Advanced Science
Agribusiness
Agricultural Science
Biomedical Science
Biotechnology
Environmental Management
Environmental Science
Equine Science
Food Technology
Mathematics
Occupational Health and Safety Science
Regional and Town Planning
Science
Sustainable Agriculture
Veterinary Science
Veterinary Technology
Wildlife Science
TOP REASONS TO CHOOSE UQ

SUCCESSFUL GRADUATES
Higher than national averages for full-time graduate employment rates and salaries

GREAT EXPERIENCES
Long- and short-term overseas study exchange, vacation research programs and more

GLOBAL CONNECTIONS
Extensive graduate network, strong industry partnerships and many notable alumni
TOP REASONS TO CHOOSE UQ

ACCESSIBLE LOCATIONS
Three easy-to-access campuses – catch public transport, ride, walk, or drive

VIBRANT LIFESTYLE
Dynamic sports and cultural activities, 200+ clubs and societies

WORLD-CLASS FACILITIES
Continuously improving teaching, learning, sporting, and research spaces

EXCELLENT TEACHERS
More national teaching awards than any other Australian university*

EXCELLENT TEACHERS
More national teaching awards than any other Australian university*

LEADING RESEARCH
Global research powerhouse with all fields at or above world standard**

HIGH-QUALITY PROGRAMS
Most comprehensive range of programs and courses in Queensland

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*As at December 2015, UQ has received 114 Citations for Outstanding Contributions to Student Learning, Awards for Teaching Excellence, and Awards for Programs that Enhance Learning.

** 2015 Excellence in Research for Australia (ERA) assessment
Largest choice of science disciplines

UQ Science offers you a huge diversity of disciplines, encompassing pathways to traditional science careers, and incorporating broader options for careers in agriculture, veterinary science, food technology, planning and the environment. These sectors are among the largest employers of scientists, technologists, business managers, consultants and other professionals here in Australia and overseas.

Great career outcomes

As a UQ Science graduate, you will have comprehensive, up-to-date knowledge and the practical skills needed to undertake key roles in solving the challenges facing our world today. You can anticipate high employability rates and attractive starting salaries because of your skills and expertise. You will also have access to other UQ graduates through a strong, global network of science alumni.

Exceptional learning opportunities

As a UQ Science student, you can choose from innovative programs with a focus on meeting global challenges and creating change; you will be exposed to exceptional learning experiences and the best teachers with more national teaching awards than any other university.

You will access premier student social and learning facilities, and the greatest number of science-based teaching and research spaces in Queensland.

The Advanced Study Program in Science (ASPinS) is an opportunity for high-achieving students to gain valuable insight into scientific research as a potential career by engaging with creative thinkers across many disciplines. ASPinS inspires students to take what they learn in the classroom and put it into practice in a dynamic learning environment. This is a unique opportunity open to science students in a range of programs. To find out more, visit: science.uq.edu.au/aspins-program

Practical experience

You will have the opportunity to meet industry representatives, undertake professional placements or internships, participate in the Summer Research Scholarships program with award-winning UQ researchers, and integrate industry-based training with your studies to apply your theoretical knowledge to real life projects.

Your program may incorporate a year of research-intensive study called “Honours”, or you may choose to complete Honours as an additional component to gain valuable project management and research skills. You may even choose to study overseas at one of UQ’s 140 international partner organisations.

Discover the diverse range of careers available that will allow you to work on issues such as climate change, biosecurity, feeding the global population, sustainable energy, disease eradication and management of diminishing natural resources.

Discover what makes UQ different and what a difference UQ can make to your future.

* QS World University Rankings, 2015–16 and 2015 Performance Ranking of Scientific Papers for World Universities
Choose UQ
Why Study Science at UQ?
Quick Reference Guide

Undergraduate degrees

Bachelor of:
- Advanced Science (Hons)
- Agribusiness
- Agricultural Science (Hons)
- Biomedical Science (Hons)
- Biotechnology (Hons)
- Environmental Management (Hons)
- Environmental Science (Hons)
- Equine Science
- Food Technology (Hons)
- Mathematics
- Occupational Health and Safety Science (Hons)
- Regional and Town Planning
- Science
- Bachelor of Science Majors
  - Animal and Veterinary Bioscience
  - Archaeological Science
  - Biochemistry and Molecular Biology
  - Bioinformatics
  - Biomedical Science
  - Biophysics
  - Chemical Sciences
  - Chemistry
  - Computational Science
  - Computer Science
  - Ecology
  - Food Science
  - Food Science and Nutrition
  - Genetics
  - Geographical Science
  - Geological Sciences
  - Marine Biology
  - Marine Science
  - Mathematics
  - Microbiology
  - Physics
  - Plant Science
  - Psychology
  - Soil and Plant Bioscience
  - Statistics
  - Zoology
- Sustainable Agriculture
- Veterinary Science (Hons)
- Veterinary Technology
- Wildlife Science

Double Your Opportunities
UQ Gatton Campus
Where to Live
Student Lifestyle
Your Global Adventure
Your Advantage
Are You an International Student?
Money Matters
Scholarships
Concurrent Diplomas
Admission Information
Your Future Options
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Bachelor of ADVANCED SCIENCE (HONOURS)

If you are a high-achieving science student, this elite four-year program is bound to challenge and develop your critical thinking and analytical skills for a rewarding career in science research or industry.

Why Advanced Science at UQ?
The Bachelor of Advanced Science (Honours) is specially tailored for high-achieving science students who are seeking a degree program that will challenge and stimulate their deep interest in science. As a student in this program, you will:
- access research labs and researchers even during your first year of study
- participate in weekly Careers in Science research seminars
- attend a camp run by senior Advanced Science students, designed specifically for first-year students
- work on an independent research project in a research group of your choice in your second or third year
- develop friendships and networks with other high-achieving students
- develop your critical thinking, writing and communication skills essential for a research or industry career.

What you will study
The UQ Bachelor of Advanced Science (Honours) will give you the foundation for a successful career focused on your chosen discipline of biology, chemistry, geographical sciences, geological sciences, mathematics or physics. Built on the courses offered in the UQ Bachelor of Science program, this program is structured to include advanced content and core research courses that will culminate in your final Honours research year. To give you an excellent grounding for an exciting career in research or industry, you will be interacting and working with researchers in every year of the program. From your first year, you will be immersed in your chosen discipline and challenged with advanced content. Throughout your program, you will follow a well-defined pathway of courses driven by research inquiry.

Majors
Biology
You will study life processes and the structure, function, growth, evolution and distribution of living organisms. As a biologist, you will play a major role in confronting the growing number of issues facing our planet in areas as diverse as agriculture, health and medicine, and management of sensitive environments.

Chemistry
You will explore the structures and properties of molecules and materials, and develop new ways to use them. You will learn the mechanisms of reactions and processes that occur at the molecular level, and the chemical principles underpinning disciplines such as biochemistry, engineering, food science, materials science, nanotechnology and medicine.

Geographical Sciences
You will study the spatial patterns and interactions of physical and human phenomena at local, national and global scales, and how they change over time. You can study courses in environmental systems and Earth system science (physical geography), human geography and spatial information science.

Geological Sciences
You will examine the interactive system of the solid Earth, atmosphere, hydrosphere, and biosphere.
and biosphere over very long and very short timescales. Your courses will include hands-on mineral and rock analysis and practical field mapping to more advanced geophysics, geochemistry and subsurface modelling courses.

Mathematics
You will access an extensive range of advanced mathematics courses to gain a deep understanding of the foundations and applications of mathematics, to prepare you for research within and beyond this degree. Mathematics is relevant across a range of disciplines, where you can combine your knowledge with modelling and computational skills, and use the latest computer technology to solve problems in the physical and biological sciences, engineering, information technology, economics and business.

Physics
You will study the most basic natural laws, and discover how and why things work on scales ranging from the sub-nuclear through the everyday, and on to the entire cosmos. Explore and identify basic principles governing the structure and behaviour of matter, the generation and transfer of energy, and the interaction of matter and energy, and use these principles in theoretical or experimental studies.

Placements and practical experience
All students will complete an extensive research project in Year 4 of their program, working closely with an academic supervisor to gain in-depth skills for progression to a PhD or to work in the industry. Depending on your major, you will also have the opportunity to participate in numerous field trips to a variety of locations including the Great Barrier Reef, Mt Isa and western Queensland. Field and laboratory-based projects solidify your skills and provide important training for independent research and project management.

Careers
You will graduate with very well-developed knowledge in your chosen major and knowledge in at least one other area, with a highly developed capacity for research, critical thinking and problem solving. Your studies will lead you to endless career possibilities in the following areas, to name only a few:

- research organisations
- government
- industry
- environmental organisations
- universities
- hospitals
- marine preservation authorities
- secondary schools (with further study)
- environmental planning and site assessment
- operations research and logistics consultancies
- financial organisations.

Advanced Science is also an excellent pathway into medicine or a research higher degree such as a PhD.

Postgraduate options
Research higher degrees (MPhil and PhD) in your area of interest are available. See page 72 for more information.

SAMPLE COURSES

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<thead>
<tr>
<th>Biology</th>
<th>Chemistry</th>
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<td>Advanced Physical Chemistry</td>
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<td>Advanced Calculus and Linear Algebra</td>
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<td>Ore Deposits and Exploration Geology</td>
<td>Advanced Mathematics Research Project</td>
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<td>Tectonics and Crustal Evolution</td>
<td>Methods and Models of Applied Mathematics</td>
<td>Advanced Quantum Theory</td>
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For more information
future-students.uq.edu.au
science.uq.edu.au/planner
Bachelor of AGRIBUSINESS

Learn how to market, finance, and manage people and technology along the value chain that links producers with consumers, in one of the leading agribusiness programs in the country.

Why Agribusiness at UQ?
Everything you ate and wore today probably involved some form of agribusiness activity. Agribusiness covers everything from the seeds that grow crops to the machines that harvest them, all the way through to the retail marketing of food.

A vital element of our economy, agribusiness focuses on businesses that drive the food and fibre industries, both in Australia and overseas. Agribusiness creates innovative, value-added food and fibre products, and manages inputs such as chemicals, fertiliser, machinery and advisory services for businesses in the supply chain. It also contributes to the commercialisation of new biotechnologies and information technologies to improve the production and marketing of food and fibre products.

Study Agribusiness at UQ and you will learn to market, finance, and manage people and technology along the value chain that links producers with consumers, in one of the leading agribusiness programs in the country. You will learn at both the St Lucia and Gatton campuses, to ensure you have access to the best courses and facilities at UQ. Courses at St Lucia will be taught by the UQ Business School, and courses at Gatton are through the School of Agriculture and Food Science. The program has been developed in close and ongoing collaboration with the food and fibre industry, to ensure you receive the most relevant, up-to-date knowledge and practical experience.

What you will study
You will learn about marketing, finance, and managing people and technology along the agrifood value chain that links producers with consumers, as well as studying business courses in accounting, economics and market research in an agribusiness context. You will develop a thorough understanding of the business that drives food and fibre industries, both nationally and internationally. Through a wide range of elective courses you can further tailor your studies to your preferred career path within agribusiness. In your first year you will be based at the Gatton and St Lucia campuses. You will complete three courses at St Lucia and one at Gatton each semester. Subsequent years are based at the Gatton campus.

Placements and practical experience
During the program, you will spend time with agribusinesses organisations through visits, case studies and research projects. In your final year, you will be involved in a major project working collaboratively within an agribusiness organisation as a member of a small team of four or five students. Your project will focus on commercial outcomes and may include international market research to address your client’s brief, which is an excellent opportunity for you to apply the business skills and knowledge you have learnt throughout the program in a real-life, business context. Some students are offered jobs with these companies prior to graduation due to the working relationships they establish with their clients.
Careers
You will be highly sought after by employers, as you will be confident and ready for agribusiness management positions, as well as being market-focused, commercially aware, innovative, internationally oriented and technically skilled. Our graduates find almost immediate employment in the food and fibre industries in managerial, administrative or research roles related to:
- agribusiness management
- agribusiness research
- agri-politics
- banking, finance, investment and insurance
- commodity trading, sales and marketing
- export marketing and management
- policy development and analysis in agricultural and regional agencies
- property management
- roles within government departments in Australia and overseas
- supply chain management
- tourism.

Postgraduate options
Research higher degrees (MPhil and PhD) in your area of interest are available. See page 72 for more information.

SAMPLE COURSES
Accounting for Decision Making
Agribusiness Planning and Management
Agrifood Strategy and Competitiveness
Applied Market Research
Commodities, Futures and Options
Export Practices and Procedures
Food and Fibre Case Studies I, II and III
Food and Fibre in the E-Landscape
Foundations of Marketing
Introduction to Human Resource Management
Investment Project Appraisal
Sustainable Food Supply Chains

For more information
future-students.uq.edu.au
science.uq.edu.au/planner
Help feed the world – choose a major in animal or plant science, understand how agricultural practices can be increased sustainably, and prepare to be in-demand in the commercial food industry with this comprehensive and vital program.

Why Agricultural Science UQ?
Agricultural Science involves the research and development of all things agriculture: higher-yielding, more water-efficient crops; healthier animals; and new technologies for improved production. If you want to shape the future of food, fibre and farming – you’re in the right place.

The UQ Bachelor of Agricultural Science (Honours) will give you the scientific, technological, management, economic, environmental and social principles to respond to the world’s need for food and fibres. As a four year program, it provides students with a sound knowledge of scientific, technological, management, economic, environmental and social principles associated with agriculture.

With worldwide demand for food rapidly increasing, agricultural science is a major area of importance to our economy, and offers high employment prospects for graduates, with two or more positions available for every university graduate. As an agricultural scientist, you will apply your knowledge to solve major challenges such as climate change, food security, and the sustainable production of food and fibre for global consumption.

What you will study
You will develop expertise in a wide range of life, land and management sciences, allowing you to understand the complex interactions in tropical agriculture and the relationships between agricultural and natural systems. You will acquire the skills to use your technical and economic expertise to increase their sustainability. The program is the most comprehensive of UQ’s range of agricultural programs, and provides you with opportunities to develop your general and specialised expertise in economics, biochemistry, microbiology, genetics, animal nutrition, land use and the environment, and agricultural development in the world context.

In your first two years you will gain a solid understanding of the agricultural sector and undertake foundation courses in animal and plant science. In the final year, you will undertake an independent research project so you can extend your specialisation in either animal or plant science.
Majors

Animal Science
This major focuses on the science and management of beef and dairy cattle production, poultry, sheep, goats and pig production. In choosing animal science, you will study nutrition and reproduction (of both grazing animals and intensively housed animals), animal health and genetics, animal behaviour, microbiology, anatomy and physiology, and biochemistry and pasture science.

Plant Science
You will learn the essential components of crop production systems, including plant molecular genetics and breeding, plant pathology, plant physiology and plant soil interactions. The courses are designed for you to develop a broad knowledge of subtropical and tropical agriculture, and gain important scientific research skills to allow you to contribute to developing more efficient and less resource-intensive crop production systems.

Placements and practical experience
You will gain practical learning opportunities in agricultural production, including the opportunity for a five-week placement in Indonesia, where you will focus on the biophysical, economic and social aspects of small-scale tropical production systems. The intensive research project in the final year will expand your national or global perspective on agriculture, and give you the skills necessary for a career in agricultural research and development, production, management, consulting or other service industries such as rural finance.

Careers
Our graduates work in local, national or international agribusinesses, offering advice to graziers and growers on animal and plant nutrition and pest control. With 50 per cent of agricultural positions in Australia located in metropolitan areas, agricultural science offers exciting, challenging careers across a wide range of sectors including:

- agronomists and horticulturalists advising growers on crop cultivation to ensure maximum profitability and sustainability
- scientists in government, industry and international institutions in genetic engineering and soil science
- agricultural consultants and advisors for producers and companies
- managers of agricultural businesses, family- and company-owned farms, or national and international agribusiness companies and rural industries
- advisers in banks and other financial organisations
- agricultural and resource economists
- extension and inspection officers
- land information systems officers
- regulators of government policy.

Postgraduate options
Research higher degrees (MPhil and PhD) in your area of interest are available. See page 72 for more information.

SAMPLE COURSES
Agricultural Biochemistry
Agricultural Development in Asia
Agricultural Economics
Agricultural Microbiology and Gene Technology
Agroecology
Analysis of Scientific Data
Animal Nutrition
Australia’s Bio-Physical Environment
Chemistry I
Design and analysis of experiments for the applied sciences
Environment and Society
Food for a Healthy Planet
Land Use and Management
Molecular and Quantitative Plant Genetics
Natural Resource Management
Research Methodologies for Agriculture
The Soil Environment
Tropical Agriculture

For more information
future-students.uq.edu.au
science.uq.edu.au/planner
Bachelor of Biomedical Science (Honours)

Discover the latest in globally relevant biomedical research, and get the theoretical and hands-on skills to prepare yourself for an exciting career in an industry that’s making incredible advances in modern medical science.

Why Biomedical Science at UQ?

Biomedical scientists understand how the human body works and what goes wrong in disease, and apply this knowledge to develop new treatments. From cancer screening, diagnosis of HIV, blood transfusion for surgery, food poisoning and infection control, biomedical scientists provide the foundation of modern healthcare. Working in partnership with doctors, nurses and other healthcare professionals, they diagnose disease, evaluate the effectiveness of treatment, and research the causes and cures for disease. Biomedical Science at UQ is based on the latest research developments to make sure you’ll graduate with the skills, knowledge and understanding to enter a rewarding career in modern biomedical science.

What you will study

The Bachelor of Biomedical Science (Honours) will give you foundation skills in chemistry, biology, physics, statistics and research. In your second and third years, you will specialise in a chosen area and have the option to pursue a research project and study abroad. You will also work on projects in research labs while on placement for first-hand experiences that will help you graduate job-ready. In your final year, you can undertake the Honours program and gain hands-on experience in research by conducting your own research project.

Your choice of specialisation areas

Developmental Biology

This examines how organisms and cells grow and develop according to their genetic blueprint, giving you an understanding of how genes contribute to the development of organs and tissues. This knowledge is central to understanding the basis of human health and disease. It also provides essential knowledge needed for Bioengineering and Nanotechnology.

Human Genetics

Examine the human genome and its significance as the instruction book of life. You can contribute to the ethical debate on the use of genetic information and be a part of future discoveries identifying the genetic mechanisms that define what it is to be human. It will allow you to employ statistical and mathematical skills needed to analyse large biological data sets generated from sequencing the genomes of humans, animals and plants.

Immunology and Infectious Diseases

Examples include HIV, malaria, tuberculosis, SARS, and exotic influenzas, all of which are a threat to global health. You will study molecular diagnostics to understand how new vaccines and therapeutic treatments are developed.

Molecular and Cellular Biology

This examines the molecules made by living organisms in a cellular context, and the application of this knowledge in...
developmental biology, neurobiology and immunology. You will gain the research tools to address questions on how cells divide, grow, communicate and die, and understand the structure, function and interactions of nucleic acids, proteins, carbohydrates and lipids, and their contribution to cellular activities and processes.

**Neuroscience**

This is a rapidly growing field examining animal and human nervous systems. The nervous system is a complex array of billions of interconnected cells responsible for integrating, processing and coordinating sensory information and motor commands. You will examine how neuroscience and neural stem cells are being used in new therapeutic strategies to treat neurological and mental illnesses.

**Pharmacology and Toxicology**

These examine drugs and their impact on the molecular structure of the human body and how pharmacologists are significantly improving therapies for diseases through advances in drug design and development, leading to new drugs or better use of existing drugs.

**Physiology**

This studies how the body works, from the molecular and cellular levels to the integrative control of tissues, organs and systems. Physiology aims to understand normal processes in the body, and the changes that occur in cells, tissues and organs that lead to disease. Molecular and systems-based approaches allow researchers to gain a unique insight into physiology from many different perspectives.

**Placements and practical experience**

In your fourth year, you will conduct an Honours research project within one of UQ’s research laboratories or institutes to put your theoretical knowledge into practice.

**Career opportunities**

As a biomedical scientist, you will have excellent career prospects in management, research, education and specialised laboratory work including:

- academia and research in universities, research institutes and hospitals
- technical and scientific roles in research projects
- biotechnology company roles
- laboratory work in molecular and cellular biology
- other scientific and administration roles that require logical reasoning and independent thinking.

**Your postgraduate options**

Research higher degrees (MPhil and PhD) in your area of interest are available. See health.uq.edu.au/postgraduate

**SAMPLE COURSES**

- Analysis of Scientific Data
- Biochemistry and Molecular Biology
- Cell Structure and Function
- Cells to Organisms
- Chemistry I and II
- Differentiation and Development
- Genes, Cells and Evolution
- Genetics
- Microbiology and Immunology
- Physical Basis of Biological Systems
- Research project

**For more information**

uq.edu.au/sbms
science.uq.edu.au/planner
enquire@science.uq.edu.au
P +61 7 3365 1888
Bachelor of

BIOTECHNOLOGY
(HONOURS)

With Australia’s biotech industry continually expanding, and with over 400 companies now in operation across the nation, the industry is constantly seeking UQ Biotechnology graduates for their excellent core technical skills and expertise in areas such as molecular biology, chemistry and immunology.

Why Biotechnology at UQ?
Biotechnology uses organisms to make or change products. From brewing and wastewater management to drug design and gene therapy, biotechnology spans many industries and specialisations, and is one of the most rapidly developing sectors across the world. Study Biotechnology at UQ and we will prepare you for an exciting career with advanced skills in applied biotechnology research and the biotech industry more generally. You will examine micro-organisms, plants and animals in the context of the discovery, understanding, improvement and development of viable products and activities. You will also receive extensive hands-on laboratory experience and practical product development skills, while learning cutting-edge theory and research from some of Australia’s leading educators in biotechnology.

Biotechnology is one of the most important advances in modern science and has applications across a variety of industries, such as:
• health (rapid diagnosis of infections such as SARS and exotic influenzas, or inherited diseases such as cystic fibrosis)
• agriculture (using genetic engineering in plants and animals to improve yield, vitamin content or pest resistance)
• pharmaceuticals (developing new drugs and antibiotics using computational biology)
• genetics (DNA fingerprinting to confirm parentage or livestock pedigree, or in forensic applications)
• environment (bioremediation such as using bacteria to clean up oil spills).

What you will study
You will receive a strong foundation in science in areas including molecular genetics, microbiology, immunology, physics, chemistry, engineering and mathematics. You will complete many of the core technical skill courses offered in the Bachelor of Science and, from your second year onwards, you will learn about commercial and intellectual property concepts that are important in the development of new biotechnology products.

The fourth year will be taken at honours level, with two honours streams available. In your fourth year, you will choose to follow either a research focus and complete research that addresses the industrial, regulatory and management issues in biotechnology. Or, if you would like to pursue a career in new product development, you can focus on business and entrepreneurship.

The program allows you to earn up to one semester’s credit toward the Master of Business (Entrepreneurship), and obtain joint Bachelor of Biotechnology (Honours)/Master of Business (Entrepreneurship) qualifications within five years.
Single majors

• Bioinformatics
• Bioprocess Technology
• Chemical Biotechnology
• Drug Design and Development
• Microbial Biotechnology
• Molecular Biotechnology
• Nanotechnology
• Plant Biotechnology

Dual majors

You can study Innovation Management as a dual major with any of the above-listed majors to prepare you for the growing focus on managing commercial outcomes from biotechnology research. A dual Innovation Management major gives you the best mix of scientific skills and business knowledge.

Placements and practical experience

The Student Industry Placement and Internship Program is available through the UQ School of Chemistry and Molecular Biosciences. Depending on your level of study, projects typically involve solving a technical or operational problem, or result in the student producing a report of their findings. More information can be found at scmb.uq.edu.au/industry-placements

Careers

Work in biotechnology cuts across many industrial and service sectors, including health, agriculture, diagnostics, the environment, forestry, the law and commerce.

Our program will lead you to possible careers in:
• agriculture (in areas such as plant breeding and engineering)
• chemical companies (in areas like nanotechnology and biosensor applications, and developing drug leads)
• diagnostic companies (undertaking diagnostic test design, development and production)
• government agencies (in roles such as technology analysts or commercialisation officers)
• legal and consulting companies (in a role such as a business plan analyst)
• pharmaceutical companies (in areas such as drug design and development or pharmaceutical production, as well as research institutes, universities or in industry)
• venture capital companies.

Postgraduate options

Research higher degrees (MPhil and PhD) in your area of interest are available. See page 72 for more information.
Bachelor of ENVIRONMENTAL MANAGEMENT (HONOURS)

The Bachelor of Environmental Management (Honours) will help you bridge the gap between science and management, and incorporate fundamental biophysical science with social science and multidisciplinary skills in environmental management, decision-making and policy analysis.

Why Environmental Management at UQ?

Do you see yourself tackling complex issues like climate change, pollution and land clearing? Environmental managers take a critical look at the many causes of environmental problems and develop better ways of managing and solving them. Environmental management focuses on sustaining our natural environment and its resources. Study Environmental Management (Honours) at UQ and you will gain a foundation in environmental sciences with added focus on social and economic disciplines, decision-making, problem-solving and policy analysis.

What you will study

Your study will go beyond a sound understanding of the natural sciences to include the techniques and approaches necessary to effectively integrate biophysical, social, cultural, economic, legal and management factors into solutions to complex environmental problems. In your third year, you will go on a two-week field trip investigating environmental management as it is practised in a variety of contexts. You will follow this up with a semester away from university on a 14-week industry placement, where you will work under supervision of both a workplace and university supervisor to develop your understanding and experience of environmental management. In your final year, you will focus on integrating and applying the research and core knowledge skills acquired in the first three years and develop your ability to manage complex real-world problems that affect a range of environments, from natural through to urban and industrial settings. If you achieve an adequate grade point average from the first three years of study, you can elect to undertake an individual research thesis in your fourth year, or opt to undertake the industry-oriented group research project.

Extended majors

You will select an extended major in either Natural Systems and Wildlife or Sustainable Development. Choose Natural Systems and Wildlife and you will learn to use scientific, social, economic and managerial information in natural systems and wildlife conservation and management; or major in Sustainable Development to learn how to reduce the effect of industry and other activities on the environment and implement ways to reduce or eliminate existing and potential environmental concerns.

Natural Systems and Wildlife

Learn to use scientific, social, economic and managerial information in natural systems and wildlife conservation and management. This major combines fundamental biological studies with multidisciplinary skills in environmental management, decision making, problem solving and policy analysis.

Sustainable Development

Gain an understanding of how to minimise conflict between growth and development and our environment. This major will provide you with multidisciplinary skills in environmental management, decision making and problem solving with a
focus on urban, industrial and rural environments. It equips you with the ability to assist firms and governments to set and meet appropriate environmental standards.

Your choice of specialisation areas
You can also use electives to further your specialisation in the following fields:
• Business and Sustainability
• Conservation and Wildlife Management
• Environmental Monitoring and Assessment
• Global Change
• Marine and Coastal Management
• Parks and Wildlife Management
• Regional Natural Resource Management
• Industrial Ecology and Cleaner Production
• Environmental Management in Mining

The program’s flexible structure allows you to transfer between extended majors up to the end of your fourth semester in your second year.

Placements and practical experience
We focus on giving students integrated, high-level professional skills and practical experience to ensure they have the knowledge and confidence to succeed in the industry.

In your third year, you will apply your knowledge and skills in a compulsory two-week field trip to observe environmental management in practice, as well as network with practitioners in government and industry. You will then spend the remainder of the semester on an industry placement program, where you will undertake a supervised project in environmental management. In your final year you will also undertake an in-depth research project or case study in conjunction with an external client, where you will apply your knowledge and skills to a real-life environmental problem.

You can participate in a variety of field trips to a diverse range of environments across Queensland, as well as having the opportunity to undertake field trips to international locations including Indonesia, Vietnam and Hong Kong.

These components of the program will help you to develop invaluable connections with potential employers and industry and gain hands-on, practical skills.

Careers
You will find employment in managerial, research, administrative and education roles within consultancies, mining companies, government departments, landcare and catchment management groups and national and international NGOs.

Opportunities are available in a variety of sectors including:
• national parks and wildlife conservation
• environmental assessment and compliance
• natural resource management including coastal, river and catchment systems
• policy development
• government and commercial consultancies in environmental planning and management
• mining industry
• environmental tourism
• environmental management.

Postgraduate options
Research higher degrees (MPhil and PhD) in your area of interest are available. See page 72 for more information.

SAMPLE COURSES
Natural Systems and Wildlife
Ecology Field Studies
Environment and Community
Field Excursion (Natural Systems and Wildlife)
Fire Management
Geographical Information and Analysis
Intro to Environmental Management
Landscape Ecology
Marine and Coastal Environmental Protection
Principles of Wildlife Management
Protected Area Management
Sustainable Development
Climate Change and Environmental Management
Cultural Heritage Management
Environment and Society
Environmental Management in Mining
Field Excursion (Sustainable Development)
Geographical Information and Analysis
Global Population Issues
Human Settlements
Intro to Environmental Management
Sustainable Consumption and Production

For more information
future-students.uq.edu.au
science.uq.edu.au/planner
Bachelor of ENVIRONMENTAL SCIENCE (HONOURS)

Featuring extensive practical experience, this program will give you the scientific skills to develop and deliver global environmental strategies, solutions and programs within the major study areas of earth resources, ecology and conservation, environmental toxicology, or natural resource science.

Why Environmental Science (Honours) at UQ?
UQ’s Bachelor of Environmental Science (Honours) will equip you with the knowledge and practical skills to make a difference to your environment, both in Australia and overseas. With increasing local and global threats to our environment, there is a critical need for graduates with the skills to effectively manage natural resources, advise legislation, guide sustainable business and economies of the future, devise adaptations to global change, and ensure the health of humans and integrity of ecosystems. From the impact of climate change to sustainability, management of ecosystems and preservation of biodiversity, to securing clean water, food and planetary function, environmental science is important across the globe.

What you will study
The Bachelor of Environmental Science (Honours) examines fundamental environmental processes, the way they can be described, monitored and predicted, and the effect of human impact on the physical and biological environment. You will specialise in one of four majors: Earth Resources, Ecology and Conservation, Environmental Toxicology, or Natural Resource Science. In each major you will study core and advanced science and regulatory topics, participate in environmental science field trips, and complete a substantial research project that includes an environmental impact assessment or an environmental audit.

The program will prepare you to address the many challenges arising from diminishing natural resources and degrading environments through world-class teaching and learning, practical experience and opportunities for professional development. You will graduate with the scientific skills and knowledge of the legal, political and social aspects of environmental management as well as extensive practical, field and research experience to start your career in environmental science.

Majors
Earth Resources
You will study the physical environment, where you will develop important knowledge and skills to minimise the impact of extraction of minerals, fossil fuels, water and other resources, and geological phenomena such as earthquakes, floods and erosion.

Ecology and Conservation
Gain an understanding of how to minimise conflict between growth and development and our environment. This major will provide you with multidisciplinary skills in environmental management, decision making and problem solving, with a focus on urban, industrial and rural environments. It equips you with the ability to assist firms and governments to set and meet appropriate environmental standards.
Environmental Toxicology
You will identify and quantify problems around the presence of chemical pollutants and toxicology effects on human and environmental health, including soil, air and water. You will address the need of societies to identify the problems associated with existing and emerging environmental toxins, to address the risks and to implement regulation.

Natural Resource Science
You will focus on the various components of landscapes (soils, water and vegetation) and on correcting the adverse effects of human use on these resources. You will study environmental processes, the way they can be described, monitored and predicted, and the effect of human impact on the physical and biological environment, in order to devise solutions for a sustainable future.

Practical experience
You will receive extensive practical experience that will set you apart from other graduates and give you the skills to develop and deliver a range of environmental strategies, solutions and programs. You will participate in numerous excursions, field-based activities and research opportunities in subtropical and tropical ecosystems that span from arid to marine, including World Heritage rainforests, the Great Barrier Reef, North Stradbroke Island and outback Australia. During your studies you will also work with specialists in one of the largest groups of environmental experts in Australia, learning about and conducting research related to contemporary environmental issues.

Careers
Our graduates contribute to environmental decision making and management to address global environmental challenges in many organisations including:

- consultant companies dealing with environmental monitoring, impact assessment and management
- government agencies, nationally and internationally
- national and international companies
- mining industries
- sustainability advising in private companies and government
- natural resource management including coastal, river and catchment systems
- national parks and wildlife conservation
- policy development for government
- teaching and research
- environmental tourism
- international agencies.

Postgraduate options
Research higher degrees (MPhil and PhD) in your area of interest are available. See page 72 for more information.

For more information
future-students.uq.edu.au
science.uq.edu.au/planner

SAMPLE COURSES

Earth Resources
- Climatology and Hydrology
- Field Geology
- Mineralogy

Ecology and Conservation
- Ecology
- Outback Ecology Field Studies
- Zoology

Environmental Toxicology
- Environmental Toxicology and Monitoring
- Integrative Cell and Tissue Biology
- Medicinal and Biological Chemistry

Natural Resource Science
- Ecology
- Plant Biology
- Soils, Landscapes and Environments
Humans and horses have shared a close relationship for thousands of years. In this three-year Bachelor of Equine Science program, you’ll learn how to improve the management, performance and welfare of horses in the equine industry.

Why Equine Science at UQ?
The equine sector contributes billions of dollars annually to the Australian economy. The Bachelor of Equine Science is a three-year program to prepare you for a career working with horses, while studying at one of the world’s top 100 universities. Equine Science covers horse nutrition, breeding, exercise physiology, health and rehabilitation, welfare and behaviour, and explores the interaction between horse and rider.

While studying Equine Science, you will acquire scientific knowledge which can be applied within an industry setting to improve the management, performance and welfare of racehorses, performance horses and horses used for pleasure. Learning from UQ’s internationally regarded equine academic staff, you will acquire skills to improve outcomes for horses, riders and the equine industry in general.

Your scientific knowledge will be applied in an industry setting to improve the management, performance and welfare of leisure horses and equine athletes. The study of Equine Science will give you exposure to the scientific and practical aspects of the horse industry, and related social and community issues. As you progress through the program, you can choose from a range of electives, including agribusines, biosecurity, pasture and production courses.

What you will study
The Bachelor of Equine Science will expose you to the scientific and practical aspects of the equine industry. The program provides an understanding of generic animal science principles and related social and community issues including:
- animal physiology
- animal behaviour and welfare
- nutrition
- reproduction
- microbiology and its relationship to health and disease.

The first year of the program focuses on the underpinning knowledge for the animal sciences, as well providing an introduction to equine science. The second year of the program builds on the foundation courses, and develops knowledge and skills in equine science with courses that investigate the relationship between the horse and humans; horse behaviour and its relationship with handling and training; horse welfare; and reproduction in the horse and its application to the equine breeding industry.

Knowledge of the sciences that relate to nutrition, microbiology and health are also introduced. In the third year of the program you will integrate the knowledge acquired in the earlier years and apply this knowledge to equine exercise, rehabilitation, nutrition and health. Other aspects of the animal sciences such as animal genetics are also covered.
Dual program
You can study the Bachelor of Equine Science as a dual degree with the Bachelor of Agribusiness. The dual four-year program allows you to combine practical business skills with your interests in equine science.

Placements and practical experience
As you progress through the program you will work extensively with horses from the UQ Australian Stock Horse stud in conjunction with UQ’s expert instructors and lecturers. You might also join the UQ Equestrian Club, which is part of UQ Sport. Further hands-on training is available by including a vocational program with your studies, or taking part in extended industry placements.

Careers
You will be able to establish a career in industries such as:
• equine enterprise management
• agribusiness firms servicing the equine industry
• animal nutrition and animal health companies
• bloodstock agencies
• breed societies, equestrian centres and riding schools
• equine industry organisations and educational institutions
• equine journalism
• horse studs
• preconditioning and training businesses
• racing and competition stables
• sales and marketing
• statutory bodies administering racing and trotting.

Postgraduate options
Research higher degrees (MPhil and PhD) in your area of interest are available. See page 72 for more information.

SAMPLE COURSES
Agricultural Microbiology and Gene Technology
Animal Anatomy and Physiology 1
Animal Anatomy and Physiology 2
Animal Breeding and Genetics
Animal Health and Epidemiology
Animal Nutrition
Animal Reproduction
Equine Behaviour and Performance
Equine Breeding and Stud Management
Equine Exercise and Rehabilitation
Equine Nutrition and Health
Emerging issues in Animal Bioscience
Fundamentals of Equine Science
Grazing Animal Production
Intensive Animal Production
Short International Experience
Livestock Science and Production
Weed Science

For more information
future-students.uq.edu.au
science.uq.edu.au/planner
Bachelor of FOOD TECHNOLOGY (HONOURS)

Be part of one of the world’s most vital industries – food – and learn how to process, preserve, package, and store it, in this highly practical program aimed at improving food production from post-harvest raw material until it reaches the consumer.

Why Food Technology at UQ?
Study the Bachelor of Food Technology (Honours) at UQ and you will graduate with strong job prospects and be in demand from employers in the food industry, who are seeking your practical experience and strong theoretical understanding of food science and technology. Developed in close consultation with the food industry, your studies will give you the most current, relevant learnings from leaders in the industry, and focus on current global production issues. Our placement program and research project in your final year will give you the practical skills to prepare you for a dynamic career in the food technology industry.

What you will study
The UQ Bachelor of Food Technology (Honours) will give you a focus on the physical, microbiological, chemical makeup and processing of food. Depending on your area of specialisation, you will develop ways to process, preserve, package or store food, according to industry and government specifications and regulations. You will apply your knowledge in all stages of food production from post-harvest, raw material until it reaches the consumer. You will learn what happens to food when we consume it, and examine the optimisation of food quality, quantity and processing, food safety and nutritional value, and means of processing, preservation, distribution and use. In your final year, you will complete a research project which will give you hands-on, practical insight and experience to ensure you graduate ready for an exciting career in the industry. This program prepares you for employment in technical and scientific food manufacturing industries and does not cover the domestic cooking, catering or hospitality fields.

Placements and practical experience
In your third year, you will undertake a 14-week (one semester) placement in the food industry, where you’ll work in a modern food company and observe food technology in action. This will give you invaluable industry experience, and the opportunity to establish strong business connections.

Duration
4 years full-time; part-time equivalent available to Australian residents and citizens

Location
St Lucia

Entry requirements
Standard Queensland Year 12 (or equivalent) English, Maths B, and Chemistry

GTAC code 703041
The UQ OP Guarantee Scheme applies to this program

Program code 2377

Delivery mode Internal

Honours Available as part of the standard program

International availability Yes
(CRICOS Code 082630B)

International students must study on a full-time basis

English proficiency for international students 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 future-students.uq.edu.au/applying/english-language-proficiency-requirements

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English language policy
For the English language policy, visit future-students.uq.edu.au/applying/english-language-proficiency-requirements
Careers
The food industry is Australia’s largest manufacturing sector, and has unmet labour demand. By completing study in Food Technology, you could gain employment in supervisory or managerial roles as a:
• food technologist
• food chemist
• food microbiologist
• laboratory supervisor
• production manager
• process and product development manager
• quality control manager.

Postgraduate options
Research higher degrees (MPhil and PhD) in your area of interest are available. See page 72 for more information.

SAMPLE COURSES
- Chemical Food Analysis
- Food Microbiology (I and II)
- Food Process Engineering (I and II)
- Food Product Development
- Food Safety and Quality Management
- Food Structure and Sensory Science
- Functional Foods and Nutraceuticals
- General, Organic and Biological Chemistry
- Genes, Cells and Evolution
- Nutrition Science
- Principles of Food Preservation
- Professional Practice
- Research Project

For more information
future-students.uq.edu.au
science.uq.edu.au/planner
The UQ Bachelor of Mathematics gives you access to a broad range of courses in pure mathematics, applied mathematics and statistics, setting you up for a career in actuarial studies, mathematics, meteorology, quantitative finance, statistics or teaching.

Why Mathematics at UQ?
It’s said mathematics is the poetry of logical ideas, helping us to understand everything around us, from the fundamental ideas of quantity, shape, pattern and order to the motion of planets and the fluctuations of stock prices. For centuries its discoveries have transformed the world.

As well as expanding knowledge in the field, today’s mathematicians and statisticians combine their knowledge with modelling and the latest computer technology to solve problems in the physical and biological sciences, engineering, information technology, economics and business. Studying the Bachelor of Mathematics at UQ will widen your career options and help you excel in the mathematical aspects of other disciplines.

What you will study
In the new UQ Bachelor of Mathematics program, you will develop a deep knowledge of mathematical topics and a high level of sophistication in the application of mathematics across a variety of fields and industries. Specialise your studies with a major, or diversify your study with a minor or dual program study option.

Majors

Applied Mathematics
You will focus on the derivation and evaluation of models in the physical, biological and engineering sciences.

Data Analytics and Operations Research
You will focus on analysing large and complex data sets and making effective decisions using optimisation techniques.

Mathematical Physics
This major 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
You will look 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
This major provides you with 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
This area is a multidisciplinary science that applies computers to enhance our understanding of biology, allowing us to change the way we manage our health and environment, and the way we undertake biological research.

Physics
You will explore and identify basic principles governing the structure and behaviour of matter, the generation and transfer of energy, and the interaction of matter and energy. Physics is at the heart of new interdisciplinary areas such as information technology, nanotechnology, quantum technology and biophotonics.

Placements and practical experience
Students studying mathematics or statistics are eligible to apply for competitive summer vacation scholarships available through the UQ Faculty of Science and the Australian Mathematical Sciences Institute (AMSI). The School of Mathematics and Physics (SMP) at UQ also coordinates the SMP Industry Summer Experience, which is a competitive internship scheme organised in collaboration with industry affiliates.

Careers
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:
- finance
- economics
- mathematical research
- statistics
- actuarial studies
- quantitative finance
- meteorology
- information technology
- molecular biology
- teaching.

Postgraduate options
Research higher degrees (MPhil and PhD) in your area of interest are available. See page 72 for more information.

SAMPLE COURSES
- Applied Mathematics
- Financial Mathematics
- Mathematical Biology
- Data Analytics and Operations Research
- Experimental Design
- Optimisation Theory
- Mathematical Physics
- Abstract Algebra and Number Theory
- Algebraic Methods of Mathematical Physics
- Pure Mathematics
- Functional Analysis
- Graph Theory and Design Theory
- Statistics
- Probability and Statistics
- Statistical Modelling and Analysis

For more information
future-students.uq.edu.au
science.uq.edu.au/planner
If you’re looking for a career that will make a difference to the health and wellbeing of workers, UQ’s Bachelor of Occupational Health and Safety Science (Honours) is unique in that it addresses psychosocial and mental health issues within the workplace, as well as long-recognised chemical, physical, mechanical and biological hazards.

Why Occupational Health and Safety Science (Honours) at UQ?

The Bachelor of Occupational Health and Safety Science (Honours) at UQ is specially tailored to allow you to use your unique combination of technical knowledge, advanced communication skills and your sense of social justice to make a difference to workplaces not only in Australia but also overseas. You will learn from some of the leading occupational health and safety (OHS) experts in Australia in a program that has been developed in response to industry demands to make sure you graduate with the knowledge and practical skills for a rewarding career.

OHS professionals work anywhere there is a workplace, so your future place of work could be as diverse as a remote mine site, a large corporate office, a laboratory or a movie set, within Australia or internationally. On a day-to-day basis, OHS professionals are involved in:

- analysing workplace data
- completing incident investigations
- conducting OHS audits and inspections
- delivering education programs including wellness programs
- designing work environments to enhance worker health and safety
- devising, evaluating and implementing OHS management systems
- ensuring legislative compliance
- monitoring and modifying work environments.

Our graduates are in high demand, with excellent employment opportunities and high starting salaries. A 2013 National Safety Recruitment Survey in Australia reported average graduate salary packages of $71,997 and average Workplace Health and Safety Group Manager salary packages of $300,939.
What you will study
Study the Bachelor of Occupational Health and Safety Science (Honours) and you will enter an industry with excellent employment opportunities and impressive starting salaries. The International Labour Organisation estimates each year about two million workers worldwide die as a result of work activities, a statistic that is steadily growing with expanding global industrialisation.

This program will give you the theoretical knowledge, practical skills and professional attributes necessary for a career in this dynamic industry. You will learn about industry hazards (chemical, physical, mechanical, biological and psychosocial) within the context of the OHS disciplines of occupational hygiene, ergonomics, occupational health, safety science and risk management.

Your first year of study will incorporate a strong basis in the foundation sciences, as well as offering the opportunity to meet with OHS professionals and gain insight into their work life. This insight into your future work life will be provided in the Introduction to OHS course.

Your subsequent years (2, 3 and 4) will be used as a basis for the study of the core OHS areas such as occupational health, ergonomics, safety science, occupational hygiene and toxicology. You will also study management, law, ethics and aspects of the environment. In your fourth year you will undertake a full semester of industry placement, so that on completion of the BOHSSc(Hons), you will be job ready.

Placements and practical experience
In your final year you will complete a minimum of 480 hours of placement with one or two industry partners to ensure you are qualified and prepared to enter the industry when you graduate. The program’s unique blend of scientific and OHS knowledge means your employment opportunities are many and diverse, as employers worldwide recognise the skills and practical knowledge gained through the outstanding teaching and facilities available at UQ.

Careers
With a shortage of qualified OHS professionals, particularly those with an undergraduate degree based on a sound background in science, you will have many career choices. Where you choose to start your career will depend on both your career goals and personal aspirations. Positions in large organisations and consulting firms offer mentoring by senior staff, and normally involve travel within Australia and overseas. Comparatively, solo positions allow you to be more hands-on across the full range of OHS issues, and expose you to other business activities, such as human resources and production.

Legislative requirements mean all workplaces require OHS advice. This allows you to have the opportunity to work in all occupational settings, including:
- agriculture
- construction
- government
- health care
- hospitality
- manufacturing
- mining/resource industry
- retail
- tourism
- transport.

Postgraduate options
Research higher degrees (MPhil and PhD) in your area of interest are available. See page 72 for more information.

APPLY SKILLS
in occupational health and hygiene, ergonomics, safety science and risk management for the
HEALTH OF WORKERS

For more information
future-students.uq.edu.au
science.uq.edu.au/planner
Study the Bachelor of Regional and Town Planning and learn how planning helps communities, companies and governments integrate environmental, economic and social aspects of development, from site design to regional scale analysis.

Why Regional Town Planning at UQ?

Any town planner will tell you there are many ways to plan a city and many different interests to be balanced. If you want to be an informed professional who makes well-advised planning and development decisions, you’re in the right place. At UQ you will learn from some of Australia’s best, in a program that is recognised by employers as delivering high-quality, experienced graduates. You will receive an industry-directed balance of theoretical knowledge and practical experience, from small-scale projects to comprehensive development schemes, often in conjunction with local authorities and community organisations. With many of South-East Queensland’s planning firms headed by UQ graduates, it’s no surprise that UQ’s Regional and Town Planning is recognised as one of the leading planning programs in Australia and a popular choice for a challenging, rewarding career. The Bachelor of Regional Town Planning is accredited by the Planning Institute of Australia (PIA).

What you will study

You will gain knowledge and practical skills, and undertake industry-focused planning projects in each year of your studies. You will learn about land-use planning, urban design, transport and infrastructure planning, use and extension of information technology, heritage and conservation, resource management, environmental monitoring, planning law and practice, commercial and industrial development, and policy making and implementation. You will also gain skills in long-range planning as well as structural and statutory components, including the current development of the built and natural environments and the legislative framework controlling land use. UQ lecturers are experts in planning theory and practice, and collaborate with guest lecturers from industry to give you access to case studies from the professional sector. You can choose to focus your fourth year of study on industry or undertake a research project (Honours). You will receive advice during the third year of your program as to which of these two options is most appropriate based on your areas of interest and academic performance during the first three years of the program.

Placements and practical experience

Throughout the course students undertake real-life planning projects. These projects expose students to planning, urban design and community engagement activities. Past students have worked on the Indooroopilly Activity Centre, Yeerongpilly transit-oriented development site and the inner-city redevelopment for Brisbane City Council. You can also choose
to internationalise your studies through the UQ Abroad study program, or by enrolling in courses that will take you on field studies to Indonesia, Vietnam and Hong Kong, which focus on the development of cities and urban areas, and the key issues facing different regions around the world. Many students choose to study a semester abroad in planning programs at UQ’s partner universities.

Careers
Choose a career in Regional and Town Planning and you will enter a dynamic industry that improves the quality of life for people in cities and regions. Employers seek our graduates for their ability to make environmentally, socially and economically sustainable decisions. You will be employed in a variety of roles in the public and private sectors, including:
- urban design
- statutory or strategic planning
- regional development
- environmental management and monitoring
- technology for planning
- spatial planning
- commercial and industrial development
- engineering and architectural applications
- heritage and conservation
- land-use planning
- planning law and practice
- resource management
- social planning
- tourism
- transport and infrastructure planning
- urban design.

Postgraduate options
Research higher degrees (MPhil and PhD) in your area of interest are available. See page 72 for more information.

UQ’s Regional & Town Planning is recognised as one of the LEADING PLANNING PROGRAMS in Australia

SAMPLE COURSES
- Advanced Planning Practice
- Community Planning and Participation
- Cultural Heritage Management
- Human Settlements
- Introduction to Planning
- Planning Practicum
- Real Estate Development Planning
- Resource Management and Environmental Planning
- Teamwork and Negotiation for Planners
- Transport and Infrastructure Planning
- Urban Design

For more information
future-students.uq.edu.au
science.uq.edu.au/planner
Why Science at UQ?

The Bachelor of Science is a versatile program that will give you the perfect balance of a defined sequence of study combined with flexible course options. With the choice of 26 majors, you can study an extensive range of courses supported by innovative research to graduate with superior technical skills, and advanced independent thinking and communication skills. Use this range of courses to tailor the program to your individual interests and career goals. Select course combinations from science and non-science disciplines in your first year, then in your second and third years focus on one or two specialist areas (majors) to deepen your knowledge.

When you receive an offer to study at UQ, you will receive a web link to a study planner showing recommended combinations of courses for your first year. You should also make an appointment to speak individually with an academic advisor to help you make your final selection of these first year courses. You will also be able to access this academic guidance throughout each semester of your studies.

Bachelor of Science with Honours

As you near the end of your Bachelor of Science, you may consider applying for an Honours program. Honours is an additional year of study that is essentially a research apprenticeship for a young scientist. You will work under the guidance of a researcher on a specific project of interest to them, and learn about the research environment, how to plan a project, how to perform critical experiments and analyse data, and how to communicate and present your results. UQ Science Honours graduates are in high demand by employers due to their ability to work without close supervision.

Bachelor of Science majors at Gatton

The exceptional teaching and research facilities at the Gatton campus are also now available to Bachelor of Science students in the Animal and Veterinary Bioscience or the Soil and Plant Bioscience majors. Taught exclusively at the Gatton campus, Animal and Veterinary Bioscience will give you a solid biological foundation for a career in research, the animal bioscience industry and related sectors. You can also study this major to progress into the Bachelor of Veterinary Science.

Choose the Soil and Plant Bioscience major to learn how plants respond to environmental variables, and the relationships of plant genetics and the environment. There is high demand for soil and plant specialists in the agricultural sector, and you will find employment in government departments, research organisations, and conservation and environmental agencies.
**DUAL PROGRAMS WITH THE BACHELOR OF SCIENCE**

**BSc + another bachelor degree**

Enrol in a dual program to complete two degrees in a shorter time than completing each program separately. You will have the flexibility to study two areas of interest at once, extend your knowledge and skills to broaden your career opportunities, and gain a competitive employment edge.

Note: The Dual Program option is not currently available for Gatton majors.

**Applying for a dual program**

Dual programs at UQ have unique program codes, and you must satisfy prerequisite and entry score requirements. Domestic applicants must apply through the normal QTAC application process. International applicants should visit the UQ International website for application details.

**Transferring to a dual program**

Once you have started your BSc you can transfer to a dual program by requesting a program change or applying through QTAC. Faculty of Science academic advisors can provide further information about the best options to suit your individual needs.

Study a Bachelor of Science in combination with:
- Arts
- Business Management
- Commerce
- Economics
- Education (Secondary)
- Engineering (Honours)
- Information Technology
- Journalism
- Laws (Honours)
- Mathematics
- Music (Honours)

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<table>
<thead>
<tr>
<th>Dual Program Description</th>
<th>Duration</th>
<th>Program Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business Management/Science (BBusMan/BSc)</strong></td>
<td>4.25 years</td>
<td>Gain practical business knowledge, high-level research and problem-solving skills, and a practical and theoretical understanding in science.</td>
</tr>
<tr>
<td><strong>Commerce/Science (BCom/BSc)</strong></td>
<td>4.25 years</td>
<td>Develop a strong background in mathematics and statistics, and practical skills in business and finance.</td>
</tr>
<tr>
<td><strong>Economics/Science (B Econ/BSc)</strong></td>
<td>4.5 years</td>
<td>Expand your career options and apply your scientific and economics knowledge for business, government or technology-based industries.</td>
</tr>
<tr>
<td><strong>Engineering (Hons)/Science (BE(Hons)/BSc)</strong></td>
<td>5 years</td>
<td>Create a strong science base for your engineering studies and further your interest in maths, physics and astrophysics.</td>
</tr>
<tr>
<td><strong>Information Technology/Science (BInfTech/BSc)</strong></td>
<td>4 years</td>
<td>Combine the theory and practice of modern computing with another field of science, and undertake an industry placement project.</td>
</tr>
<tr>
<td><strong>Mathematics/Science (BMath/BSc)</strong></td>
<td>4 years</td>
<td>Combine the versatility and breadth of science and in-depth knowledge of maths. This innovative program will develop graduates with the practical skills and interdisciplinary knowledge required to address today’s global challenges.</td>
</tr>
<tr>
<td><strong>Music (Hons)/Science (BMus(Hons)/BSc)</strong></td>
<td>5 years</td>
<td>This dual degree program is designed to provide you with a professional career in music and a depth of understanding in one or more fields of knowledge in the sciences, and culminates in advanced research training in your chosen Music Honours field.</td>
</tr>
<tr>
<td><strong>Science/Arts (BSc/BA)</strong></td>
<td>4 years</td>
<td>Build your knowledge in humanities as well as the sciences. The combination of majors available will expand your career opportunities and allow you to choose from a greater range of topics than is possible in a single program.</td>
</tr>
<tr>
<td><strong>Science/Education (Secondary) (BSc/ BEd(Sec))</strong></td>
<td>4 years</td>
<td>Specialised minors will provide you with the specific knowledge necessary for secondary teaching. The fourth year is completed as a professional practice year in schools.</td>
</tr>
<tr>
<td><strong>Science/Journalism (BSc/BJ)</strong></td>
<td>4 years</td>
<td>Combine these programs if you are seeking a career in science journalism or other forms of scientific communication.</td>
</tr>
<tr>
<td><strong>Science/Laws (Hons) (BSc/LLB (Hons))</strong></td>
<td>5.5 years</td>
<td>Understand and interpret the legal requirements attaching to modern science and its applications. Work as a company lawyer, in environmental impact and litigation, as a medical or maritime lawyer, a patent lawyer, or as a scientist who is an expert in law.</td>
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</table>
The UQ BSc has long been recognised as a good preparation to study Medicine and to advance into a medical career. Alternatively, the UQ BSc offers a way to improve your entry rank for programs like Engineering, Veterinary Science, or Pharmacy. By completing a year of full-time study in the BSc, you can use your level of achievement at university (your Grade Point Average or “GPA”) as a way to meet the higher entry requirements. If you are planning to use the BSc as a way to improve your entry rank, you should always seek advice on the GPA required to allow you to transfer into your chosen program, as entry into some programs – particularly in the health sciences and veterinary science – is very competitive. See your academic adviser early in your studies so they can help you keep all your options open and carefully plan your first year to make sure that, if you are unsuccessful in transferring to your chosen program, you can still continue in the BSc.

Bachelor of

SCIENCE MAJORS

How do I choose an area of specialisation in the BSc?

In the BSc, you will complete a specialisation – whether it be a major, an extended major or a dual major – in your chosen area of science. Tailor your BSc study plan according to your interests and explore the flexibility to incorporate one third of your courses from other UQ programs.

What is the difference between a major, an extended major and a dual major?

A major is an area of specialisation focusing on a single discipline within a program. For example, Chemistry is a major within the Bachelor of Science. An extended major is similar to a major but contains more courses and provides greater depth in that area of study. A dual major is a combination of two different disciplines, for example Biophysics is a combination of Biology and Physics.

Majors – St Lucia
- Archaeological Science*
- Biochemistry and Molecular Biology
- Biomedical Science*
- Chemistry
- Computer Science*
- Ecology
- Food Science*
- Genetics
- Geographical Science
- Geological Sciences*
- Marine Biology*
- Marine Science
- Mathematics*
- Microbiology
- Physics*
- Plant Science
- Psychology*
- Statistics
- Zoology

Majors – Gatton
- Animal and Veterinary Bioscience*
- Soil and Plant Bioscience*

Dual majors
- Bioinformatics
- Biophysics
- Chemical Sciences
- Computational Science
- Food Science and Nutrition

*Also available as an extended major.

What if I can’t decide on a major?

Your study is quite broad in the early years of your program, which gives you time to decide on your area of specialisation. You are asked to specialise in the final half of your program and, even then, you still have several options. Access to academic advisers is always available and you are strongly encouraged to take advantage of their experience.

Can I study part-time?

You can study the Bachelor of Science part-time but most lectures, practical lessons and other learning activities are scheduled between 8am and 6pm Monday to Friday and classes may be spread out over the week. (Note however, that international students must study on a full-time basis.)

Can I transfer into another program?

If you decide you want to transfer to another program, you may be able to get credit towards the new program. As there are many options, it is best to seek academic advice early.

For more information

future-students.uq.edu.au
science.uq.edu.au/planner
What you will study
Archaeological Science at UQ has a global reputation for research excellence and features structured, interdisciplinary study of the theory and method of science-based archaeology.

Tailor your studies in geography, earth science, biology, chemistry or psychology in combination with core archaeology courses to develop your skills in scientific reasoning and strong multidisciplinary knowledge.

Careers
You will find employment in the following sectors:

- commercial consulting (cultural heritage consultancy)
- university teaching and research
- government (developing public policy and as cultural heritage advisers)
- museums
- forensic science.

Many BSc graduates also enter into further research-based studies in Honours, Masters and Doctor of Philosophy (PhD) programs.

SAMPLE COURSES
- Advanced Research in Archaeology
- Animals and Archaeology
- Biodiversity Analysis, Discovery and Systematics
- Biogeography and Geomorphology
- Cultural Heritage Management
- Discovering Archaeology
- Doing Archaeology
- Environment and Society
- Field Archaeology
- Historical Archaeology
- Mineralogy
- Palaeobiology
- Sedimentary Environments
BSc Major ST LUCIA

BIOCHEMISTRY AND MOLECULAR BIOLOGY

What you will study
Biochemistry and Molecular Biology is the study of the chemical basis of life, and underpins all disciplines of biology. As a student in the Biochemistry and Molecular Biology major, you’ll learn about the molecular events that control the growth and development of all living things. In addition, you’ll develop an understanding of how molecular events can go wrong in certain disease states and how they can be exploited to develop new drugs. A major in Biochemistry and Molecular Biology is relevant to research and development in areas like medicine, the environment, agriculture, proteomics, genomics, bioinformatics, biotechnology, genetic engineering, and drug design.

Careers
Biochemistry and Molecular Biology offers some of the most exciting and challenging careers in the fields of science and medicine. You may work in sectors such as agriculture, health and the environment in biotechnology, agricultural and pharmaceutical companies as a biochemist, molecular biologist or molecular geneticist in research or quality control. You may be employed as a research biochemist or molecular biologist in laboratories in universities, biotechnology companies and agricultural, veterinary and medical institutes, investigating the molecular networks controlling normal biological processes and defective processes associated with disease affecting animals and plants. Using the latest genetic engineering and molecular-biological techniques, you may contribute to the development of new approaches to diagnose and treat diseases such as:

- an industrial biochemist checking the purity of food and beverages or the enzymatic production of fuels from waste products by fermentation procedures
- a clinical biochemist in hospital laboratories studying the chemical composition of tissues and body fluids to assist in the study, diagnosis and treatment of diseases
- a biochemist/molecular biologist in government agencies in specialist areas such as forensics, biosecurity and quarantine.

BSc Dual Major ST LUCIA

BIOINFORMATICS

What you will study
With rapid advances in computing and the huge increase in the amount of biological information (such as the human genome), Bioinformatics is changing the way we make scientific discoveries and interpret scientific data. It combines maths, computing and biology, applying them to biological problems to analyse our genes and molecular structures, and to model cellular processes. Bioinformatics allows us to experiment on our laptop and visualise in three dimensions how molecules process information.

You will develop your knowledge in four key areas:

- Structural Bioinformatics – learning concepts and computational solutions to study shape and the dynamic behaviour of molecular systems.
- Systems Bioinformatics – understanding functions, processes and components in a cellular context and developing the background to study systems biology.
- Methods in Bioinformatics – examining computational theories and algorithms underpinning the tools and models that facilitate discoveries using biological data.
- Applied Bioinformatics – gaining the expertise to solve different types of biological problems using appropriate bioinformatics methods.

Careers
As a new and growing area, there is a world shortage of trained bioinformaticists and computational biologists. With your strong scientific knowledge and interdisciplinary skills in computing, mathematics and biology, you will be in demand in pharmaceutical/biotechnology companies, research organisations and governments, in roles such as:

- bioinformatician
- biomedical computer scientist
- biostatistician
- clinical data manager
- geneticist
- medical writer/technical writer
- research scientist
- software/database programmer.
BIOMEDICAL SCIENCE

What you will study
Biomedical scientists understand how the human body works, what goes wrong in disease, and apply this knowledge to develop new treatments. From cancer screening and diagnosing HIV to blood transfusion for surgery, food poisoning and infection control, biomedical scientists are the foundation of modern healthcare. Working in partnership with doctors, nurses and other healthcare professionals, they diagnose disease, evaluate the effectiveness of treatment, and research the causes and cures of disease. Biomedical Science at UQ incorporates extensive practical experience in research laboratories where the latest breakthroughs are taking place.

Your first-year studies will give you a broad foundation in the traditional sciences of biology, chemistry and mathematics. In your second year you will build on this foundation in cell biology, cell and tissue physiology, biochemistry and molecular biology. In the second semester of your second year, you will choose courses relevant to your intended specialisation in one or more of these areas: anatomy; developmental biology; human genetics; immunology and infectious diseases; neuroscience; pharmacology; and physiology.

Careers
You will find employment in research institutes, government, education and industry in areas such as:
- technical and scientific positions on research projects funded by government and private agencies
- academic and research pathways in universities
- research institutes and hospitals
- government and industry
- research work in pharmaceutical and biotechnology companies developing diagnostics for disease and new drugs for treatment
- laboratory work in molecular and cellular biology
- scientific sales and marketing
- in secondary schools or other educational institutions, when combined with a teaching qualification.

A major in Biomedical Science may also be used to gain graduate entry to programs such as the Doctor of Medicine. Many BSc graduates also enter into further research-based studies in Honours, Masters and Doctor of Philosophy (PhD) programs. Biomedical Science is also available as an extended major.

BIOPHYSICS

What you will study
Biophysics is at the crossroads of biology, physics, chemistry, mathematics and engineering. Biophysicists typically use their knowledge of physics to study the structure and function of biological molecules, cells and organisms; or they develop and build new instruments and tools for research and biomedical purposes. Biophysics also encompasses fields like bio-molecular modelling, crystallography, spectroscopy, radiology, medical physics, ultrasound, and nanotechnology. You will undertake practical experiences using state-of-the-art scientific equipment, and take courses from a range of fields including physics, chemistry, mathematics neuroscience, physiology, biochemistry, and structural biology. Develop your area of interest across four streams:
- Biophotonics – using spectroscopic techniques (optical, radio-frequency etc) to understand biological systems (including imaging and diagnostics).
- Molecular Machines – studying cellular components involved in metabolism, molecular motors and energy conversion (e.g. photosynthesis) at an atomic level.
- Biomolecular modelling – using advanced computational techniques/theories to calculate and predict molecular properties and structure, crucial in such areas as drug design, understanding enzyme processes, modelling energy transduction and the design of new bio-inspired functional materials.
- Ion channels and electrophysics – studying electrical processes (particularly within membrane structures) crucial to the workings of a biological system (for example, ion channels in the heart and muscles).

Careers
In this rapidly expanding field, you will find employment in:
- universities and research centres
- pharmaceutical and cosmetological industries
- hospitals working with Computer Assisted Tomography (CAT) scans and Magnetic Resonance Imaging (MRI)
- government departments as advisers assisting governments to understand rapid scientific development
- development of medical instruments
- biotechnology industry and research.
What you will study
Chemistry studies the interaction of matter and energy to analyse molecules and materials, exploring their properties and developing ways to utilise them. The principles of chemistry underpin sciences such as biochemistry, engineering, food science, materials science, nanotechnology and pharmacy.

During your first year you will learn the fundamentals of general, physical, organic and inorganic chemistry. Courses in your second and third years are more specialised in areas such as:
- Synthetic chemistry – exploring the synthesis of new drugs, new materials or new molecular devices.
- Polymer chemistry – studying new polymers with novel uses as materials, electronic devices, and in medicine.
- Computational chemistry – understanding and predicting the structures and reactivities of molecules and short-lived intermediates using high-level theoretical calculations and powerful supercomputers.
- Surface chemistry – investigating the impact of chemistry in the study of catalysts and in nanotechnology.
- Spectroscopy – examining the interactions between matter and electromagnetic radiation to determine chemical structures and reactivities, from individual molecules through to biological macromolecules such as enzymes: spectroscopy has applications in analytical chemistry, biology, physics, astronomy and remote sensing.

You will have access to LabSkills multimedia software so that, regardless of your abilities and background, you can receive extra support for the practical work in UQ’s chemistry labs.

Careers
Chemistry is one of the most versatile majors you can study because it can be combined with so many other scientific areas. You can choose to follow either a generalist career or a specialist career in research.

You will find employment in roles such as a chemist, materials scientist, environmental scientist, biochemist, toxicologist and a forensic scientist. Jobs outside the lab include scientific journalist, quality assurance manager, pharmaceutical sales representative, patent examiner, teacher and roles in marketing and conservation.

This major is accredited by the Royal Australian Chemical Institute.
What you will study
Computational Science is an interdisciplinary field that uses skills from mathematics and information technology to solve scientific problems through computation. Computational scientists collect and process huge amounts of data and design sophisticated models. Computational Science is only available as a dual major. This means you can choose a compatible single major and combine it with Computational Science and study additional courses about information technology, mathematics and computational methods to develop your computational and quantitative skills.

Careers
You will have a competitive employment advantage in industry due to your extensive knowledge and skill base. You will work in roles such as a theorist, researcher and/or inventor where you will apply your theoretical expertise and innovation to complex problems and the creation of new technologies in areas such as genome research, molecular and microbial sciences, and bioinformatics; scientific research and analysis in biology, mathematics, computer science, visualisation and computational methods; and construction and maintenance of large scale simulations and models, especially in the business, finance, engineering and government sectors.

What you will study
Information and communication technologies drive modern science. Choose this major and you will study the science of computing and its application to other scientific disciplines and gain a solid grounding in computational, scientific and mathematical skills. You will have the opportunity to specialise in areas such as software, information systems and management, web design, artificial intelligence and human-computer interaction.

Enhance your computing skills even further by completing an extended major in Computer Science within the Bachelor of Science. Alternatively, study a dual major with Computational Science for greater specialisation in computational and mathematical problem-solving, together with significant studies in another field of science such as biology or physics.

Careers
You will graduate with a unique skill set that is in demand across a range of industries, including government, university and commercial organisations, in roles such as:
• a computer science and biological sciences (bioinformatics) professional with biotechnology companies
• a systems integration specialist designing and implementing complex systems based on components from different sources
• a computer science and mathematics expert, applying mathematics to financial, logistical or business problems using computing technology
• a computer science and psychology practitioner understanding how both computers and humans work, to help build systems that integrate computers more seamlessly into people’s lives
• a computational science specialist in large-scale computation on large networks of conventional computers.

Many BSc graduates also enter into further research-based studies in Honours, Masters and Doctor of Philosophy (PhD) programs.
What you will study

Food Science is a combination of the basic chemical and biological sciences and their application to the quality, safety, nutritive value, processing, and storage of food. It is firmly based in chemistry, biochemistry, biotechnology, microbiology and biometry, and is the science underpinning the food industry, the largest manufacturing industry in Australia. You will learn all of the technical aspects of foods from “field to fork” including the development of new foods, the processes to produce these foods, the packaging materials for optimal storage and transport, how to conduct shelf-life studies and sensory evaluation of products with consumer panels, and microbiological and chemical testing of products for consumer safety.

Food science is a highly interdisciplinary science incorporating many different fields including microbiology, chemical engineering, and biochemistry. As a food scientist you will deal with issues such as food safety, product development, the industrial processes used to manufacture food, food preservation, food technology, packaging, molecular gastronomy and sensory analysis. You will learn the processes involved in developing, producing and evaluating new foods, examine the causes and prevention of foodborne illnesses, learn the methodologies for microbiological and chemical testing of food, and discover the causes and prevention of quality degradation.

Careers

As Australia’s largest manufacturing industry, the food industry seeks highly qualified graduates. You will find employment in:
• food technology
• process and product development
• food microbiology
• food standards and policy
• production management
• quality assurance
• research and development
• technical sales and marketing.
What you will study
The impact of food and nutrition on our daily lives is one of the most popular health topics in the world. From the obesity epidemic to specialised diets that promote health and wellbeing, the study of nutrition and the foods we eat is integral to the health and longevity of our society. The food system is not only concerned with on-farm production, off-farm food processing, and distribution of produce for sale, but also the selection and consumption of the food by the consumer including the effects of food on their health.

You will study all aspects of the food system from “farm to fork”, including basic food processing principles, shelf-life studies and sensory evaluation of products with consumer panels, as well as the microbiological and chemical testing of products for consumer safety. You will examine the psychological, sociological and cultural factors that influence food choice and the effect of these factors on consumer health. You will also learn the physical nature and chemical composition of food so you can understand how food behaves under different conditions of processing and storage. You will use this information to improve the safety and quality of food as well as extend the range of products available.

Careers
Food and nutrition scientists are in demand across the world due to the ongoing need to provide food to the increasing global population. You will work in roles such as:
• community nutrition and education
• food policy
• research and development

You could work as a:
• molecular geneticist in laboratories around the world, often interacting closely with chemists, biochemists and microbiologists
• genetic counsellor in hospitals, helping members of the public understand the nature of a genetic disease that they or their family members have inherited
• conservation geneticist studying the genetic diversity in endangered species populations, facilitating the development of breeding programs and conservation efforts to prevent their extinction
• biotechnologist using genetic engineering to manipulate life at the molecular level to generate products that make our lives better, ranging from vaccines to genetically modified foods.
What you will study
Geology studies the interacting systems of the solid Earth, atmosphere, hydrosphere, and biosphere as they evolve through time. Geologists discover, develop and responsibly manage minerals, energy, and other Earth resources. Geological knowledge underpins the sustainable supply and responsible use of natural resources and is essential in solving environmental challenges such as global climate change.

Core courses in geology, chemistry, mathematics and physics provide the foundation for your study of fundamental geologic methods and problems, both in the laboratory and in the field. Specialise in economic geology, mining geology, energy resources, geophysics, environmental geology, geochemistry, palaeobiology, marine geology, surficial processes and landscape evolution, tectonics, and remote sensing. The three recommended study plans are:
• Minerals and Energy – to work as a professional geologist in the exploration and mining industries.
• Environment and Marine – to work in environmental geosciences, marine geology, climate change, hydrogeology, and geochemistry.
• Exploration Geophysics – to work as a professional geophysicist in resource and engineering companies, international geophysical contractors, government or research organisations.

Most students complete advanced courses in field geology, culminating with a trip to the Mt. Isa region. Field and laboratory based projects during your honours year solidify your geologic skills and provide essential training for independent research.

Careers
Long-term employment prospects are very strong and areas such as exploration for energy resources, minerals and water; environmental planning; engineering; and the disposal of hazardous waste which all require skilled geoscientists. Geological Sciences is also available as an extended major. Both single and extended majors have accreditation with the Australian Institute of Minerals and Metallurgy.
What you will study
Marine Biology allows you to focus on the biology of marine organisms in addition to the physical aspects of marine science such as currents, waves and physical processes of marine environments. It draws on disciplines such as marine ecology, zoology, botany and genetics to study life in the oceans and other salt water environments such as estuaries and wetlands. You will develop a breadth of specialized knowledge of marine biological systems and the application of ecological and environmental strategies to protect these systems. With one of the largest marine research groups in Australia, your studies will be enriched by the input of researchers at the forefront of this dynamic discipline.

Courses in your second year will build core knowledge in the biological sciences and prepare you for specific courses in marine biology in your third year. You will participate in field trips to UQ’s research stations at Moreton Bay and Heron Island to experience both tropical and sub-tropical environments and also gain practical laboratory skills and knowledge to prepare you for a broad scope of employment opportunities.

Careers
You can work in many areas of research and education including:
• engineering and consulting companies
• the fishing and aquaculture industries
• food technology

Marine Biology is available as an extended major.

What you will study
Marine Science investigates oceans and coastal habitats, using biological, chemical and physical sciences. At UQ, marine science researchers explore global changes in physical processes on coasts and in coastal oceans, biology and ecology, fish and fisheries, aquatic organism health and disease, marine molecular biology, biotechnology and biodiscovery, marine neuroscience and marine mammals.

You will access the largest marine research facilities and the largest assembly of marine scientists in Australia to gain extensive practical research experience, interact with world-renowned research scientists, and visit field stations and laboratories including Heron Island Research Station on the southern Great Barrier Reef and the Moreton Bay Research Station on North Stradbroke Island.

Specialise in one of the following:
• Marine Biology and Ecology – to gain an understanding of the biology of marine microbes, plants and animals, the behaviour, physiology, and biochemistry of marine organisms, and the functioning of, and interactions within, marine communities.
• Marine Geology – to develop broad skills in physical sciences necessary to tackle the most pressing concerns facing industry and coastal and marine environments.
• Coastal Environments – to gain expertise in a range of disciplines, including geomorphology, climatology, ecology, coastal processes, remote sensing, planning and management.

Careers
Marine-based industries are worth more than $16 billion annually and offer broad scope in the variety of job opportunities available to graduates in:
• engineering and consulting companies
• the fishing and aquaculture industries
• food technology
• marine parks
• ecotourism
• marine resource development
• marine science institutes
• museums
• oil companies
• pharmacology
• planning and management
• power-generating authorities
• teaching
• universities
• wildlife conservation.
**What you will study**

Microbiology studies microscopic living organisms such as bacteria, viruses, fungi, algae, and protozoa which have a major impact on all aspects of life. Well-known diseases caused by microbes can involve viruses (such as influenza and HIV), bacteria (meningococcus, *Staphylococcus*, *E. coli*) and protozoa (such as malaria).

You will learn from some of the leading microbiologists in education and research in Australia. Your studies will encompass the key areas of:

- Immunology – How humans and animals respond to the challenge of disease-causing organisms.
- Virology – The non-cellular viruses that cause human and animal disease.
- Parasitology – The parasitic organisms that cause diseases in humans and animals using many of the same molecular approaches for bacteria and viruses.
- Environmental Microbiology – The use of micro-organisms to remove pollutants and the roles that micro-organisms play in greenhouse gases like carbon dioxide and methane.
- Microbial Biotechnology – Harnessing bacteria and other microbes for industrial and commercial purposes.
- Microbial Genomics – Using gene sequencing to understand microbial communities such as those in the human intestine.

**Careers**

You will find employment in roles such as a:

- research microbiologist at universities, biotechnology companies and agricultural, medical and veterinary institutes
- industrial microbiologist checking the purity of food and beverages or the management of waste treatment
- clinical microbiologist in hospitals using advanced diagnostic technology to detect and identify microbes causing infectious diseases
- microbiologist in government agencies in specialist areas such as forensics, biosafety and quarantine.

Many BSc graduates enter into research-based studies in Honours, Masters and Doctor of Philosophy (PhD) programs.
What you will study

Plant Science tackles some of the most important problems facing our world today, such as food security, global warming, dependency on fossil fuels and feeding the global population. Global food production must increase by 70 percent by 2050 to match population growth - a statistic that has plant scientists all around the world working hard to find sustainable solutions. Some of their initiatives include breeding high-yielding, pest-resistant crops and producing biofuels and biomaterials from plants that have potential to limit carbon emissions.

Careers

You will be in demand by employers such as multinational companies, universities, government departments, research institutes, tissue-culture laboratories, seed companies, mining companies, plant nurseries, landscape designers and environmental consultants in roles such as:

- researcher
- consultant
- teacher (when combined with a teaching qualification)

Many BSc graduates continue into further research-based studies in Honours, Masters and Doctor of Philosophy (PhD) programs.
**PSYCHOLOGY**

**What you will study**
Psychology is the scientific study of how people behave, think and feel and examines brain function, memory, conscious experience, lifespan development, social behaviour and the range of functional and dysfunctional behaviour. You will develop superior analytical skills and understand how to apply the scientific perspective to psychological phenomena in the laboratory and in the real world.

**Careers**
The combination of science and psychology studies will give you a competitive edge with employers. You may enter professions that require superior analytical and thinking skills such as human resources, mental health, counselling and corrective services. With further training you may become a registered psychologist who practises in a specialisation such as clinical psychology, clinical neuropsychology, counselling psychology, health psychology, organisational psychology, or sport and exercise psychology. Psychologists work in a range of settings, including private practice, hospitals, government agencies and corporations.

To gain full registration as a psychologist with the Psychology Board of Australia students should complete a Psychology Extended Major in their undergraduate degree, before completing further studies. To find out more about psychology at UQ, visit [psy.uq.edu.au](http://psy.uq.edu.au)

Many BSc graduates also enter into further research-based studies in Honours, Masters and Doctor of Philosophy (PhD) programs.

**SAMPLE COURSES**
- Applied Sport and Exercise Psychology
- Developmental Psychology
- Judgment and Decision-Making
- Learning and Cognition
- Neuroscience for Psychologists
- Parenting and Family Psychology
- Psychopathology
- Psychotherapies and Counselling
- Sensory Neuroscience
- Social and Organisational Psychology
- The Neuroscience of Social Behaviour

**SOIL AND PLANT BIOSCIENCE**

**What you will study**
Plants play an essential role in sustaining life on earth, from animals and humans to the global environment and plant growth is dependent upon four factors - sun, soil, water and nutrients.

Through the study of foundation sciences in biology, chemistry and landscape process, you will gain extensive knowledge of the interrelatedness of biophysical processes within Australian climate, water and landscape systems, soil formation, the physical, chemical and biological properties of soils and how these affect the availability of nutrients, toxins and plant growth.

You will examine physiological processes, using a whole plant approach, and their response to environmental variables and their dynamics in relation to canopies and root profiles. Using the interrelationships of plant genetics and environment, you will explore the role of plant breeding in sustainable cropping systems and devise integrated strategies for managing factors influencing plant and environmental health.

**Careers**
Plant and soil specialists are in high demand within the agricultural and resource management sectors, government departments, research organisations, and conservation and environmental agencies. You may be employed in any number of diverse roles focusing on areas such as:
- natural resource management
- monitoring of plant and food products
- development of new technologies to increase crop yields or improve crop nutrient use

- mapping and classification of land uses
- formulation of resource use-related policy
- communication of recommendations and research outcomes to landowners and other stakeholders.

Soil and Plant Biosciences is also available as an extended major.
**STATISTICS**

**What you will study**
Statistics is an essential part of science, providing the mathematical language and techniques necessary to understand and deal with chance and uncertainty in nature and human-designed environments. It involves the design, collection, analysis and interpretation of data, with the aim of extracting patterns and other useful information. Statistics is important to all fields such as engineering, health sciences, social sciences, economics and marketing. Statistical analyses are used across a wide range of fields including predicting stockmarket fluctuations and insurance claims, modelling the flow of internet traffic and mobile phone calls, assessing drought conditions, population models for endangered species, and to model the spread of disease such as HIV/AIDS, and much more.

You will learn state-of-the-art statistical techniques and software, as well as develop a clear understanding of the modern statistical and probabilistic theory behind the methods. You will develop a wide range of skills, including:

- probabilistic reasoning and problem solving
- statistical modelling of analysis
- optimal design of statistical experiments
- advanced data exploration and visualisation
- application of statistical software
- development of statistical algorithms
- report writing and presentation.

**Careers**
Graduates of the Statistics major are in high demand in business, industry, research and government. In business and industry, statisticians work in areas like quality control, and product development and improvement. Statisticians also manage assets and liabilities, and determine the risks and returns of certain investments. Statisticians are employed by nearly every government department and in many scientific, medical, environmental, defence and agricultural agencies. Businesses rely on statisticians to forecast sales, analyse business conditions, and help solve managerial problems.

You will be eligible for accreditation as a graduate statistician from the Statistical Society of Australia and as you gain more experience you will be eligible to apply to become an accredited statistician.

**SAMPLE COURSES**
- Calculus and Linear Algebra I
- Discrete Mathematics
- Experimental Design
- Multivariate Calculus and Ordinary Differential Equations
- Probability and Statistics
- Probability Models and Stochastic Processes
- Problems and Applications in Modern Statistics
- Statistical Modelling and Analysis

**ZOOLOGY**

**What you will study**
Zoology is the scientific study of animals to understand animal evolution and diversity, using the morphology, development and genetics, behaviour, ecology, physiology, biochemistry and molecular biology of animals.

You will explore the relationships and interactions of animals with their physical and biological environments, and use modern comparative and experimental approaches to investigate the evolution and diversity of animals. To pursue a career as a professional zoologist, you will be guided to choose courses in wildlife and conservation biology, entomology, environmental physiology, marine biology, fisheries biology and aquaculture, terrestrial ecology, molecular ecology and mathematical applications in biology.

You can study:
- General Zoology – to combine the study of animals with other aspects of biology including biostatistics, ecology, evolution, genetics and insect science.
- Entomology – to study insects and related organisms.
- Wildlife Biology – to study the conservation and management of animals using tools such as radio tracking or molecular and physiological techniques, and design and conduct research projects.

You will gain practical experience to prepare you to work with animals, with field courses offered to the Australian outback, rainforests, Moreton Bay and Stradbroke Island and the Great Barrier Reef.

**Careers**
While it’s unusual to find a job advertisement looking for a “zoologist” specifically, zoology offers a very large number of career options, ranging from field-based conservation work to forensics to biomedical research. Graduates of the Zoology major have found work in scientific laboratories; with Commonwealth, state and local governments; in national parks, museums, zoos and conservation authorities; with medical laboratories; and in education institutions.

**SAMPLE COURSES**
- Animal Behaviour
- Arthropods and Human Health
- Biostatistics and Experimental Design
- Brain to Behaviour: Invertebrate
- Neuroethology
- Cells to Organisms
- Genes, Cells and Evolution
- Insect Identification and Taxonomy
- Insect Science
- Marine Invertebrates
- Physiological and Integrative Zoology
- Zoology
Bachelor of Sustainable Agriculture

The world’s population is expected to reach 10 billion by 2050 and environmental pressures on our planet have never been greater. How will we distribute our resources? How will we produce enough food and fibre to feed and clothe us all? Sustainable Agriculture is part of the solution.

Why Sustainable Agriculture at UQ?

Sustainable food production has never been more important, with the world population now exceeding seven billion people and predicted to reach ten billion people by 2050. At the same time, the environmental pressures on our planet have never been greater. Studying Sustainable Agriculture will enable you to acquire scientific and managerial principles, and help commercial farmers to sustainably increase their output of food and fibre to feed and clothe the world with the least environmental and social impact.

The UQ Bachelor of Sustainable Agriculture is a three-year program which will provide you with the skills and knowledge to help industry tackle some of the big problems facing our planet. This new program takes advantage of UQ’s position as one of the top-ranked agriculture and biological sciences universities in Australia and will give you access to leading researchers and industry practices with some of the best agricultural teaching facilities available.

What you will study

The Bachelor of Sustainable Agriculture will expose you to the scientific and practical aspects of the sustainable agriculture industry. You will acquire skills and knowledge from researchers at UQ’s Gatton campus, who focus on specialisations to develop successful sustainable agriculture practices. During your studies you can choose to major in agronomy, horticulture or livestock and poultry science. As a working 1068-hectare farm, UQ Gatton focuses on these specialisations and supports Australia’s most extensive agricultural research program with links to local, national and global growers, producers and industry.

Majors

Agronomy

You will study how the environment and agricultural practices can be managed to control the whole plant growth and crop production cycle. As an agronomist you will utilise a number of scientific disciplines to enhance the production of food, create healthier food, investigate plants as a future energy source and manage the environmental impacts of agriculture. You will combine the study of biological, chemical, ecological and earth sciences or genetics to examine variables such as crop rotation, irrigation and drainage, plant breeding, plant physiology, soil classification and fertility and the control of weeds, insects and other pests to manage the whole plant and crop production cycle.

Horticulture

You will study diverse areas including the intensive production of fruit, vegetable, nursery and floricultural crops; turf; and the use of plants for recreational and therapeutic benefit, or to enhance the urban landscape. As a horticulturist you will work to improve plant yield, quality, nutritional value and resistance to insects, diseases

Duration

3 years full-time; part-time equivalent available to Australian residents and citizens

Location

Gatton

Entry requirements

Standard Queensland Year 12 (or equivalent) English and Maths A or B

QTAC code

787409

The UQ OP Guarantee Scheme applies to this program

Program code

2386

Delivery mode

Internal. Some individual courses may be available by external mode

Honours

Available as an extra year of study

International availability

Yes (CRICOS Code 087884F)

International students must study on a full-time basis

English proficiency for international students

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 future-students.uq.edu.au/applying/english-language-proficiency-requirements

DUAL PROGRAMS

Bachelor of Sustainable Agriculture + Agribusiness

UQ is one of the TOP-RANKED agriculture and biological sciences universities in Australia
and environmental stresses through the use of scientific techniques in plant breeding, biochemistry, physiology and propagation.

**Livestock and Poultry Science**
You will study a range of sciences including animal behaviour, microbiology, anatomy and physiology, biochemistry, health, genetics and reproduction that underpin the effective and humane production of animals for food, fibre and pharmaceuticals. You will use the latest technologies in disease control, welfare management, animal environment interactions and product quality. You will study business principles and gain practical skills in applying these through industry placements to ensure the profitable and sustainable management of livestock and poultry.

**Placements and practical experience**
You will be able to complete a 30-day industry placement to give you practical, hands-on work experience. It’s also a great opportunity to establish industry contacts and gain current, industry-relevant experience.

**Careers**
The sustainable agriculture sector contributes billions of dollars annually to the Australian economy. You will find employment in industries such as:
- government departments
- research institutions such as CSIRO and universities
- agribusinesses such as agricultural service companies, banks, seed companies, food producers and agricultural consultancies
- small or large-scale organisations involved in production, post-harvest and marketing of horticultural products
- biosecurity, extension and animal production enterprises
- allied industries such as feed milling, stock equipment manufacturers, and livestock and poultry health companies.

**Postgraduate options**
Research higher degrees (MPhil and PhD) in your area of interest are available. See page 72 for more information.

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**SAMPLE COURSES**

**Agronomy**
- Agricultural Microbiology and Gene Technology
- Crop Production Science
- Land Use and Management
- Pasture Science
- Plant Breeding
- Plant Production Principles
- Soil Plant Relationships

**Horticulture**
- Agricultural Microbiology and Gene Technology
- Horticultural Science
- Plant and Environmental Health
- Plant Breeding
- Plant Physiology
- Plant Production Principles
- Plant Protection
- Soil Plant Relationships

**Livestock and poultry science**
- Animal Anatomy and Physiology I
- Animal Anatomy and Physiology II
- Animal Breeding and Genetics
- Animal Health and epidemiology
- Animal Nutrition
- Intensive Animal Production
- Livestock Science and Production
- Pasture Science

For more information
future-students.uq.edu.au
science.uq.edu.au/planner
Bachelor of
VETERINARY SCIENCE
(HONOURS)

Become a fully qualified veterinarian through UQ’s Veterinary Science (Honours) program taught at our award-winning Gatton campus where you will access world-class facilities, teachers, research and knowledge that make this program one of the finest across the globe.

Why Veterinary Science at UQ?
Are you passionate about animals? Are you interested in the health and welfare of dogs, cats, exotic pets, horses, production animals and wildlife? What if you could study veterinary science at an internationally accredited university with world-class teaching, hospital and research facilities?
If you are a high-achieving student with a passion for animals, have experience studying science and have good communication skills, then the Bachelor of Veterinary Science (Honours) at UQ is the program for you.

This program attracts some of the highest-achieving students from Australia and internationally and produces veterinarians who are in high demand around the world.
You will receive a balance of theoretical knowledge and practical, hands-on experience, and develop your expertise to deal with the causes, diagnosis, treatment and prevention of diseases and injuries in companion, domestic, exotic, wildlife and production animals, to ensure the protection of public health and economic productivity. Developed in consultation with industry, the program also includes the latest research developments to ensure you will receive the most relevant, up-to-date knowledge and expertise to prepare you for a fulfilling and rewarding career as a veterinary science professional.

On graduation, you’ll be eligible to register to practise veterinary science in Australia, New Zealand, the United Kingdom, South Africa, Singapore, Hong Kong or Malaysia.

As with North American veterinary graduates, you will be eligible to sit the North American Veterinary Licensing Examination.

What you will study
The Bachelor of Veterinary Science (Honours) provides you with a combination of theoretical knowledge and extensive practical skills that are the foundation for a rewarding and successful career working with animals.
You will learn to care for healthy and sick animals, and gain expertise in the prevention, recognition, control and treatment of diseases in animals, as well as the welfare and productivity of livestock and production animals.
You will have a strong focus on animal handling and on developing the clinical skills you will need on your first day in practice as a veterinarian. Our final (fifth) year of the program is entirely “hands-on” in veterinary hospitals. You will develop skills and knowledge in veterinary medicine, surgery, anaesthesia, radiology in commonly treated species, including dogs, cats, cattle, sheep, pigs and horses, but also gain these skills in wildlife, and avian and exotic pets.
In the program, you will also learn about the prevention of the spread of diseases, including zoonoses (diseases transmitted from animals to people) and emerging infectious diseases. You will receive unique training in epidemiology.
and population health that will assist in protecting biosecurity and food security. Beyond training that qualifies you to be a practising veterinarian, you will receive comprehensive biomedical training that can be used for careers in research, industry, government and related areas.

Placements and practical experience
You will gain practical, hands-on experience in the state-of-the-art teaching, hospital and research facilities at UQ’s outstanding Gatton campus. From the Small Animal Hospital to the Equine Specialist Hospital, you will receive essential hands-on experience throughout the program to become confident and job-ready on graduation. You will also undertake clinical practical work, specialist practice and practical work on farms and in abattoirs, veterinary clinics and other animal health enterprises to refine and professionally inform your expertise.

Beyond the formal curriculum, students have the opportunity to participate in summer or winter research scholarship programs in the School. They may also choose to develop their skills through volunteering in the School’s and Campus’s animal and clinical facilities.

Careers
On graduating with the BVSc(Hons), you will be able to work as a general practitioner in veterinary clinical practice in Australia and a range of other countries. You will also be able to find employment in a number of other sectors, including as:
• a government biosecurity officer
• a consultant for animal production and disease control
• a veterinarian in industry (especially pharmaceutical and biotechnology industries)
• an educator and/or researcher with universities and governments
• a government department veterinarian dealing with animal disease control and efficient animal production.

You will also be eligible for enrolment in further study in postgraduate coursework or research programs in veterinary science.

Postgraduate options
Research higher degrees (MPhil and PhD) in your area of interest are available. See page 72 for more information.

SAMPLE COURSES
Animal and Veterinary Biology
Animal and Veterinary Enterprise
Animal Breeding and Molecular Genetics
Animal Handling, Behaviour and Welfare for Veterinary Students
Cell and Tissue Biology for Agriculture and Veterinary Science
Companion Animal Clinical Studies
Digestion, Metabolism and Nutrition
Equine Clinics
Infectious Diseases
Intensive Livestock Medicine
Molecular Basis of Life
Principles of Clinical Practice
Principles of Disease (I and II)
Ruminant Medicine and Surgery
Rural Veterinary Practice - Livestock Medicine
Small Animals Clinics
Theriogenology: Clinical Reproduction, Obstetrics and Neonatology
Veterinary Anaesthesia and Radiology
Veterinary Professional Practice
Veterinary Public Health and Pathology
Veterinary Reproduction

For more information
future-students.uq.edu.au
science.uq.edu.au/planner

This program produces veterinarians who are in HIGH DEMAND AROUND THE WORLD
Study Veterinary Technology at UQ and access world-class facilities, teachers and knowledge as you develop into a para-veterinary healthcare specialist, working in animal health and welfare.

Why Veterinary Technology at UQ?
Do you want to work in a healthcare team that cares for all creatures, great and small? The UQ Bachelor of Veterinary Technology program allows you to study and acquire skills as a para-veterinary healthcare specialist, learning from internationally regarded academics using world-class facilities. It will prepare you for employment within the veterinary industry in areas such as veterinary practice, animal health, biosecurity, veterinary pharmaceutical companies, animal nutrition companies, government agencies, research institutions and the livestock sector.

Most importantly, a veterinary technology degree equips graduates with the attributes of critical thinking, problem solving and self-directed learning, which prepare them for supervisory and management roles. To develop a broader range of competencies, the veterinary technology student can also enrol in the Certificate IV in Veterinary Nursing.

Placements and practical experience
You will gain practical, hands-on experience in the state-of-the-art teaching, hospital and research facilities at UQ’s outstanding Gatton campus. From the Small Animal Hospital to the Equine Hospital, you will receive essential hands-on experience throughout the program to become confident and job-ready on graduation. Industry and clinical placements beyond UQ, such as vet clinics, vet hospitals, wildlife parks, government agencies, welfare organisations, animal breeding enterprises, research facilities and pharmaceutical companies, will give you additional practical, hands-on work experience.
These placements are great opportunities to establish industry contacts and gain current, industry-relevant experience.

Beyond the formal curriculum, you have the opportunity to participate in summer or winter research scholarship programs in the School. You may also choose to develop your skills through volunteering in the School’s and Campus’s animal and clinical facilities.

**Careers**

You will find employment in fields such as:
- support staff in veterinary practices (general, specialist, emergency and critical care), including veterinary practice management
- animal behaviour and training instructor
- animal management officer with local councils
- animal research technician and supervisor
- biosecurity inspector and project support with government agencies
- clinical academic in higher education (veterinary nursing)
- regulatory affairs officer for veterinary drug and product registration
- teacher/trainer in vocational training and education (veterinary nursing)
- veterinary clinical nutrition technician
- veterinary laboratory scientist
- veterinary pharmaceutical representative.

You can pursue a research career by undertaking a research honours year, which could lead to postgraduate studies.

**Postgraduate options**

Research higher degrees (MPhil and PhD) in your area of interest are available. See page 72 for more information.

**For more information**

future-students.uq.edu.au
science.uq.edu.au/planner
Bachelor of WILDLIFE SCIENCE

This three-year Bachelor of Wildlife Science program provides you with a career pathway working with native and exotic animals.

Why Wildlife Science at UQ?

The Bachelor of Wildlife Science is a three-year, “hands-on” degree that focuses on animal biology and management of wild animals. UQ is ranked as one of the world’s top universities and is already a leader in this field with the best specialist animal research and veterinary facilities in the southern hemisphere. As a Bachelor of Wildlife Science student, you will work with UQ Gatton’s wildlife scientists, who are involved in the conservation and management of non-captive and captive wildlife as well as exotic animals in Australia and overseas. You will learn from biologists as they focus on wildlife anatomy and physiology, captive breeding, reproduction, nutrition, health, husbandry, ecology, welfare and behaviour.

You will be studying part of your degree and gaining hands-on wildlife experience in a new $3 million captive breeding facility which is part of a new conservation project in south-east Queensland.

To develop a broader range of competencies, you can also enrol in the Certificate IV in Captive Animals.

What you will study

Want to take a walk on the wild side? As a wildlife scientist you will study native and exotic amphibians, reptiles, birds and mammals in their natural or man-made environments, their biodiversity, and the emerging issues associated with human wildlife interactions. You will gain the ability to implement and evaluate wildlife management programs for captive and free-ranging wildlife. In this degree, you will develop a deep scientific knowledge of wildlife anatomy and physiology, captive breeding, reproduction, nutrition, health, husbandry, ecology, welfare and behaviour. With excellent wildlife trapping, identification and animal handling skills, you will be able to make a major contribution to the wildlife, game and vertebrate pest management industries in Australia. As you progress through the program, you can choose from a range of electives.

Placements and practical experience

During your studies, you will participate in industry placement programs in locations such as zoos, sanctuaries, wildlife parks, government agencies, welfare organisations, and animal breeding enterprises. Industry placements give you practical, hands-on work experience. They are also great opportunities to establish industry contacts and gain current, industry-relevant experience.
Careers
You will find employment in research, managerial and educator roles, including:
• as a biologist
• as a conservation officer in ecotourism
• in land management
• in marine resource organisations
• in vertebrate pest and game management
• as a wildlife biologist
• as a wildlife technician
• in government agencies
• in wildlife sanctuaries and zoos.
You can pursue a research career by undertaking a research honours year, which could lead to postgraduate studies.

Postgraduate options
Research higher degrees (MPhil and PhD) in your area of interest are available. See page 72 for more information.

SAMPLE COURSES
Agricultural Biochemistry
Agricultural Microbiology and Gene Technology
Animal Anatomy and Physiology 1
Animal Anatomy and Physiology 2
Animal Breeding and Genetics
Animal Environmental Physiology
Animal Health and Epidemiology
Animal Nutrition
Animal Reproduction
Animal Welfare, Behaviour and Handling
Applied Biology I
Applied Biology II
Applied Mathematics and Statistics
Australian Terrestrial Vertebrates
Biology of Australian Marsupials and Monotremes
Chemistry
Elements of Ecology
Emerging issues in Animal Bioscience
Game Management
Industry Placement
Plant and Environmental Health
Principles of Wildlife Management
Short International Experience
Wildlife Technologies
Working with Groups and Teams
Zoo Husbandry and Management
Or other courses listed in the Bachelor of Equine Science, Bachelor of Sustainable Agriculture or Bachelor of Agricultural Science (Hons) course lists

For more information
future-students.uq.edu.au
science.uq.edu.au/planner
As the world around you changes, new and fascinating career opportunities are created every day, and job roles increasingly combine multiple disciplines.

A dual program, also called a double degree, will equip you for this evolving job market. It gives you the flexibility to study two different disciplines in a much shorter time, by studying only the mandatory courses for each program with fewer or no electives.

**Benefits to “like”**

**Save time**
Graduate with two Bachelor programs in as little as four years – a much shorter time than it would take to study both programs separately.

**Broaden your skills**
Choose to study two complementary disciplines to broaden your understanding and skills – such as majoring in criminology and sociology in your Bachelor of Arts while studying chemistry or genetics in your Bachelor of Science for a scientific perspective on forensics.

**Strike a balance**
Why compromise when you can balance your studies and your sanity by pursuing both your career ambitions and your passion? Dual program students appreciate the diversity of topics offered in their two different programs.

**Get an edge**
As a dual program graduate you will have a competitive advantage with employers, and you will broaden your prospective employment to a wider range of industries.

**Learn from the best**
By studying in two disciplines you will benefit from exposure to a more diverse range of UQ’s outstanding teachers and researchers.

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</table>
UQ offers many of its agriculture, animal, veterinary science and environment programs at the impressive Gatton campus, which is located just over an hour’s drive west of Brisbane.

The 1068-hectare campus offers modern teaching and research facilities set against the backdrop of the historic rural traditions of its Queensland Agricultural College heritage.

About Gatton
The UQ campus is located five kilometres from Gatton, the largest town and business centre in the Lockyer Valley, and within easy travel to other major centres in South-East Queensland.

Gatton itself has the perfect combination of town and country living with an eclectic mix of restaurants, art galleries and shopping, as well as hot-air ballooning, sky-diving, bird watching, beautiful parks and country markets.

World-class learning
Study at the Gatton campus and you will enjoy the benefits of a relaxed, friendly atmosphere supported by a learning environment that features state-of-the-art facilities and resources as well as extensive practical, hands-on experience to reinforce what you learn in the classroom.

These specialist research and teaching facilities include:
• Queensland Animal Science Precinct
• UQ Veterinary Medical Centre
• veterinary teaching laboratories and a Clinical Studies Centre
• Native Wildlife teaching and research facility
• Gatton research dairy
• nursery and glasshouse facilities
• Gatton e-Learning Laboratory
• General and specialist research laboratories
• modern lecture theatres and computing laboratories
• cropping facilities
• 1068-hectare fully serviced farm
• pesticide wind tunnel research facility
• specialist facilities for equine and poultry research.

Collaborative learning is a priority with all students able to access the Regional Collaborative Learning Centre and the Gatton e-Learning Laboratory (GeLL). The GeLL is a modern learning space that brings together real materials (both preserved and fresh specimens), interactive resources, and technological tools for information sharing and dissemination to significantly enhance your student learning experience.

International students
A large number of international students from more than 36 countries are enrolled in programs offered at the Gatton campus, giving our students and staff a truly multicultural experience. The Gatton International Student Association (GISA) encourages all students to learn about other cultures and organises social events including International Dinners where all participants bring a plate of food from their home country and field trips to some of Australia’s most beautiful sites such as Mt Tamborine, Stanthorpe and Stradbroke Island.

At UQ Gatton, you will enjoy the unique benefits of a personalised educational experience and the opportunity to study among like-minded peers who share a passion for agriculture, agribusiness, animals, food, plants, soils or veterinary science.

Video
W: youtube.com/watch?v=CwYVqYMdKQo
Top tips for house-hunting:

• Always inspect the property in person before you sign anything or pay any money
• Take some time to consider a few different suburbs, because prices, size and quality may vary with location
• Make sure you understand all of the tenancy documentation before you sign anything
• Try to meet all housemates before moving into a share-house
• Come along to an accommodation workshop, or visit accommodation.uq.edu.au to view online
• Need advice or want something checked? Contact Accommodation Services via email, phone, or book an appointment to see us in person.
WHERE TO LIVE

Whether you study at Gatton or St Lucia, you will have a range of accommodation options both on- and off-campus.

Colleges at UQ
Living on campus can help you transition smoothly into university.
UQ colleges are located within easy walking distance of all university facilities and provide academic support, social, cultural and sporting activities and the opportunity to build networks and friendships that will last a lifetime.

Your college roommates
- 10 residential colleges at St Lucia house 2500 domestic and international students.
- The Halls of Residence at Gatton houses 436 domestic and international students.

Your college fees
- College fees and on-campus cost of living vary between colleges.
- Residential colleges provide full catering for undergraduate students.

Your college lifestyle benefits
- Convenience of university facilities and services being only a few minutes’ walk away
- Supportive staff and secure premises
- Academic tutorial programs and peer group support
- Meeting students other than those in your academic program
- Active sporting, cultural and social life
- College scholarships, prizes and bursaries.

College applications
Complete an application form which is available directly from the Colleges’ websites:
Gatton:
Halls of Residence: uq.edu.au/halls

St Lucia:
Cromwell College: cromwell.uq.edu.au
Duchesne College: duchesne.uq.edu.au
Emmanuel College: emmanuel.uq.edu.au
Grace College: grace.uq.edu.au
International House: internationalhouse.uq.edu.au
King’s College: kings.uq.edu.au
St John’s College: stjohns.uq.edu.au
St Leo’s College: stleos.uq.edu.au
Union College: unioncollegeuq.com.au
Women’s College: womens.uq.edu.au

Colleges Associate Membership Program
The Colleges Associate Membership Program delivers some key aspects of the College experience for students of UQ, who are not living at a College, but are interested in the academic, networking, mentoring and social aspects of College life.

Off-campus housing
UQ Rentals Online
On the UQ Rentals database, you can:
- access hundreds of shared and vacant property listings, ranging from low-cost share-houses to high-rise penthouses
- filter for the price and location that best suits your needs.

Student accommodation providers
A number of independent student-accommodation providers offer a variety of purpose-built and managed housing options.

Find out more
Access online resources and free info sessions to help you find and maintain a tenancy:
- check our website for information session times
- watch our information video
- contact one of our team members by visiting accommodation.uq.edu.au

Arriving and finding accommodation
UQ Accommodation Services provides information and services to assist you in finding a home that’s right for you, and make your arrival as smooth as possible.

UQ Accommodation Services include:
- Free information sessions all year
- Free tenancy advice
- Online resources
- One-on-one appointments with accommodation advisors
- Share housing and living skills advice and resources.

We advise all new students who haven’t arranged any accommodation to arrive as early as possible before classes start. Allow at least one month to get organised, arrange inspections, and lodge applications for rental properties.

We are here to help you find the right accommodation for your needs, whether it’s on- or off-campus. Contact us today to get started.

LEXUS HUGHES
Bachelor of Science student and resident at Gatton Halls of Residence

“Living at Halls of Residence is one of the best decisions I have ever made. Not only are Halls great for study, it’s even better for your social and “home” life with many facilities easily accessed on campus. I feel so privileged to live on campus as it makes my study life so much easier.”
At UQ, study is only one part of your life as a university student. Our St Lucia and Gatton campuses offer a full university experience where you will make life-long friends and broaden your horizons by studying, working and socialising with people from all over the world.

**UQ Sport**

UQ Sport offers a variety of sporting opportunities and manages the sporting facilities on the Gatton and St Lucia campuses. At Gatton, UQ Sport organises teams for Inter-Halls sport and works closely with clubs to provide various sporting and recreational opportunities. The Gatton campus offers students access to a sport and fitness centre incorporating an extensive cardio and weights gym, multi-purpose indoor sports hall, 25-metre heated swimming pool and two squash courts. Facilities also include ovals, playing fields and tennis, netball and beach volleyball courts.

**Facilities**

**UQ Gatton**

Just over an hour’s drive west of Brisbane, the campus offers a unique blend of modern teaching facilities, state-of-the-art laboratories and historic buildings.

**UQ Sport** manages a host of competitive and recreational sports facilities on the St Lucia campus. These include a heated 50-metre swimming pool, Olympic-standard athletics track, tennis centre, squash courts, indoor sports pavilion, beach volleyball court, three-level fitness centre, sports store and playing fields.

**UQ Gatton** operates production units, including dairy, poultry, piggery, beef herd, equine precinct and wildlife facilities, to support teaching, research and hands-on training. The programs offered in the areas of agribusiness, agriculture, animal studies, environmental science and veterinary science are recognised as among the best in Australia.

You will have access to horticultural fields, nursery, tissue culture and post-harvest facilities, research laboratories and greenhouses, and an extensive range of modern plant and machinery. Modern facilities include the climate-controlled research greenhouse, rainout shelters and the pesticide wind tunnel research facility.
Collaborative learning is a priority on the Gatton campus with students having access to the Regional Collaborative Learning Centre and the new Gatton e-Learning Laboratory (GeLL). These modern learning spaces significantly enhance the student learning experience.

You can take advantage of a range of medical, welfare, counselling and learning support services, and numerous sporting and recreational activities. Campus amenities include a post office, childcare centre, bookshop, dining hall and cafe, ATM, motel, library, health services, chaplaincy, student centre, student support services, and a licensed club.

You will gain a more personalised education, while also belonging to a large university with international standing. UQ Gatton offers a relaxed, friendly atmosphere and you will enjoy the benefits of being close to the major city centres of Brisbane, Ipswich and Toowoomba.

**UQ St Lucia**

UQ’s St Lucia campus is renowned as one of Australia’s most attractive and is just seven kilometres from Brisbane’s vibrant city heart.

Bounded by the Brisbane River on three sides, the 114-hectare site provides a perfect study, research and living environment. UQ St Lucia combines the vitality of a modern campus with the tradition of an established university.

The gracious sandstone buildings, parklands and lakes encompass world-class teaching and research facilities. These include Queensland’s largest research library plus fully equipped laboratories and lecture theatres.

You can find everything you need on campus, including excellent sporting venues, shops, banks, a post office, cinema, theatre, restaurants and refectories. The St Lucia campus is also a great place to relax and enjoy university life with market days, bands and sporting events.

**Student clubs**

Make new friends, try different activities and participate in social events by joining any of more than 190 clubs and societies (visit uqu.com.au).

These clubs and societies, ranging from recreational and cultural interests to political and welfare groups, have been formed by people with a wide range of interests, hobbies and backgrounds and contribute to the colour and diversity of UQ campus life. There are also societies based on faculties and schools.

Sporting clubs at the Gatton campus include basketball, hockey, netball, rugby league, rugby union (men’s and women’s), soccer, tennis, touch football and volleyball (including beach volleyball).

Recreational/interest clubs include UQ Gatton Students’ Association; Gatton International Students’ Association (GISA); Agribusiness Club; Cattlemans Club; UQ Veterinary Students’ Association; Student Wildlife Association of Gatton (SWAG); Equine Club; Gatton; the Past Students Association and the Gatton Campus Choir.
YOUR GLOBAL ADVENTURE
See the world differently with UQ Abroad

Learn a language
Want to study somewhere you don’t speak the language?
You can take an extra-curricular course before you go at UQ’s Institute of Modern Languages (IML), which offers:
• more than 30 languages
• beginner to advanced levels
• listening, speaking, reading and writing skills
• small, friendly classes
• no formal entry requirements.
Although courses will not count towards your program, IML assesses your progress as you go.
Find out more at iml.uq.edu.au
Why study overseas?
• Improve your foreign language skills
• Broaden your work and study options
• Enhance your employability
• Establish a global network of friends
• Gain credit towards your UQ program
• Choose from 200 exchange partners in 40 countries

UQ Abroad offers a wide range of overseas experiences, including semester-based student exchange, short-term study, internships and volunteering.

Student exchange program
Study overseas for up to one year while gaining credit towards your UQ degree.
Choose from almost 200 exchange partners in 40 countries, combine study and travel, and have the adventure of a lifetime.
While on exchange, tuition fees at the host university are waived and you continue to pay fees and be enrolled at UQ.
You can even apply for student exchange scholarships or an OS-HELP loan to assist with airfares, accommodation, health insurance and living costs.

Short-term global experiences
Want to study, work, or live overseas for only a short time?
With UQ Abroad’s international short-term programs, you can have an amazing global experience during your semester breaks.
More than 40 experiences are available on each break, and you can choose to study, take an internship or volunteer in over 25 different countries.
Some experiences are eligible for academic credit transfer towards your UQ program, so you can fast-track your studies by completing courses at an approved host university in Asia, Europe, the USA or Latin America.

ELYSIA SOKOLENKO
Bachelor of Science/Bachelor of Arts
Study Abroad University: McGill University, Montreal, Canada

I wanted to go somewhere that would take me out of my comfort zone a little but not so much that it would be too much to tackle. That’s when I arrived at the decision to apply to McGill in Canada.

Science never happens in one place. It requires a lot of collaboration with people from all around the world. This, of course, requires you to adapt to different ways of seeing and doing things. Going overseas and studying at a different university gave me quite a lot of experience with this. It was invaluable.
YOUR ADVANTAGE
Be the best “you” possible with UQ Advantage Award

UQ Advantage Award
UQ Advantage Award is a free program designed specifically to bring out the best in you during your undergraduate studies. Participants can access a range of co-curricular activities and a unique symposium series. By registering for the award, you will enjoy experiences that will help you realise your aspirations, become a leader in your chosen field, make a positive impact on society, and enhance your employability.

After completing all program requirements, you will receive a formal certificate when you graduate that endorses the enhanced experience and skill-set you have developed after your UQ Advantage Award experience.

BRIGID KING
Bachelor of Science, Award Graduate 2015

As part of the Award I studied abroad at University College Dublin, Ireland; I completed an 8 week research project at a leading cancer research laboratory and I volunteered in a hospital. I have gained invaluable experience in research that will be directly applicable to my work in the medical profession during my medical degree and after I graduate. I now have an enhanced understanding of other cultures. I know that all the skills I have developed during the Award will be relevant and help to set me apart from other graduates in a very competitive field.

UQ Advantage Award
W: uq.edu.au/advantage-award

Elizabeth MacDonald, UQ Bachelor of Arts (extended International Relations major) graduate and UQ Advantage Award recipient, participated in a student exchange to The University of British Columbia, Canada.

CATEGORY WHAT HOW
Global and cultural engagement Broaden your world view with global experiences International exchange, language study, international short-term programs
Research and entrepreneurship Discover solutions to global questions and extend your academic studies Internships, conference presentations, summer research project
Social responsibility and leadership Extend your social awareness and enhance your leadership skills Volunteering, student associations, participating in a student mentorship program
Symposium series Workshops, seminars and activities to make the most of your UQ experience Topics include presentation and research skills, networking, and the benefits of volunteering

Financial support
A UQ Advantage Grant could help you realise your dreams.
Grants worth up to $1000 are awarded for co-curricular activities such as internships, volunteering, research, leadership programs and conference participation.

Find out more by visiting: uq.edu.au/uqadvantage/advantage-grant
ARE YOU AN INTERNATIONAL STUDENT?

While a lot of information in this guide is relevant to you, certain key information may be different for international students.

You are an international student if you are a:
• temporary resident (visa status) of Australia
• permanent resident (visa status) of New Zealand, or
• resident or citizen of any other country.

Eligibility for UQ study
For admission into undergraduate programs at UQ, you must have:
• completed recognised upper secondary or equivalent Year 12 studies to the required standard
• satisfied individual program requirements (e.g. specific subject prerequisites, auditions or interviews)
• satisfied English language requirements.
If you do not meet these criteria, you might consider taking the Foundation Year bridging course offered by International Education Services (IES) or English language training offered by the Institute of Continuing and TESOL Education (ICTE-UQ).

Tuition fees
UQ has program-based fees for coursework award programs, meaning that all courses within a program are charged at the same tuition fee rate per unit for a given academic year.

Fee information
W: future-students.uq.edu.au/apply/international/tuition-fees

Other expenses
All international students applying to study in Australia must have a student visa and study full-time, on campus. Please consider expenses such as visa and medical (pre-departure) fees, tuition fees, general living expenses, return airfares, and Overseas Student Health Cover (OSHC) when you plan your budget.

Applying to UQ
How to apply
W: future-students.uq.edu.au/apply

More information
W: future-students.uq.edu.au
foundationyear.com
icte.uq.edu.au

GRACE LOO
(From Singapore)
Bachelor of Veterinary Science

Studying at an international university can be challenging and you may be worried, like I was, about handling the transition but please be assured your lecturers, tutors and peers are always there to help.

Want more information?
If you would like to know more about your study options at UQ, feel free to ask a question through our enquire online form and one of our UQ advisors will respond to you. Feel free to register for an advisory session, and if you are in Brisbane, why not sign up for a campus tour to see our beautiful campuses?

We also have a range of publications, including the international student guide and program supplements to help you.

Ask UQ
W: future-students.uq.edu.au/ask
Advisory sessions
W: uq.edu.au/international-students/advisory-sessions
Campus tours
W: uq.edu.au/international-students/campus-tours
**Fees and costs**

**Course fees and student contributions**

When you study at University, at the start of each semester or teaching period (study period) you are charged a fee for each course you enrol in.

Most undergraduate places at UQ are Commonwealth supported, i.e. funded partly by the Australian Government (Commonwealth support) and partly by you (student contribution).

You qualify for Commonwealth support if you are an Australian or New Zealand citizen, or an Australian permanent resident and have a Commonwealth-supported place (CSP).

International students pay full tuition fees. If you have a CSP, the amount you pay for a course (your student contribution amount) depends on the fee band level of the course (see table below).

It is not possible to publish a fixed fee for a program, because fees are charged according to the courses you choose, not the program you are enrolled in, and most students can choose different electives during their program.

Indicative annual fees (based on average first-year enrolment patterns) are listed on our Courses and Programs website to help you plan your budget.

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**Student Services and Amenities Fee (SSAF)**

In 2011 the Australian Parliament passed legislation allowing universities to charge a fee for non-academic services such as sporting and recreation activities, employment and career advice, child care, financial advice, and food services. UQ levies the SSAF – which is capped at a maximum of $290 for 2016 – according to whether you are an internal or external student, full-time or part-time. The fee is indexed annually.

**Proposed higher education reforms**

In the May 2014 Budget, the Australian Government proposed changes to funding for higher education. The proposals were not passed by the Senate, but will be reviewed for 2017. All Australian universities, including UQ, do not know at this stage what the proposed reforms will be.

Visit the Study Assist website to view 2017 updates as they become available.

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**2016* STUDENT CONTRIBUTION BANDS AND AMOUNTS**

<table>
<thead>
<tr>
<th>BAND</th>
<th>AREA OF STUDY</th>
<th>ANNUAL* STUDENT CONTRIBUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Law, accounting, administration, economics, commerce, dentistry, medicine, veterinary science</td>
<td>$10,440</td>
</tr>
<tr>
<td>2</td>
<td>Mathematics, statistics, computing, built environment, health, science, engineering, surveying, agriculture</td>
<td>$8917</td>
</tr>
<tr>
<td>1</td>
<td>Humanities, behavioural science, social studies, education, foreign languages, visual and performing arts, nursing</td>
<td>$6256</td>
</tr>
</tbody>
</table>

*2016 figures only, based on full-time (16-unit) workload: figures indexed annually.
Centrelink Student Services

The Australian Government provides three income-support payments for Australian tertiary students: Youth Allowance, Austudy, and ABSTUDY.

You can apply for these payments at any Centrelink Customer Service Centre. Other schemes include:
- Student Start-up Scholarship
- Relocation Scholarship
- Interest-free advance loan where part of allowance is paid as a lump-sum advance
- Pensioner Education Supplement (PES)
- Low Income Health Care Card
- Fares Allowance
- Child Care Benefit (CCB) or Rebate, or JET Child Care Fee Assistance.

Other government assistance

HECS-HELP
If you are a domestic student in a Commonwealth-supported place, you may be eligible to receive HECS-HELP.

HECS-HELP is an Australian Government loan scheme that allows you to defer repayment of all or part of the student contribution amount until your income meets a specific threshold. This means you do not have to start repaying your HECS-HELP debt until you earn above a certain income level ($54,126 for the 2015–16 income year). Loan repayments are then taken out of your pay as additional tax. You need to supply your tax file number to apply.

SA-HELP
SA-HELP is a loan scheme that helps you pay for the SSAF. If you use SA-HELP, the amount will be added to your accumulated HELP debt. You can take out a SA-HELP loan even if you do not wish to take out any other HELP loan. You require a tax file number to obtain SA-HELP.

Keeping your costs down

- Investigate the financial support and fee repayment options offered by the Australian Government
- Apply now for a Tax File Number, which you will need to obtain a HELP loan and to defer repayment of your student contributions until your income reaches a certain level
  - see ato.gov.au
- Enjoy UQ’s low-cost entertainment and activities, and visit their secondhand bookshop
- Ask UQ’s Student Services about finding accommodation.

SA-HELP information
W: studyassist.gov.au

SA St Lucia’s Global Change Institute
Make your university experience easier and more affordable with the support of a scholarship.

You may not think you are eligible for a scholarship, but with many, many different opportunities available, you should definitely take some time to research and apply.

When you’re reading this, you’re probably completely preoccupied thinking about exams, the formal, graduation, and schoolies; however, spare a few moments early in 2016 to plan your application for a UQ scholarship, and make your university experience even more enriching. You might be surprised at how many scholarships you are eligible to apply for!

Undergraduate Scholarships and Prizes Office
W: scholarships.uq.edu.au
E: ugscholarships@uq.edu.au
T: +61 7 3365 7113

Get in early
Scholarship applications close at different times throughout 2016 – plan your response and apply early so you don’t miss out!

Some of our many scholarships include:

**ACADEMIC**
UQ’s Academic Scholarship Program rewards the achievements of outstanding school leavers.

**Exciting new scholarships are coming**
UQ is reviewing the Academic Scholarship Program to reinvigorate the scholarship process and continue to improve each program’s value and relevance for recipients. For detailed and up-to-date information about academic scholarships, visit scholarships.uq.edu.au.

**EQUITY**
UQ strongly supports equitable access to education for students who struggle to attend university. The following scholarships provide opportunities for such students:

**UQ Link Scholarships**
Awarded to applicants who apply to study at UQ and have experienced educational disadvantage due to financial hardship.
**Award Value:** $9000 over three years

**Centrelink Student Income Support**
The federal government provides financial assistance to students who receive student income support payment through Centrelink (Youth Allowance, ABSTUDY, Austudy).
**Award Value:** Variable and determined by Centrelink

**Indigenous Commonwealth Scholarships**
The federal government provides three levels of financial support to Indigenous students to help with the costs of going to university, particularly those needing to relocate.
**Award Value:** Variable, maximum $20,350 over four years

**SPORTING**
UQ Sport Scholarships are awarded to outstanding new and continuing students who are both academically gifted and have demonstrated exceptional ability in their chosen sport. Though there are several sporting scholarships, the two main options UQ offers are:

**UQ Sports Achievement Scholarship**
Awarded to outstanding new and continuing students who have demonstrated exceptional ability in their chosen sport.
**Award Value:** $6000 for one year

**The Clem Jones Sporting Scholarship**
Awarded to students with academic ability and the potential to perform at a higher level in their chosen sport, so they can complete their intended program
**Award Value:** $18,000 over three years

Please note: All figures were correct at time of printing but are subject to changes; see scholarships.uq.edu.au prior to applying to confirm correct values.
Explore your future at UQ

Visit us online
Find out about your dream program, how to apply, scholarships, life at UQ and upcoming events.

future-students.uq.edu.au

Chat with us live
Our friendly student advisors are waiting to chat with you about study and life at UQ.
uq.edu.au/ask

Give us a call
Ring our dedicated call centre or book a call back for support and advice.
+61 7 3346 9872

Ask us a question
Email us your query and receive helpful advice about study and life at UQ.
ask@uq.edu.au
CONCURRENT DIPLOMAS

A concurrent diploma could be the perfect balance between a single degree or dual degree program.

These diplomas can be studied alongside your bachelor degree. They enable you to enhance your undergraduate experience with personal or career interest areas, while maintaining your core studies.

**Diploma in Languages (DipLang)**
Languages are a passion for many UQ students. All languages are offered with streams for beginners and those who are more advanced.

As such, the concurrent diploma will suit you if you’ve studied a language at high school and want to increase your proficiency, or if it’s your first time learning a second language. Proficiency in a second language will open up both professional and personal opportunities for you.

Whether you are studying architecture, speech pathology, pharmacy or engineering, you can also study any of the languages offered at UQ to enhance your international employability. If you are studying ancient history or archaeology, you may find the classical languages, Latin and Greek, to be beneficial to your program.

**Languages available**
You can study:
- Chinese
- Chinese Translation and Interpreting
- French
- German
- Indonesian
- Japanese
- Korean
- Russian
- Spanish
- Classical Languages.

**Language Advantage**
The School of Languages and Cultures at UQ is recognised as one of Australia’s leading language institutions. Promoting intercultural communication and understanding, the School provides outstanding teaching and research of major world languages and cultures.

**Diploma in Music Performance (DipMusPerf)**
If music plays a big part in your life, this diploma is an excellent opportunity to sharpen your skills and knowledge through music ensemble training. With encouraged participation in rehearsals and performances, you’ll gain a better understanding of rhythmic accuracy and pitch discrimination, and develop a variety of musical techniques used by ensemble directors.

The School has four ensembles: the UQ Chorale, the UQ Chamber Singers, the UQ Wind Ensemble and the UQ Symphony Orchestra. There are regular vacancies for singers, strings and brass in these ensembles.

**Music Advantage**
The School of Music at UQ is one of Australia’s leading music institutions, with world-class teachers and mentors to enhance your practical skills and deepen your musical knowledge. The School runs several concert series, providing opportunities to obtain valuable experience performing in music ensembles at a variety of venues including the Queensland Performing Arts Complex (QPAC). Other areas of specialisation include musicology and practical studies.

Staff members and alumni of the School are acclaimed nationally and internationally as performers, teachers, composers and researchers – including a three-time GRAMMY®-award winning musician.
Open Day 2016

St Lucia 7 August | Gatton 21 August

Open Day is the perfect opportunity to experience UQ.
Find out about programs and courses, explore the campus and facilities, meet staff and current students, and enjoy the range of fun activities on offer.

Visit the website
Visit the website before the day for a copy of the program, directions to the campus and to create a personalised plan.
uq.edu.au/openday

Download the app
Available from the App Store or GooglePlay, the UQ Open Day app provides access to your personalised plan and interactive maps to use on the day.

Ask us a question
Email our friendly staff any questions you have about the event.
openday@uq.edu.au
ADMISSION INFORMATION

You must satisfy prerequisites and have a sufficient entry score (OP or entry rank) to study undergraduate programs at UQ, but there are alternative pathways for entry if you do not meet these requirements.

How to apply

Apply for UQ undergraduate program admission through the Queensland Tertiary Admissions Centre (QTAC).

Check the QTAC Guide or the QTAC website for details on how to apply and what entry requirements you need. Free print copies are given to all current Queensland Year 12 students and some interstate students, or you can buy a copy from newsagents or QTAC directly.

You may list up to six program preferences, but you will only receive one offer – for your highest preference for which you are eligible. When applying, make sure you place programs in order of personal preference, putting the one you most want to study first, and the one you least desire last.

See the QTAC website for 2017 application deadlines.

QTAC Admissions
W: qtac.edu.au
E: admissions@uq.edu.au
T: 1300 467 822
T: +61 7 3365 2203

The step-by-step process

1. Choose
2. Apply
3. Accept

Search for your program
- Search in this guide on pages 4-54
- Visit future-students.uq.edu.au

Prospective students
- Apply by visiting qtac.edu.au

Current students at other universities
- Download a Cross-Institutional Enrolment form at uq.edu.au/myadvisor/forms-online

TIP: Check prior to applying that your home institution will give you credit.

How to accept your offer
1. Log in by clicking “Applicant login” at qtac.edu.au
2. Select Login and enter your details
3. Select the Accept offer option
4. Accept your offer
5. Go to uq.edu.au/startingatuq and follow the instructions
How to enrol
1. Access your first year planner to find out what you must study
2. Choose your courses (visit myAdvisor at uq.edu.au/myadvisor for help)
3. Enrol online via mySI-net at sinet.uq.edu.au
4. Plan your timetable and sign on to classes
5. Pay fees

Getting ready for uni
• Research your course resources
• Come along to Orientation Week (held the week prior to classes starting)
• Get your student ID card
• Attend Faculty or School information and welcome sessions
• Get your questions answered in time for when you start classes the following week

Prerequisites
Subject prerequisites are the Queensland Year 12 subjects (or interstate/overseas/tertiary/bridging course equivalents) required for individual programs.
Some programs have additional prerequisites (e.g. auditions or the Undergraduate Medicine and Health Sciences Admission Test (UMAT)).

Entry scores
Entry scores include Overall Positions (OP) and entry ranks. Eligible applicants are selected for admission to a program in order of merit; those with the highest entry score are selected first, and so on until the program quota is filled.
The minimum OP or rank required for entry varies from year to year and is determined once applications have been processed and places allocated. While it is difficult to predict exactly what OP or rank will be needed for entry to a program, you can use the previous year’s cut-offs as a guide.

English language requirements
If you are from a non-English speaking background, you will need to provide evidence of English proficiency. You can do this by passing Queensland Year 12 English (or interstate/international equivalent), or by other means detailed in the Entry Options booklet available at uq.edu.au/study/docs/domestic/entry-options.pdf or uq.edu.au/international/language-requirements.

Special entry programs
If you are of Australian Aboriginal and/or Torres Strait Islander descent, or have experienced financial hardship or other difficult circumstances that have negatively impacted your studies, you may be eligible for special entry to UQ. Contact UQ Admissions for more information.
UQ’s Bonus Rank Scheme gives current Year 12 high school students bonus points towards their entry score for completing certain approved subjects or courses. Contact UQ Admissions for more information.

Programs for high school students
UQ’s Enhanced Studies Program (ESP) lets you complete a university course at one of three UQ campuses during semester 1 of Year 12. The program is offered free of charge, boosts your tertiary ranking by one point, and you may even receive credit for the course you completed if you subsequently go on to study at UQ: see uq.edu.au/esp.
The Young Scholars Program is another opportunity to discover, learn and engage with UQ’s academic community and like-minded students from across Queensland. See uq.edu.au/younsgcholars.
Other opportunities include the Institute of Modern Languages (IML) summer intensive sessions: see iml.uq.edu.au/highschool.html and a range of faculty workshops and seminars: see uq.edu.au/schools/activities-for-schools.

Alternative entry
If you did not complete Year 12, did not achieve a high enough entry score for your preferred program, or are a mature-aged applicant, there are alternative entry pathways to UQ. Contact UQ Admissions for advice.

Improving an entry score (upgrading)
If you are not offered a place in your preferred program and want to improve your entry score or meet subject prerequisites, you can accept an offer in a less competitive program with fewer prerequisites and try to improve your entry score. This is called upgrading.
We recommend you complete one full year of bachelor degree study to upgrade to higher demand programs because the entry ranks allocated to attempts totalling less than one full-time year are capped. Depending on your academic performance your new entry rank could be higher than your previous rank.
For more information on how to improve your entry score, contact UQ Admissions.

UQ Admissions
W: uq.edu.au/study/admissions
E: admissions@uq.edu.au
T: +61 7 3365 2203

SCIENCE 2017
YOUR FUTURE OPTIONS

When your undergraduate program is complete, you may want to pursue further study, and you will find a range of postgraduate study options to choose from at UQ.

Postgraduate study

UQ offers both coursework programs and research higher degrees (RHD) at postgraduate level.

Both will give you specialised knowledge, provide a significant advantage in the employment market, enhance your promotion potential, or pave the way for a career in academia.

Coursework programs

Postgraduate coursework programs include graduate certificates, graduate diplomas, coursework masters, extended masters and professional doctorates, and require that you complete prescribed courses and assessment. Some programs include a research component, but mostly they comprise lectures, laboratories, tutorials, assignments and examinations.

Graduate certificates, graduate diplomas and masters (by coursework) programs may be studied across a wide range of disciplines either individually or within a suite of programs. Depending on your academic background, you may enter a masters program directly, or be asked to apply for a graduate certificate, before progressing to a graduate diploma or a coursework masters.

Research higher degrees (RHDs)

An RHD involves undertaking a significant research project and producing a thesis. You may also have to undertake some coursework.

RHDs include the Master of Philosophy (MPhil), which takes one-and-a-half to two years to complete; the Doctor of Philosophy (PhD) which takes three-and-a-half to four years; and the Doctor of Biotechnology (DBiotech), which takes three years to complete. To be awarded these degrees you must produce either a 40,000-, 50,000- or 80,000-word thesis of original research.

Graduate School

W: uq.edu.au/grad-school

Continuing professional development

Once you begin your career, you may be interested in ongoing tuition to keep up-to-date in your industry.

Some faculties offer work-related courses run intensively over several days or hours, while others are offered on a semester-long basis. Still others are offered online.

The Institute of Continuing and TESOL Education (ICTE-UQ) also offers Professional Year programs throughout the year as well as a certificate in English language teaching.

Check UQ’s continuing professional development website for details.

UQ Continuing Professional Development

W: uq.edu.au/cpd

STANDARD PATHWAYS TO AND THROUGH UQ

PRE-TERTIARY LEVEL*

QUEENSLAND YEAR 12
(high school equivalent)

TERTIARY PREPARATION PROGRAM
(UQ College)

OR
BRIDGING PROGRAMS**

UNDERGRADUATE LEVEL

UNDERGRADUATE PROGRAMS

• Associate degree***
• Bachelor degree
• Dual degree

CONCURRENT DIPLOMA

UNDERGRADUATE DIPLOMA

HONOURS

POSTGRADUATE LEVEL

COURSEWORK PROGRAMS ****

• Graduate Certificate
• Graduate Diploma
• Coursework Masters
• Professional Doctorate

RESEARCH HIGHER DEGREE PROGRAMS (RHD)

• Master of Philosophy (MPhil)
• Doctor of Philosophy (PhD)
• Doctor of Biotechnology (DBiotech)

* Other entry methods may be possible: contact UQ Admissions or see uq.edu.au/study/docs/domestic/entry-options.pdf
** For more information about approved bridging programs, please access the Bridging Programs Domestic Admissions Information Sheet at uq.edu.au/study/docs/domestic/bridging.pdf
*** The Associate Degree in Business is designed as either a UQ-accredited stand-alone qualification, or as a pathway to the Bachelor of Business Management;
**** Although postgraduate coursework degrees can lead to an RHD, applicants also require relevant experience or research experience. View the full list of entry requirements here: uq.edu.au/grad-school/our-research-degrees
MORE STUDY OPTIONS

UQ offers more than 60 exciting undergraduate programs to help build your dream career. For more details, check out our range of publications, or go to future-students.uq.edu.au

Arts, Communication, Education and Society
- Arts
- Communication
- Criminology and Criminal Justice
- Education (Primary)
- Education (Secondary)
- International Studies
- Journalism
- Music
- Social Science

Business and Economics
- Advanced Finance and Economics (Honours)
- Business Management
- Commerce
- Economics
- International Hotel and Tourism Management

Engineering, Architecture and Information Technology
- Architectural Design
- Engineering
- Information Technology

Health
- Biomedical Science
- Dental Science
- Exercise and Nutrition Sciences
- Exercise and Sport Sciences
- Health Sciences
- Health, Sport and Physical Education
- Medicine
- Midwifery
- Nursing
- Occupational Therapy
- Pharmacy
- Physiotherapy
- Psychological Science
- Social Work
- Speech Pathology

Law
- Bachelor of Laws (Honours)
- Master of Laws
- Master of International Commercial Law
- Master of Philosophy
- Doctor of Philosophy

Science
- Advanced Science
- Agribusiness
- Agricultural Science
- Biomedical Science
- Biotechnology
- Environmental Management
- Environmental Science
- Equine Science
- Food Technology
- Mathematics
- Occupational Health and Safety Science
- Regional and Town Planning
- Science
- Sustainable Agriculture
- Veterinary Science
- Veterinary Technology
- Wildlife Science

Disclaimer
The inclusion in this publication of details of a program or a course creates no obligation on the part of the University to teach it as or when described. The University may discontinue or vary programs and courses at any time without notice. Information in this guide is accurate as at April 2016.

While care has been taken to provide accurate information in this prospectus, it is the responsibility of students to check and confirm the specific details of programs, courses and enrolment.

Visit future-students.uq.edu.au for up-to-date program information.

All costs and fees quoted in this publication are in Australian dollars (AUS). Any agreement with this University does not remove the right to take action under Australia’s consumer protection laws.

Australian Consumer Protection
australia.gov.au

Central guides
- Australian Undergraduate
- International Undergraduate and Postgraduate

Copies of these publications are available through UQ Admissions.
T: +61 7 3365 2203
E: admissions@uq.edu.au
W: future-students.uq.edu.au
Tertiary Studies Expo (TSXPO)
RNA Showgrounds
Saturday and Sunday, 16-17 July 2016

UQ Open Day 2016
St Lucia campus
Sunday, 7 August 2016
Gatton campus
Sunday, 21 August 2016

QTAC closing date
For on-time applications
Thursday, 29 September 2016
(check qtac.edu.au for details)

Semester 1, 2017
Classes commence
Monday, 27 February 2017

CONTACT DETAILS
Faculty of Science - St Lucia campus
T: +61 7 3365 1888
E: enquire@science.uq.edu.au
W: science.uq.edu.au

Faculty of Science - Gatton campus
T: +61 7 5460 1276
E: enquire@science.uq.edu.au
W: science.uq.edu.au

UQ Admissions
T: +61 7 3365 2203
E: admissions@uq.edu.au
W: future-students.uq.edu.au

UQ International Admissions
T: +61 7 3365 7941/1800 671 980
E: study@uq.edu.au
W: future-students.uq.edu.au

Undergraduate Scholarships and Prizes Office
T: +61 7 3365 7113
E: ugscholarships@uq.edu.au
W: scholarships.uq.edu.au

Student Services – Accessibility
T: +61 7 3365 1704
E: disability@uq.edu.au
W: uq.edu.au/student-services/disability

KEY DATES
Tertiary Studies Expo (TSXPO)
RNA Showgrounds
Saturday and Sunday, 16-17 July 2016

UQ Open Day 2016
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In the event of any conflict arising from information contained in this publication, the material approved by The University of Queensland Senate shall prevail.
CRICOS Provider Number 00025B