

COURSE STRUCTURE – BIOMEDICAL SCIENCE COURSE CODE – M3G

Unit Code	Unit Name
Year 1	
Semester One	
KRA101	Chemistry 1A
CXA171	Cell Biology & Function
CXA101	Introduction to Medical Laboratory Sciences
KMA153	Data Handling & Statistics
Semester Two	
KRA102	Chemistry 1B
CXA172	Anatomy and Physiology 1
CXA121	Histology
CXA176	Microbiology & Health
Year Two	
Semester Three	
CXA222	Histopathology
CXA261	Metabolic Biochemistry
CXA273	Anatomy and Physiology 2
CXA211	Immunology (MLS)
Semester Four	
CXA262	Cell and Molecular Biology
CXA231	Haematology 1
CXA251	Clinical Chemistry 1
CXA241	General and Medical Microbiology
Year 3	
Semester Five	
CXA300	Human Molecular Biology
CXA332	Haematology 2
CXA352	Clinical Chemistry 2
CXA342	Medical Microbiology A
Semester Six	
CXA333	Transfusion Science
CXA353	Clinical Chemistry 3 (Endocrinology)
CXA343	Medical Microbiology B
CXA386	Research and Topics in Health Sciences
Year Four	
Semester Seven	
CXA401	Medical Laboratory Practice
CXA412	Medical Laboratory Placement 1 (12.5%)
CXA425	Medical Laboratory Placement 2 (25%)

ADMISSION & PREREQUISITES

Minimum University requirements, including CHM5C Chemistry and MAP5C Mathematics Applied, or higher in the Tasmanian Certificate of Education or its equivalent.

A TER score of 76 is normally required.

BACHELOR OF BIOMEDICAL SCIENCE WITH HONOURS

The Honours degree is designed to provide students with the foundations necessary to conduct research in biomedical and health science and to gain greater expertise in various disciplines.

This is primarily an on campus course offered at Launceston requiring a minimum of 2 semesters full-time or part-time equivalent study.

RESEARCH

A recently expanded research base has created a progressive and dynamic environment for Honours, Masters and PhD students within the School of Human Life Sciences.

The school encourages a supportive and integrated approach to research in a broad range of areas, including:

Nutrition, Lifestyle and Disease – the physiological and clinical effects of nutrition, exercise and lifestyle changes in the prevention and management of chronic disease.

Neuropharmacology – the actions of tachykinin peptides and natural pungent compounds on the central nervous system.

Antimicrobial Resistance – mechanisms of antimicrobial resistance in bacteria, specifically B-lactamases.

Exercise – fatigue during exercise and after training; effect of exercise on physiological parameters and immune function.

Haematology and Renal Disease – research in haematology and renal disease in cooperation with clinicians in the Launceston General Hospital.

Prospective Honours, Masters and PhD candidates should contact:

The Graduate Research Coordinator, A/Professor Dominic Geraghty (D.Geraghty@utas.edu.au), or the Head of School, Professor Madeleine Ball (Madeleine.Ball@utas.edu.au)

FURTHER INFORMATION

Uni Info Centre

For further information about admission or the courses offered by the Faculty, please contact the Uni Info Centre:

Freecall: 1300 363 864

University of Tasmania
Locked Bag 1345
Launceston
Tasmania, Australia, 7250

Fax: (03) 6324 3026

Email: Course.Info@utas.edu.au

Email for admission enquiries: admissions@utas.edu.au

University of Tasmania - www.utas.edu.au

General information about starting university, application procedures, fees, accommodation and advice on course selection

is available at www.utas.edu.au Select link to "Future Students".

School of Human Life Sciences

School of Human Life Sciences

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Or Merran.Rogers@utas.edu.au

www.hls.utas.edu.au/

For up to date information please refer to:

<http://www.utas.edu.au/courses/M3G>



School of
Human Life Sciences

CRICOS Provider Code: 00586B

Bachelor of Biomedical Science



FACULTY OF HEALTH SCIENCE





BACHELOR OF BIOMEDICAL SCIENCE

THE SCHOOL OF HUMAN LIFE SCIENCES

The School of Human Life Sciences is based at the Launceston campus of the University of Tasmania and provides education in human biology and related life sciences from undergraduate to doctoral level.

The School offers five undergraduate programs, the Bachelor of Biomedical Science, the Bachelor of Health Science, Bachelor of Exercise Science, Bachelor of Health Science/Bachelor of Teaching and the Bachelor of Health Science/Bachelor of Medical Radiation Science (Medical Imaging).

The School also offers a Postgraduate Diploma of Medical Laboratory Science for students with a previous degree in Health Science, Science or other health related discipline.

Honours, masters and doctoral level students conduct research within the School's research programs related to nutrition and disease, neuropharmacology, antimicrobial resistance, exercise, and molecular genetics.



The School of Human Life Sciences at the Launceston campus of the University of Tasmania.

PROGRAM DESCRIPTION

What is Biomedical Science at UTAS?

The Bachelor of Biomedical Science is a professionally-accredited 3.5 year program that is designed to produce graduates who can work as Medical Scientists in clinical settings such as pathology laboratories. Whilst this is still the major focus of this successful program, the core of high quality clinical and diagnostic units within the degree is also attracting students wishing to enter post-graduate medical programs, as well as students whose interests lie in biomedical research. Once a graduate enters the clinical laboratory there are also additional career paths into informatics, management, human resource management and a wide range of clinical specialties.

The course structure consists of six semesters of on-campus tuition at the Launceston campus, followed by a semester of clinical placement in an accredited laboratory within Australia. The units in the first half of the program are structured to sequentially build a knowledge base in Chemistry, Anatomy, Physiology, Histology, Immunology and Biochemistry. The second half of the on-campus program develops professional subject areas such as Haematology, Clinical Biochemistry, Microbiology and Molecular Biology. Graduates will also develop their abilities to present and communicate information in a variety of formats. Graduates from this degree have enjoyed an outstanding employment record for many years and job prospects continue to be excellent.

PROFESSIONAL RECOGNITION

Why is Biomedical Science so special at UTAS?

Whilst there are many Biomedical Science programs offered within Australia, the UTAS programme is one of only nine programs across Australia and New Zealand accredited by the Australian Institute of Medical Scientists (AIMS).

AIMS only accredits programs of outstanding quality that are capable of producing graduates who are ready for practice in the challenging health care field of laboratory medicine. To maintain quality and consistency, these programs are reaccredited every 5 years.

Employers recognise that these degree-holders have been specifically trained for entry into this industry, and meet professional training and competency requirements.

Graduates from these courses are the only graduates eligible for direct entry into AIMS and, as such, are recognised as being ready to be employed as Medical Scientists.

Opportunities for travel are enhanced by this professional recognition with several hundred graduates from accredited courses currently working as Medical Scientists in the UK and other countries.

Visit the "Past Students" section of our website (www.hls.utas.edu.au/past_students.htm) and see the variety of careers and experiences of our graduates.

WHAT DOES A MEDICAL SCIENTIST DO?

A Medical Scientist carries out laboratory investigations which assist in the diagnosis and treatment of disease. These investigations can be divided into a number of categories:

Microbiology Medical scientists in microbiology detect and identify disease causing microorganisms from patients with infectious diseases such as food poisoning or pneumonia and then perform tests to help select the correct antibiotic for treatment. For example, medical scientists detect the meningococcal microorganism from a sick child with meningitis and determine that penicillin is an appropriate treatment.

Haematology Medical scientists in haematology assess the numbers and quality of the various cells found in the blood and bone marrow, identifying diseases such as iron deficiency anaemia and leukaemia. They also look for defects in the coagulation system that might cause bleeding or clotting to occur, and help monitor patients on anticoagulant therapy.

Transfusion Medical scientists in transfusion conduct testing on blood donated by the public to ensure it is safe for transfusion, by carrying out blood group and antibody screening. They ensure the blood is compatible by also testing recipients.

Clinical Biochemistry & Endocrinology Medical scientists in clinical biochemistry analyze blood and body fluids for chemicals to assist in the diagnosis and monitoring of patients with metabolic or physiological diseases, such as diabetes. Medical scientists in endocrinology measure, interpret and assess hormone levels and hormonal actions (eg. thyroid hormones) in patients with dysfunctional endocrine states that can result in a wide range of conditions and diseases.

Immunology Medical scientists in immunology use their understanding of the immune system and how it protects us from the outside world to use and interpret laboratory tests that help understand where things go wrong (eg autoimmune diseases).

Molecular Biology Medical scientists in molecular biology utilise specialised techniques at the cutting edge of science to investigate the genetic basis of disease and assessing the risk of developing disease based on genetic make-up.

Histology Medical scientists in histology use tissues or lesions removed from a patient to enable the microscopic diagnosis of disease processes such as cancer or infection. Cytology scientists examine smears of cells such as pap smears to enable the early detection of cells that may indicate the presence of malignancy.