Undergraduate international course

Bachelor of Biomedical Science

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
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<tr>
<td>QUT code</td>
<td>LS40</td>
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<td>QTAC code</td>
<td>418401</td>
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<td>CRICOS</td>
<td>052768K</td>
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<tr>
<td>Duration</td>
<td>3 years full time</td>
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<td>OP</td>
<td>9</td>
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<tr>
<td>Rank</td>
<td>82</td>
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<tr>
<td>Total credit points</td>
<td>288</td>
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<tr>
<td>International fee (indicative, subject to annual review)</td>
<td>2020: $44,400 per year full-time (96 credit points)</td>
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You will have a high degree of course flexibility with the option to select a major and two minor areas of study that align with your interests, and prepare you for areas of emerging priority and employment.

You may also complete studies in complementary areas from across the university including behavioural science, public health, languages, journalism, law and business.

You will learn from leading researchers from the Institute of Health and Biomedical Innovation, the Translational Research Institute and partner research facilities at major Brisbane hospitals. QUT researchers have made groundbreaking discoveries in cancer biology, infectious diseases, tissue engineering and vaccine development.

Throughout the course, you will have the opportunity to develop industry-relevant practical skills and use cutting-edge technology in modern and well-equipped laboratories.

Subject prerequisites
- Biology
- Chemistry
- Maths B

You must have achieved this study at a level comparable to Australian Year 12 or in recognised post-secondary studies.

Minimum English requirements
Students must meet the English proficiency requirements.

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Kylie O'Keefe
Graduate success

'QUT played a big part in me getting my first job, my lecturer was the one who introduced me to the boss at the company. This led me to my job in Copenhagen, followed by New York city, working for a pharmaceutical company.'
Bachelor of Biomedical Science

Course structure
Your Course
Year 1
You will undertake units covering chemistry, physics, anatomy, pathology and cell biology, providing a solid knowledge base for the topics covered later in the course. With QUT’s practical approach to teaching, you will not only learn the theory, but gain a wealth of practical experience in state-of-the-art laboratories. You will also gain an introduction to the essential communication skills required for a career in the health and medical professions.

Year 2
You will have the option of choosing a major and two minors from five key biomedical scientific disciplines to align with your own career goals: anatomical sciences, cell and molecular biology, human biochemistry, human physiology and infectious diseases. You will have the opportunity to complement your studies by choosing a university wide set from a discipline outside of biomedical science, such as behavioural science, public health, human rights, entrepreneurship, mathematical sciences, international business or study a language. A minor is also available in Clinical Physiology which includes a 400 hour Clinical Physiology internship in which you will be placed in a hospital with professional clinical physiologists who will provide training in physiological instrumentation and measurement, recording, interpretation and reporting of clinical data. You will also have opportunities to gain real world experience as part of your course in Work Integrated Learning placements in biomedical research institutes and laboratories in the science industry.

Year 3
In the real world, the design and completion of successful research and/or business projects demand that individuals gather information, solve problems, work effectively as a part of a team and analyse and communicate results in a critical manner. Therefore each major in this course will culminate in a capstone unit which will require you to apply the knowledge and skills developed through your course. Capstone projects include human anatomical dissection, contemporary laboratory based research projects in biochemistry, physiology and cell and molecular biology, and diagnosis, characterisation and development of appropriate responses to an infectious disease outbreak scenario.

Course Design
The Bachelor of Biomedical Science comprises first-year studies in chemistry, physics, anatomy, pathology and cell biology, providing a solid knowledge base for the topics covered later in the course. Units in the second and third years combine advanced studies with theoretical, practical, and problem-solving skills. Several units in the area of humanities and applied health are an integral part of the course.

The Bachelor of Biomedical Science provides the necessary knowledge and skills to enter a career in biomedical research, with integration of research design and implementation, scientific writing and communication and practical laboratory skills embedded through each year of the course.

Furthermore students will be well prepared to sit GAMSAT which is designed to evaluate mastery and use of concepts in basic science as well as the acquisition of more general skills in problem solving, critical thinking and writing. The Bachelor of Biomedical Science provides a solid grounding in GAMSAT testing areas: reasoning in humanities and social sciences, written communication, reasoning in biological and physical sciences (including chemistry, biology and physics).

Customise your degree
Our flexible course design means you can shape your course to suit your interests and career aspirations. Choose your major area of study from the list below.

Anatomical sciences
Build practical skills in histology, medical image interpretation and organ identification. Examine real examples from QUT’s extensive skeletal collection, film library, pathology museum and human cadavers.

Cell and molecular biotechnology
Study the cellular and molecular mechanisms that operate in normal and diseased tissues. Undertake laboratory research projects in cancer biology, tissue engineering, human stem cells and systems biology.

Human biochemistry
Study the structure, function and properties of biomolecules and the molecular machinery that regulates the everyday workings of healthy cells and tissues, the molecular basis of diseases, and how diagnostic technologies and treatment strategies impact on biochemical processes in the cellular context.

Human physiology
Knowledge about the human body and how its systems work to maintain our health is essential to understanding the basis of disease, diagnostic technologies and treatments. Design and undertake a laboratory-based research project in human physiology.

Infection and immunity
Develop knowledge and understanding of infectious disease agents (bacteria, viruses, yeasts, fungi and parasites) and how they cause human disease, together with cutting-edge strategies of diagnosis, treatment, control and prevention.

Careers and outcomes
Our graduates are employed locally, nationally and overseas and work for research institutes, universities, hospitals and biotechnology companies. There are
Bachelor of Biomedical Science

increasing opportunities in consultancy, science journalism and companies involved in the development and marketing of new diagnostic and treatment products. This course also provides a solid grounding for you to pursue postgraduate study in medicine and other health disciplines.

Graduates who complete the clinical physiology minor as part of their studies may also work as a sleep scientist, neuroscientist, respiratory scientist or cardiac scientist.

This course also provides a solid grounding for students wishing to pursue postgraduate study in medicine and allied health. Postgraduate study provides graduates with the opportunity to pursue leadership and management roles in biomedical science, and the knowledge and skills to operate their own research lab and create new products.

Double degrees
You can widen your career possibilities even further by pairing this degree with one of the following:

Business: A double degree in biomedical science and business can provide you with the knowledge to work as part of multidisciplinary teams in biomedical research, development and commercialisation.

Law: Combine your studies in biomedical science and law to work as an in-house counsel or lawyer to health departments or the pharmaceutical industry.

Mathematics: Combine your studies in biomedical science and mathematics and graduate with the ability to collect, collate and analyse data; build and interpret mathematical models that reveal new insights into patient treatment regimens; and develop new models of care that optimise the quality and efficiency of healthcare.

Professional recognition
Depending on the units selected in final year, graduates will be eligible for membership into one or more of the following organisations: Australian Society for Medical Research, Australian and New Zealand Society for Cell and Developmental Biology, Australian Society for Biochemistry and Molecular Biology, Australian Association of Clinical Biochemists, Australian Society for Microbiology, Australian Neuroscience Society, The Endocrine Society of Australia, Society of Reproductive Biology, Australian and New Zealand Association of Clinical Anatomists, Australian and New Zealand Bone and Mineral Society, and Australian and New Zealand Forensic Science Society.

Additional fees
Additional Costs
There are requirements that you will need to meet as a student in this course. Some of these requirements have associated costs. Information is available from the Additional course requirements and costs website.

Scholarships
You can apply for scholarships to help you with study and living costs.

- QUT Excellence Scholarship (Academic)
- Equity scholarships scheme
- QUT Sport Scholarship (Elite Athlete)

Course requirements
There are requirements that you will need to meet as a student in this course. You will need to identify these requirements and ensure you allow sufficient time to meet them. Some of these requirements have associated costs.

Blue card: You must undergo a criminal history check for working with children and be issued with a suitability card (blue card) before commencing clinical placement/practicum in an organisation where they may work with children or young people.

The processing of your application may take several months so you must submit your blue card application to HiQ as early as possible to ensure you have your card before you begin any unit that requires contact with children. There is no charge for student blue cards. Students who already have a blue card must register it with QUT.

Information is available from the Additional course requirements and costs website.