Bachelor of Science (Earth Science)

The Earth is an amazing place and for an earth scientist, it offers a unique natural laboratory that covers space and time. Earth science is a multidisciplinary science that applies chemistry, physics, biology and mathematics tools to understand earth processes, decipher its past and predict its future. Earth scientists work to monitor changes in the Earth’s environment and suggest solutions to problems. They study natural hazards to prevent loss of life and reduce property damage. Earth scientists play key roles in the search for fuels and minerals. Climate change, earthquakes and geothermal energy are just a few of the issues that require knowledge of earth science.

Earth science (also known as geoscience) blends the traditional fields of geology, physical geography and oceanography/ hydrology. Geology describes the rocky parts of the Earth’s crust (or lithosphere) and its development. Physical geography, which studies the Earth’s surface, includes geomorphology, soil science and biogeoscience. The marine and freshwater parts of the Earth define the fields of oceanography and hydrology.

Why choose this course?
If you enjoy working outdoors and are interested in understanding how the world works, then you will find earth science a rewarding area of study. Blending current research issues and problem solving with theory and industry-related, hands-on practicals, the earth science major provides you with a fundamental background to pursue a career in either the resource or the environmental sector.

Entry requirements
QUT Year 12 Early Offer Scheme
If you’re a current Queensland Year 12 student, you may be eligible to receive an offer for this course on 20 November, before receiving your ATAR or selection rank.

Real graduate
Find out what Katrina found the most rewarding about studying geology. Since graduating from her Bachelor of Applied Science degree, she’s completed an internship on the PIXL project led by NASA scientist Dr Abigail Allwood, based at the Jet Propulsion Laboratory in California. The PIXL is an instrument that’s helping scientists look for signs of past microbial life on Mars.
Before you start this course, we assume you have sound knowledge of the subject/s listed below. If you don’t have the subject knowledge, you can still apply for the course but we encourage you to undertake bridging studies to gain the knowledge:

**Course structure**
During your first year of study you’ll get to sample a range of core science disciplines, allowing you to decide on your major later.

**Faculty core units**
These five units give you an introduction to the principles of science. The inquiry based experimental science units will give you the opportunity to learn by enquiry and become familiar with the methods of scientific inquiry.

From your very first semester, you will collaborate with your peers and teaching staff in QUT’s exciting new learning environments. You will explore real-world problems from multiple scientific perspectives and learn the tools of the trade. Depending on your choices, you may find yourself out in the field, working in the laboratory or learning about the impact of scientific discovery on people, policy, industry and the planet.

Working with data you have collected, you’ll study how to apply fundamental methods of scientific practice, perform scientific analysis, and learn the tools to present your findings. You’ll have the opportunity to explore and discover the range of career and professional outcomes available to you, so you can gain the most from your unit selection and the flexibility the Bachelor of Science has to offer.

**Your major**
Your major is your main area of study for what you aspire to become professionally. You will receive in-depth knowledge and expertise within your chosen scientific discipline, preparing you for entry into the workforce or further study. Your primary major comprises 11 units.

**Complementary study areas**
This is where you make the degree your own, tailoring your studies to further match your individual career goals with a wide range of complementary study options available. You’ll have the opportunity to develop sought-after professional skills, deepen your understanding of your major discipline, pursue an interest from across the university, or broaden your scientific understanding. You can even work with industry or study overseas to gain credit towards your degree.

You can choose: a second major (eight units); or a minor.

**Second major (eight units)**
Choose a second area of study to complement your major, and develop a significant depth of knowledge and skills in two discipline areas. Experience another field, learn another academic methodology and experience interdisciplinary networking.

Choose a second science discipline (biological sciences, chemistry, environmental science or physics), or explore different perspectives which might include:
- computational and simulation science
- innovation and entrepreneurship
- science communication, or
- policy and governance.

**Minor (four units)**
You might prefer to expand the breadth and depth of your studies by adding to your chosen science major with two minors.

**Careers and outcomes**
There is currently a shortage of earth scientists in Australia and employment rates are high and salaries great. Earth scientists are in high demand in the energy sector (oil, gas, coal, geothermal) and exploration and mining industries. Many earth scientists find employment in environmental consulting companies tackling geotechnical, groundwater contamination, natural hazards or climate change issues. Earth scientists may work for government agencies such as CSIRO and Geoscience Australia doing applied research, or for state or local governments.

**Professional recognition**
Graduates are eligible for membership in a number of professional societies, such as the Geological Society of Australia, Australian Institute of Geologists and other overseas professional societies.

**Other study options**
- Bachelor of Business/Bachelor of Science
- Bachelor of Information Technology/Bachelor of Science
- Bachelor of Laws (Honours)/Bachelor of Science
- Bachelor of Mathematics/Bachelor of Science

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This information has been prepared for Australian and New Zealand citizens and those with Australian permanent resident status. Some courses are open to international students, and entry requirements and fee information may be different. For more information and to check if a course is available, international students should visit www.qut.edu.au/international. Last updated on: 18/09/2020. Information contained in this document was correct at the time of printing. The university reserves the right to amend any information, and to cancel, change or reiterate any course. CRICOS No.00213J