English
Mathematics B

Image: The vertical series of white dots in the image show zeros of the Riemann zeta function. The proof that these lie perfectly on a line continues to elude mathematicians, and is key to understanding some fascinating properties of prime numbers.

www.uq.edu.au/study
Sample courses

**Applied Mathematics**

**Financial Mathematics**

**Mathematical Biology**

**Data Analytics and Operations Research**

**Optimisation Theory**

**Experimental Design**

**Mathematical Physics**

**Abstract Algebra & Number Theory**

**Algebraic Methods of Mathematical Physics**

**Pure Mathematics**

**Functional Analysis**

**Graph Theory and Design Theory**

**Statistics**

**Statistical Modelling & Analysis**

**Probability & Statistics**

**Bioinformatics**

**Genes, Cells & Evolution**

**Physics**

**Quantum Physics**

---

**Majors**

**Applied Mathematics** focuses on the derivation and evaluation of models in the physical, biological and engineering sciences.

**Data Analytics and Operation Research** focuses on analysing large and complex data sets and making effective decisions using optimisation techniques.

**Mathematical Physics** is concerned with the mathematical foundations of modern physical theories and provides a mathematical understanding for a range of contemporary science, including statistical mechanics, relativity and the quantum theory of many body systems.

**Pure Mathematics** looks at the intrinsic nature and fundamental properties of mathematical concepts, providing an appreciation of the ubiquity, universality and beauty of mathematics while developing high level skills in critical, analytical and abstract thinking.

**Statistics** provides the mathematics and techniques necessary for understanding and dealing with chance and uncertainty through the design, collection, analysis and interpretation of data.

**Minors**

It is possible to combine your studies with minors in other fields, including:

**Bioinformatics** is a multidisciplinary science which applies computers to enhance our understanding of biology, and is rapidly expanding the field of biological research.

**Physics** is at the heart of new interdisciplinary areas such as information technology, nanotechnology, quantum technology and biophotonics.

---

**Dual qualifications**

The Bachelor of Mathematics can be combined with the following programs:

- Arts
- Commerce
- Economics
- Education (Secondary)
- Science
- Engineering

**Mathematics/Arts (BMath/BArts)**

Duration: 4 years

Combine the versatility and breadth of an arts degree with the in-depth knowledge of a mathematics degree.

**Mathematics/Commerce (BMath/BCom)**

Duration: 4 years

Bring a strong mathematical foundation to your business skills and choose from majors in accounting, business information systems and finance.

**Mathematics/Economics (BMath/BEcon)**

Duration: 4 years

Gain a focused background in economic theories and principles, while expanding and applying your mathematical knowledge.

**Mathematics/Education (Secondary) (BMath/BEd(Sec))**

Duration: 4 years

Combine your passion for mathematics with the necessary skills, knowledge and practical experiences required for teacher registration and employment.

**Mathematics/Science (BMath/BSc)**

Duration: 4 years

Gain the practical mathematical skills and science interdisciplinary knowledge required to address today’s global challenges.

**Engineering/Mathematics (BE(Hons)/BMath)**

Duration: 5 years

Create a strong mathematics base for your engineering studies and equip yourself to work in both established and emerging areas of engineering.

---

**Your future in mathematics**

Demand is at an all-time high for trained mathematicians. Graduates with a degree in mathematics are respected for their excellent quantitative and problem-solving abilities and gain a wide range of rewarding positions in the public and private sectors, including in:

- Actuarial studies
- Economics
- Finance
- Information technology
- Mathematical research
- Meteorology
- Molecular biology
- Quantitative finance
- Statistics
- Teaching

---

**International students**

For entry you will require an IELTS overall score of 6.5 with a score of 6 in reading and writing, speaking and listening.

If you wish to enrol in the dual Bachelor of Mathematics/Bachelor of Education (Secondary) program you will require an IELTS overall score of 7.5 with a score of 7 in reading and writing, and 8 in speaking and listening.

As an international student you are required to complete the degree on a full-time basis.