

Exciting science courses for non-science students

Think outside the box; are you an arts, business or engineering student with an interest in biology? The courses on this page are especially designed for non-science students who want to experience Australia's terrestrial and marine environments first-hand or learn more about the origins of human behaviour, health and disease. You don't need to have any prior knowledge of biology to enrol in these courses as an exchange or study abroad student.



Australia's Terrestrial Environment (BIOL2001)

Semester: Semester 1 (February start),
or semester 2 (July start)

Course level: Year 2

Location: St Lucia

Get a hands-on introduction to the flora and fauna of the Australian continent. Through lectures and fieldtrips to places such as Brisbane Forest Park, Fraser Island World Heritage Area (four-day field trip), Lamington National Park and Australia Zoo, you will examine a range of Australian animals and vegetation types, and learn about Australian climates, soils, and geomorphology, along with those historical factors that have helped shape this continent's distinctive terrestrial environment. You will gain practical research experience through the collection, analysis and interpretation of ecological data obtained during your field trips. This course is suitable for all students and does not require any prior knowledge of animal and plant biology and/or ecology and conservation. There are additional costs for the field trips.



Photo: Bluedog Photography



Australia's Marine Environment (MARS2005)

Semester: Semester 1 (February start),
or semester 2 (July start)

Course level: Year 2

Location: St Lucia

Experience the amazing diversity of Australia's marine life through lectures, tutorials and field trips to Moreton Bay Research Station (MBRS) on North Stradbroke Island and Heron Island Research Station (HIRS) in the Great Barrier Reef. During the lectures you will gain a basic understanding of oceanography, diversity of marine animals and plants, coastal and estuarine systems, and coral reef environments. The three-day and five-day field trips give you an opportunity to put your knowledge into practice. You will investigate the animals and plants on the islands by snorkeling and reef walking, and gain data for your small group research project. This course is suitable for all students and does not require any prior knowledge of biology or marine environments. Approximate field fees – \$300 for MBRS and \$600 for HIRS.



Evolutionary Perspectives on Modern Society (BIOL1100)

Semester: Semester 2 (July start)

Course level: Year 1

Location: St Lucia

This course looks at how evolution has shaped our environment, our bodies, and our behaviours to make us precisely what we are today. The battle of the sexes, the obesity epidemic, violence, deception, antibiotic resistance, the issues we see in the news every day, all make sense in light of our evolutionary history. In this course, you will be provided with the foundations of evolutionary concepts that will help you understand why these issues (and others) occur and if, or how, we can solve them. BIOL1100 will change the way you see the world around you, and give you a deeper understanding of human behaviour, food security and health in today's society. Designed for all non-biology students who want to understand more about the origins of human behaviour, health and disease.

STUDY ABROAD & EXCHANGE

courses for science and non-science students

Discover the exceptional opportunities that studying science at a top 50 university can offer you.

study abroad & incoming exchange for science students

Study at The University of Queensland (UQ) for one or two semesters to gain a different perspective on your field of study and broaden your skills and knowledge. This brochure includes just some of UQ's most popular science courses for study abroad and incoming exchange students. You will find that many of these courses include field trips, research experiences, or hands-on laboratory work that will make the theory come to life. For an extensive list of available courses: uq.edu.au/study

For more information about UQ's Study Abroad and Incoming Exchange program: uq.edu.au/studyabroad

*QS world university rankings, 2015-2016

Key to icons:



Planet Earth: The Big Picture (ERTH1000)

Semester: Semester 1 (February start), or semester 2 (July start)

Course level: Year 1

Location: St Lucia

This introductory course is for students intending to specialise in geology, environmental sciences, environmental management, or marine sciences. Through lectures, a practical laboratory class and a part-day field trip you will gain an understanding of the structure and character of the Earth's core, mantle, and crust, geological materials, plate tectonics, geological hazards, Earth resources, geological time, the fossil record, and human impacts on the environment. You will get a well-rounded overview of modern Earth Science through practical examples and activities from areas such as environmental management, civil engineering, atmospheric chemistry, and toxicology. Approximate field fees – \$16.



Environmental Management in Mining (ENVM3305)

Semester: Semester 1 (February start)

Course level: Year 3

Location: St Lucia

As mining activity intensifies globally, so do the impacts of mining and refining processes. If you are interested in a career in environmental consulting in a mining context then this course is for you. Through a combination of lectures, practicals, and two one-day field trips you will learn how to identify and mitigate potential environmental impacts during mining and refining processes; work collaboratively within a multidisciplinary team to create an environmental management plan; critically assess management plans and suggest improvements; and manage uncertainties. The course has a strong industry focus and uses local and international case studies to illustrate management approaches. This course is suitable for all students and does not require any prior knowledge of environmental management.



Environmental Toxicology and Monitoring (ENVM3211)

Semester: Semester 2 (July start)

Course level: Year 3

Location: St Lucia

Chemicals and toxic waste are a key environmental concern with widespread adverse effects around the globe. Through lectures, laboratory work and a field trip you will learn about a range of pollutants detected in the environment and gain the basic laboratory skills required in environmental toxicology. The course also includes a one-week field trip to North Stradbroke Island during which you will put theory into practice through the identification, quantification and toxicity-testing of contaminants found in aquatic environments. This course is suitable for all students and does not require any prior knowledge of environmental toxicology.



Food for a Healthy Planet (AGRC1040)

Semester: Semester 1 (February start)

Course level: Year 1

Location: St Lucia and Gatton (Lectures will be held at either campus. Lectures that are held at St Lucia will be live-streamed to Gatton, and vice versa.)

One of the most pertinent challenges of humankind is how to feed 12 billion people and maintain the integrity and function of our planet. Have you ever thought about what the foods you eat contain and how much energy, water, labour, fertiliser, and pesticides are used in their production, processing, and distribution? In this course you will evaluate food nutritionally and environmentally and will try to answer these questions. You will work collaboratively with experts to investigate and research current and future foods in local and global contexts, human nutrition and food safety, plant and animal production, environmental sustainability, and food security.



CSI UQ: Introduction to Forensic Science (SCIE2020)

Semester: Semester 2 (July start)

Course level: Year 2

Location: St Lucia

Pre-requisite: Year 1 chemistry

Get an insight into the work of a forensic scientist and learn the most commonly used analytical techniques in police, customs and insurance investigations. Each forensic investigation is a puzzle where the first steps involve the identification and quantification of a wide variety of substances. You will learn methods for the analysis of chemical and biological evidence such as DNA, blood, paint, dust, gun shot residues and documents and investigate their use in the examination and interrogation of the evidence of crime. This course assumes that you have a basic knowledge of chemistry.



Marine Geology and Palaeoceanography (ERTH3110)

Semester: Semester 1 (February start)

Course level: Year 3

Location: St Lucia

Pre-requisite: Year 2 sediments & stratigraphy OR Year 2 geological mapping, map interpretation and field techniques

It is vital to be able to understand the distribution of marine resources, the occurrence of marine geohazards (such as tsunami) and to reconstruct past environmental conditions to inform climate predictions. Through this advanced course you will explore these issues and gain an understanding of the underlying processes. Through lectures, practicals and a part-day field trip to Moreton Bay you will gain an understanding of how ocean basins evolve through the interplay between plate tectonics and climate controls, the production and distribution of marine sediments, global sea levels and patterns of ocean circulation. You will be introduced to the use of marine fossils for palaeoceanographic and palaeoclimatic reconstruction of Cenozoic climates, including opening and closing oceanic gateways, thermohaline circulation and the *El Niño*-Southern Oscillation. This course requires you to have some prior knowledge of sedimentology and stratigraphy.



Molecular Microbiology (MICR3003)

Semester: Semester 1 (February start)

Course level: Year 3

Location: St Lucia

Pre-requisite: Year 2 microbiology, biochemistry, chemistry or infectious disease

What are the major component parts of microorganisms and how do they coordinate their functions? How can we introduce new genes into bacterial cells? How do we sequence a bacterial genome and compare it with others? This course introduces you to the molecular methods for answering these fascinating questions. The course consists of up to date lecture material and challenging practical laboratory classes. Practical classes include advanced methods of gene cloning and protein expression and fermentation leading to the production of beer and biofuels. It is expected that you have completed a second level course in microbiology, biochemistry, chemistry or infectious disease so you are familiar with fundamental concepts and can understand relevant scientific jargon and acronyms.