Technological advances continue to generate a wealth of career opportunities for skilled graduates in mathematics, physics and statistics.

Our postgraduate programs in Science provide advanced theoretical and practical knowledge in the specialised scientific fields of mathematics, physics and statistics.

The Mathematics field of study will give you advanced knowledge and skills in mathematics and its applications. You can choose advanced level courses to learn about recent developments in a broad range of modern mathematics including analysis, algebra and combinatorics, applied mathematics, computational mathematics and statistics and probability. You will also develop skills in modern applications of mathematics in areas such as coding and cryptology, bioinformatics, mathematical physics and ecology, computational science and visualisation and financial mathematics.

Physics embraces the study of the most basic natural laws and is about explaining how and why things work on scales ranging from the sub-nuclear, through the everyday, and on to the entire cosmos. The Physics field of study will give you advanced knowledge in areas such as quantum physics, computational physics, and gravitational physics. This will prepare you for a research degree, or give you the background knowledge to take to a wide range of scientific disciplines.

Statistics is the scientific application of mathematical principles to the collection, analysis, and presentation of numerical data. Statisticians contribute to scientific inquiry by applying their mathematical knowledge to the design of surveys and experiments, collection, processing, and analysis of data and interpretation of the results.

The Statistics field of study will give you the theory and practical experience in the use of popular statistical and data analysis packages, as well as applied and theoretical statistics and probability theory. You will develop advanced skills in modern statistics so you will graduate ready to embark on a career as a professional statistician.

Career opportunities
Many of our Mathematics graduates study higher degrees and go on to research positions at universities and other major research institutions. Statistics, operations research and financial mathematics are most often used in industry, with the number of mathematicians employed in banking, finance, insurance and risk-management on the rise.

Our Physics graduates have robust, high-level analytical and problem-solving skills that are widely applicable and highly valued by a diverse range of employers including those in education, finance, engineering, computing and management. Many graduates are employed by governments in research and management positions, universities, health, research and nuclear physics.

Our Statistics graduates are in high demand in business, industry, research and government, where they are employed in areas such as quality control, product development, asset and liability management and determining risks and returns of investments.

future-students.uq.edu.au

CRICOS Provider Number 00025B
JASON WERRY  Master of Science graduate

After working as a software developer for 15 years, Jason Werry decided to take his career in a new direction. With a strong interest in the mathematics behind quantum mechanics, he enrolled in UQ’s Master of Science program, specialising in mathematics.

During the program, Jason worked on projects involving the latest research in mathematics, giving him the knowledge and confidence to commence a PhD at UQ. In 2015, Jason completed his PhD degree and is now a Postdoctoral Research Fellow with the UQ School of Mathematics and Physics, researching on the mathematical structures within quantum theories.

Program structure

**Graduate Certificate in Science**
- 8 units (0.5 year full-time or part-time equivalent)
Studies may be undertaken in the following specialisations:
  - Mathematics
  - Physics
  - Statistics

**Graduate Diploma in Science**
- 16 units (1 year full-time or part-time equivalent)
Studies may be undertaken in the following specialisations:
  - Mathematics
  - Physics
  - Statistics

**Master of Science**
- 24 units (1.5 years full-time)
Studies may be undertaken in the following specialisations:
  - Mathematics
  - Physics
  - Statistics

Sample courses
- Financial Calculus
- Mathematical Biology
- Advanced Quantum Theory
- Condensed Matter Physics: Electronic Properties of Crystals
  - Probability and Statistics
  - Experimental Design

Entry requirements

**Graduate Certificate in Science**
Program code 5138
CRICOS Code: 029216A
- Mathematics field: Bachelor of Science with mathematics major
- Physics field: Bachelor of Science with physics major
- Statistics field: Bachelor of Science with statistics major
UQ or equivalent GPA of 5.5 or above on a 7 point scale. Or 5 years of work experience in the same field.

**Graduate Diploma in Science**
Program code 5240
CRICOS Code: 008585E
- Mathematics field: Bachelor of Science with mathematics major
- Physics field: Bachelor of Science with physics major
- Statistics field: Bachelor of Science with statistics major
UQ or equivalent GPA of 5.5 or above on a 7 point scale.

**Master of Science**
Program code 5244
CRICOS Code: 038548F
- Mathematics field: Bachelor of Science with mathematics major
- Physics field: Bachelor of Science with physics major
- Statistics field: Bachelor of Science with statistics major
UQ or equivalent GPA of 5.5 or above on a 7 point scale.

International Students:
**English Proficiency**
IELTS overall 6.5; writing 6, reading 6, speaking 6, and listening 6. For other English Language Proficiency Tests and Scores approved for UQ, view the English proficiency policy at http://future-students.uq.edu.au/applying/english-language-proficiency-requirements.

In the event of any conflict arising from information contained in this publication, the material approved by The University of Queensland Senate shall prevail.