Course information

Students in the Tertiary Preparation Program generally study two core courses and three elective courses. Elective courses are selected to meet the prerequisite requirements for your chosen undergraduate program.

A Humanities stream is also recommended for students who intend to study in the Faculty of Humanities and Social Sciences.

Core Courses

**Academic English**

This core course focuses on developing the academic language skills required to successfully read, write, listen and speak in academic contexts. As well as developing fluency and accuracy in each skill, learners will be introduced to core academic skills including assignment writing, referencing, critical thinking, oral presentations, and research skills such as using databases and library facilities.

**General Mathematics**

This course provides the knowledge, skills and techniques required in an every-day life application of mathematics as appropriate to the skills needed when encountering mathematics in a non-mathematically based tertiary course. This course covers basic calculations, linear algebra, geometry, trigonometry, matrices, financial mathematics, growth and decay, statistics and network analysis.

**Mathematical Methods**

This course develops understanding of the basic mathematical ideas of calculus and statistics and the manipulative skills required for solving mathematical problems. These skills are applied with technological tools to solve problems related to real-life situations. Topics covered include algebra, computation, sequences and series, logarithmic functions, geometry, trigonometry, differential and integral calculus, statistics and probability, and the application of mathematics in society.

Elective Courses

**Accounting**

This aim of this course is to provide an introduction to accounting concepts and the role of accounting within business. Students learn basic accounting functions as well as how to use Excel to produce financial reports. This course also introduces financial analysis and budgeting.

**Behavioural Science**

This course provides a general introduction to the social sciences through examining human behaviour and the role that the individual plays in the wider community. The course will initially address the psychology of the individual, covering memory, social influence, learning and research. It will introduce sociology by exploring how the broader community responds to some of these issues, with a focus on interpersonal and intercultural communication. This course is recommended for students wishing to progress to programs within the Faculty of Humanities and Social Sciences.

**Business Management**

This course covers a broad range of management concepts and business operations that contribute to the success of businesses large and small. These include an understanding of business principles, planning (strategic and operational), marketing, organisational behaviour and human resource management. Throughout the course, theory is discussed in the context of business cases which can include domestic and global businesses. You will apply the theory learnt in class to plan your own business enterprise in a group.

**Biology**

This course encompasses origin, development, diversity, function and evolution of living systems and the consequences of intervention on those systems. This course also develops your knowledge, skills and experiences to engage in conceptual, laboratory and field work of a biological nature. Successful completion of Biology prepares you to participate in scientific thinking and application of knowledge in undergraduate programs at UQ.
Chemistry
This course is an introduction to the study of materials and their properties and structure. It covers the basics of physical, inorganic and organic chemistry. You will study atomic theory, chemical bonding and intermolecular forces and will apply these concepts to understand gas behaviour, aqueous solutions, acids and bases, reaction rates, equilibrium and redox reactions. You will also be introduced to organic chemistry and examine characteristic chemical properties and reactions displayed by different classes of organic compounds. Completing the course will give you valuable skills required for scientific investigation and critical evaluation of questions. The practical work in this course will give you experience in laboratory techniques and analysis. This course is recommended for students wishing to progress into Science, Medicine, Health and Engineering programs.

Design
This course provides an introduction to the fundamental processes and methods of design as it applies to built environment, engineering, and business disciplines. The course examines topics such as designers’ thinking styles, the work of designers, problems for solving by design, stakeholder engagement in design problem-solving, generating design solutions, communicating design solutions and reflective learning about self as designer.

Economics
This course is designed to provide students with an introduction to broad based economic issues. It focuses on how decision makers within the economy (e.g. consumers, firms, government departments) make choices to satisfy their wants given their limited resources. In this course you will develop your ability to make economic decisions based on analysis of economic information.

Health and Nutrition
This course will introduce you to the influence of diet and exercise on health, fitness and well-being. You will develop and apply the knowledge and skills to understand the function of nutrients in the body and how the body responds to exercise. You will learn how to use diet and exercise to maintain a healthy body weight and how nutrition can be used to enhance exercise performance.

Humanities and Social Sciences
This course provides an introduction to the fundamental concepts of the Humanities and Social Sciences. The course examines topics such as Global Strategies and Perspectives, and Creative Arts and History, to develop skills in critical and creative thinking, research, evaluation, argument mapping, problem solving and reflective learning. This course is recommended for students wishing to progress to programs within the Faculty of Humanities and Social Sciences, and is a core course for students in the Humanities stream.

Information Technology
This course introduces the fundamental concepts and techniques of Information Technology. The content develops an understanding of the applications of information systems in organisations and provides an insight to the workings of a computer, hardware and software, networking, security, database management, and system development and programming. Practical projects in spreadsheets, database management, and programming are critical components of the course to develop practical, professional and collaborative skills and knowledge. This course is recommended for students wishing to progress to programs related to Information Technology, Information Systems, Computer Science, or Data Science.

Physics
This course provides the theoretical and experimental basis to engage in classical and modern understandings of the universe. You will study force and motion, thermodynamics, electricity, gravitational and electromagnetic fields, waves, radioactivity and modern physics. Completing the course will give you valuable skills required for scientific investigation and critical evaluation of questions. The practical work in the course will give you experience in laboratory techniques and analysis. This course is recommended for students wishing to progress into Science and Engineering programs.

Research
This course provides the opportunity to research a topic of your own choosing. This will involve a structured, supervised and academically rigorous process. You will develop skills to apply concepts, terminology and principles of research to develop and complete a research project on an agreed topic within a chosen discipline.

Humanities Students
The following courses are recommended for students whose preferred undergraduate program is in the Faculty of Humanities and Social Sciences.

A maths course is not compulsory for Humanities students. However, students intending to progress into Education or dual degree programs at The University of Queensland must select a maths course as an elective course.

Core Courses
- Academic English
- Humanities and Social Sciences

Elective Courses
- Behavioural Science
- Research
- Business Management