



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

CREATE CHANGE

Explore careers in
science, mathematics,
agriculture and the environment



Science is transforming the future. Be part of it.

From harnessing the power of data to developing life-saving medical treatments, science offers endless opportunities to shape our future.

At UQ, you'll gain the knowledge and skills needed to thrive in this rapidly evolving landscape. Are you passionate about improving sustainability in global food production, addressing environmental issues or innovating new products or technologies? UQ can help you turn your curiosity into a rewarding career. Discover how you can be part of tackling global challenges.

CHOOSING A CAREER

Follow these steps to find your dream career:

1

Define your interests

Think about the subjects you enjoy at school as well as your hobbies and interests outside of class.

2

Match your interests to careers

Use the career charts on the next pages to find careers that align with your interests. Look for UQ programs that fit with what you like.

3

Do your research

Take the time to talk to your teachers and school guidance officers, and attend a university Open Day to ask questions of real life scientists and lecturers.

LEARN TO THINK LIKE A SCIENTIST

As the job market evolves, so do the skills required to succeed. Studying science at UQ equips you with the skills that employers value most, such as:

- **Analytical skills:** Develop critical thinking, data analysis, and financial literacy.
- **Problem-solving abilities:** Enhance your creative thinking and experimental design skills.
- **Communication skills:** Improve your writing, speaking, and programming abilities.
- **Entrepreneurship and innovation:** Learn to think outside the box and bring new ideas to life.

YEAR 11 AND 12 SUBJECT SELECTION

Planning your senior year subjects? Choose wisely to set yourself up for a successful career in science! Here are the essential subjects to consider:



MATHEMATICAL METHODS



BIOLOGY



CHEMISTRY



PHYSICS



EARTH & ENVIRONMENTAL SCIENCE

Every degree at UQ requires Year 12 English (or equivalent).



To check the specific pre-requisite subjects required for your preferred science program, visit study.uq.edu.au

Science grads reveal how UQ shaped their careers...



READ MORE

Jamie Pollen

Head Agronomist and Production Manager,
Queensland Berries

“Demand is high for agricultural scientists who can find sustainable solutions to the complex challenges of food security and nutritional value [...]. The skills I developed during my time at UQ have equipped me to assess and manage complex challenges, thrive in fast-paced work environments, lead informed decision-making, and be recognised for my strong problem-solving skills and critical thinking capabilities.”

Paul Gibson

Investigator (Boating and Fisheries Patrol), Queensland
Government Department of Agriculture and Fisheries

“I undertook a Bachelor of Science at UQ to academically pursue my interest and passion in sustainable fisheries because it was the best rated Brisbane university for sciences. [...] My most memorable experiences were the extended field trips to Fraser Island, inland Queensland and UQ’s research station on Heron Island.”



READ MORE



READ MORE

Giselle Pickering

Scientist (Water Planning Ecology), Queensland
Department of Environment and Science

“Studying geographical science at UQ allowed me to explore many different perspectives and techniques for approaching challenges related to people, place and environment. [...] My GIS expertise is particularly useful in my role since mapping and spatial analysis is highly integrated with the ecological assessments and research that I conduct at work.”



I like...

Animals, plants, food and business

- Problem solving
- Connecting people and technology
- Economics and business
- Understanding consumer behaviour
- International relations
- Protecting the environment
- Marketing and advertising



My degree options

Bachelor of Agribusiness

Bachelor of Agricultural Science

Majors in Agronomy, Animal Science, Horticulture

Bachelor of Biotechnology

Major in Agricultural Biotechnology

Bachelor of Science or Bachelor of Advanced Science (Honours)

Majors in Food Science and Nutrition, Food Technology

Animal health

- Helping sick animals
- Working in fast-paced environments
- Observing and recording
- Protecting wildlife
- Fieldwork
- Problem solving
- Teamwork

Bachelor of Veterinary Science (Honours)

Bachelor of Veterinary Technology

Bachelor of Wildlife Science

Environment

- Protecting the environment
- Working outdoors
- Analysing data to find solutions
- Managing projects
- Problem solving
- Educating others
- Attention to detail

Bachelor of Environmental Science

Bachelor of Science or Bachelor of Advanced Science (Honours)

Majors in Coastal and Ocean Science, Earth Science, Ecology and Conservation Biology, Geographical Science, Marine Biology, Plant Science, Zoology

Bachelor of Environmental Management (Honours)



My speciality



I could be a...

Supply chain management International business

- Agribusiness consultant
- Supply chain manager
- Agribusiness banker
- Innovation manager
- Commodity broker
- Export trader

Animal and plant science Environmental sustainability

- Livestock specialist
- Environmental consultant
- Biosecurity inspector
- Crop scientist
- Agronomist
- Farm manager

Innovation and entrepreneurship

- Research scientist, e.g. animal vaccine scientist
- New product developer
- Innovation manager
- Biochemist
- Plant pathologist

Food innovation and entrepreneurship

- Food technologist
- Food chemist
- Food production manager
- Food safety inspector
- Nutritionist

Veterinary surgery

- Small, large and exotic animal veterinarian
- Veterinary surgeon
- Biosecurity specialist
- Zoonotic disease specialist

Veterinary nursing

- Veterinary technician
- Veterinary nurse
- Veterinary pathologist
- Animal nutrition specialist
- Practice manager
- Biosecurity officer

Wildlife conservation

- Wildlife scientist
- Ecotourism guide
- Conservation officer
- Park ranger
- Environmental assessment manager

Data management and analysis Experimental research

- Environmental scientist
- Toxicology consultant
- Ecologist
- Soil carbon researcher
- Water quality specialist
- Marine scientist
- Conservation officer
- GIS specialist
- Geologist

Environmental management Environmental policy development

- Ecological assessment consultant
- Environmental management consultant
- Resource manager
- Sustainability adviser



I like...



My degree options

Human health

- Developing innovative products
- Biology
- Chemistry
- Experiments
- Analysing data
- Attention to detail
- Problem solving

Bachelor of Biotechnology

Majors in Chemical and Nano Biotechnology, Medical Biotechnology, Molecular and Microbial Biotechnology, Synthetic Biology and Industrial Biotechnology

Bachelor of Science or Bachelor of Advanced Science (Honours)

Majors in Biochemistry and Molecular Biology; Biomedical Science; Cell Biology; Chemistry; Genetics; Microbiology; Microbiology, Infection and Immunity; Psychology; Public Health

Data and mathematics

- Logical thinking
- Numbers and data
- Coding
- Problem solving
- Analysing and interpreting data
- Spotting trends and patterns
- Attention to detail

Bachelor of Mathematics

Majors in Applied Mathematics, Pure Mathematics

Bachelor of Mathematics

Majors in Data Analytics and Operations Research, Statistics

Bachelor of Science or Bachelor of Advanced Science (Honours)

Majors in Applied Mathematics, Bioinformatics, Computer Science, Mathematics, Statistics

Quantum technology and space

- Designing experiments
- Developing ideas for disruptive technology
- Creativity and inventiveness
- Coding
- All things space
- Logical thinking
- Problem solving

Bachelor of Mathematics

Major in Mathematical Physics

Bachelor of Science or Bachelor of Advanced Science (Honours)

Majors in Applied Mathematics, Biochemistry and Molecular Biology, Chemistry, Computer Science, Earth Science, Mathematics, Physics, Statistics

Bachelor of Science or Bachelor of Advanced Science (Honours)

Majors in Applied Mathematics, Biochemistry and Molecular Biology, Chemistry, Computer Science, Earth Science, Mathematics, Physics, Statistics



My speciality



I could be a...

Human health Innovation and entrepreneurship

- Biotechnologist
- Vaccine scientist
- Patent consultant
- Clinical researcher
- Quality control manager
- Venture capital consultant
- Biochemist
- Medical sales representative

Human health

- Biochemist
- Biomedical scientist
- Chemist
- Immunologist
- Forensic scientist
- Geneticist
- Epidemiologist
- Stem cell researcher
- Microbiologist

Mathematics

- Mathematician
- Actuary
- Financial analyst
- Materials scientist
- Meteorologist
- Cryptographer

Data analysis

- Bioinformatician
- Computational biologist
- Market analyst
- Quantitative researcher
- Data analyst
- Cybersecurity specialist
- Statistician
- Social media data strategist

Quantum technology

- Quantum engineer
- Quantum sensing scientist
- Quantum physicist
- Quantum control engineer
- Quantum product engineer
- Laser technology manager

Space

- Astronomer
- Computer scientist
- Astrophysicist
- Atmospheric scientist
- Planetary scientist
- Data scientist

Study options



Bachelor of Agribusiness

Duration: 3 years full-time

Entry requirements: Queensland Year 12 or equivalent English; General Mathematics or Mathematical Methods



Bachelor of Agricultural Science

Duration: 3 years full-time

Entry requirements: Queensland Year 12 or equivalent English; General Mathematics or Mathematical Methods



Bachelor of Biotechnology

Duration: 3 years full-time

Entry requirements: Queensland Year 12 or equivalent English; Mathematical Methods; plus one of Biology, Chemistry or Physics



Bachelor of Environmental Science

Duration: 3 years full-time

Entry requirements: Queensland Year 12 or equivalent English; Mathematical Methods; plus one of Biology, Chemistry, Earth and Environmental Science or Physics



Bachelor of Environmental Management (Honours)

Duration: 4 years full-time

Entry requirements: Queensland Year 12 or equivalent English



Bachelor of Mathematics

Duration: 3 years full-time

Entry requirements: Queensland Year 12 or equivalent English; Mathematical Methods



Bachelor of Science

Duration: 3 years full-time

Entry requirements: Queensland Year 12 or equivalent English; Mathematical Methods; plus one of Biology, Chemistry, Earth and Environmental Science or Physics



Bachelor of Advanced Science (Honours)

Duration: 4 years full-time

Entry requirements: Queensland Year 12 or equivalent English; Mathematical Methods; plus two of Agricultural Science, Biology, Chemistry, Earth and Environmental Science, Specialist Mathematics or Physics, at least one of which must be Biology, Chemistry or Physics



Bachelor of Veterinary Science (Honours)

Duration: 5 years full-time

Entry requirements: Queensland Year 12 or equivalent English; Mathematical Methods; Chemistry; plus one of Physics or Biology



Bachelor of Veterinary Technology

Duration: 3 years full-time

Entry requirements: Queensland Year 12 or equivalent English; General Mathematics or Mathematical Methods



Bachelor of Wildlife Science

Duration: 3 years full-time

Entry requirements: Queensland Year 12 or equivalent English; General Mathematics or Mathematical Methods



study.uq.edu.au

Disclaimer

The information in this Guide is accurate as at August 2024. However, the University has many programs and courses, and refreshes and updates its programs and course offerings from time to time and without notice. It is your responsibility to visit study.uq.edu.au for up-to-date information.



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