

WHAT DOES A MEDICAL LABORATORY SCIENTIST DO?

A medical laboratory scientist carries out laboratory investigations which assist in the diagnosis and treatment of disease.

Microbiology Medical scientists detect and identify disease-causing microorganisms from patients with infectious diseases and perform tests to help select the correct treatment.

Haematology Medical scientists assess the numbers and quality of various cells in the blood and bone marrow, identifying diseases such as iron deficiency anaemia and leukaemia, bleeding or clotting disorders. They help monitor patients on anticoagulant therapy.

Transfusion Medical scientists conduct testing on donated blood, 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 analyse blood and body fluids for chemicals to assist in the diagnosis and monitoring of patients with metabolic or physiological diseases. Medical scientists in endocrinology measure, interpret and assess hormone levels and hormonal actions.

Immunology Medical scientists interpret laboratory tests to diagnose immune system function and disorders.

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

Histology Medical scientists prepare tissues or lesions to enable the microscopic diagnosis of disease processes such as cancer or infection. Cytologists examine smears of cells to enable the early detection of cells that may indicate the presence of malignancy.

ADMISSION AND PREREQUISITES

Successful completion of a first degree in biochemistry or a medical science, health science, science or other related discipline, with a credit average, including studies of biochemistry/physiology at second year and some introductory understanding of immunology and microbiology.

FURTHER INFORMATION

Graduate School
Email: Graduate.School@utas.edu.au
Web: www.utas.edu.au/graduateschool

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".

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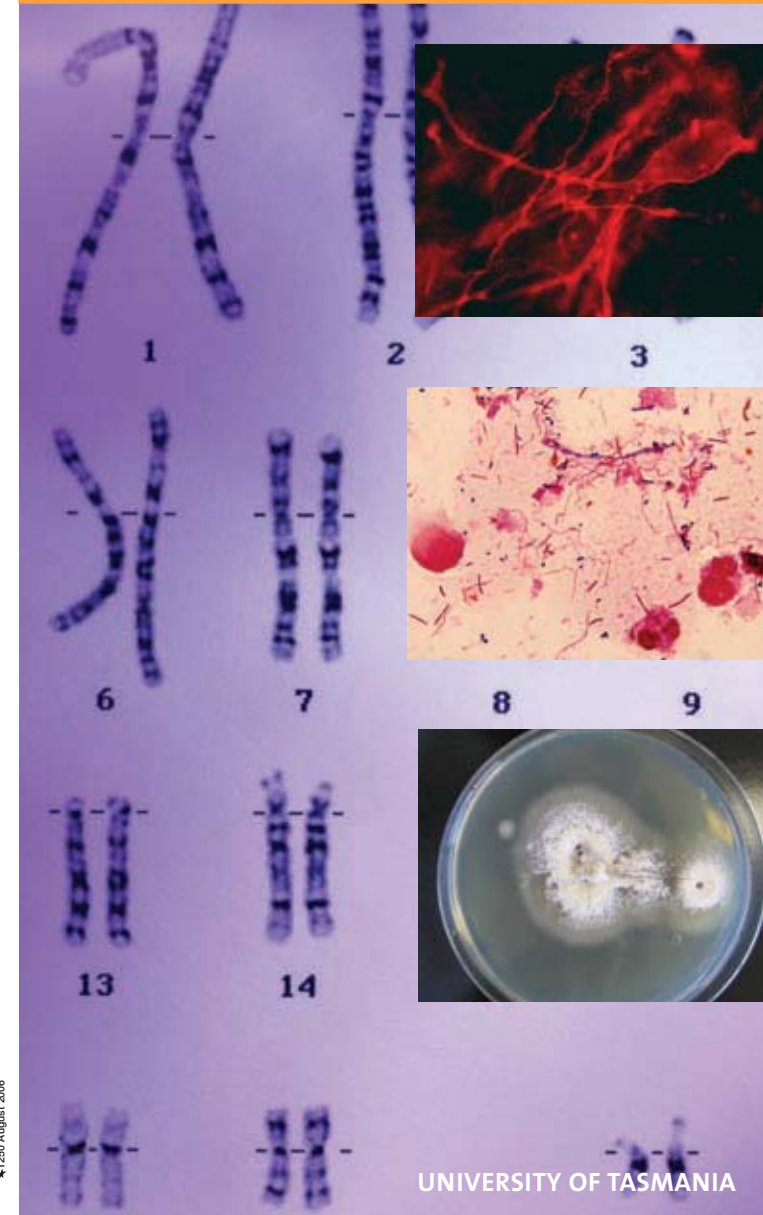
School of
Human Life Sciences

CRICOS Provider Code:00586B

Graduate Diploma of Medical Laboratory Science

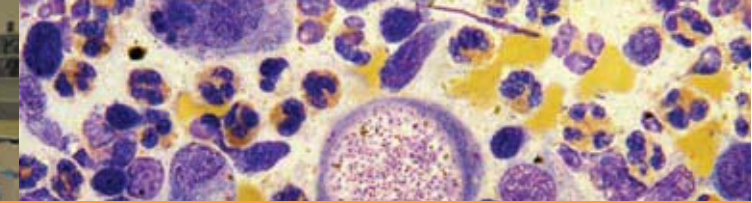


FACULTY OF HEALTH SCIENCE



1250 August 2006

UNIVERSITY OF TASMANIA



GRADUATE DIPLOMA OF MEDICAL LABORATORY SCIENCE

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 doctorate level.

COURSE OBJECTIVES

The Graduate Diploma of Medical Laboratory Science is designed to provide students with the theoretical and practical skills necessary for employment in medical pathology laboratories.

The programme will provide a formal qualification in medical laboratory science for students with an undergraduate background in science or health science. The programme will equip students to sit the examination for membership of the Australian Institute of Medical Scientists when they have the appropriate practical laboratory experience.

CAREER OUTCOMES

Graduates will be eligible to sit for membership of the Australian Institute of Medical Scientists (AIMS) once they have completed the relevant work experience.

AIMS does not currently accredit postgraduate programmes, but it may do so in the future. The units used are all part of an AIMS-accredited undergraduate degree.

CAREER PROSPECTS

A medical scientist carries out laboratory investigations that assist in the diagnosis and treatment of disease.

Students will gain knowledge and a variety of skills in professional areas such as clinical chemistry, endocrinology, haematology, blood transfusion science, histopathology, microbiology, human molecular biology and immunology

There are various career options open to medical scientists, especially in hospital-based clinical and pathology laboratories, private pathology services, blood transfusion services and public health laboratories. Other areas of employment are found in universities, veterinary laboratories and diagnostic companies.

COURSE STRUCTURE

Students are required to complete eight units. The first unit of each core stream and at least two full core streams must be included in the programme.

The programme will usually be undertaken over a minimum of three semesters (18 months) to incorporate the above requirements.

CORE UNITS

Haematology Major

Unit Code	Unit Name	Semester
CXA231	Haematology 1	2
CXA632	Haematology 2	1
CXA333	Transfusion Science	2

Clinical Chemistry Major

CXA251	Clinical Chemistry 1	2
CXA652	Clinical Chemistry 2	1
CXA353	Clinical Chemistry 3 (Endocrinology)	2

Microbiology Major

CXA241	General & Medical Microbiology	2
CXA642	Medical Microbiology A	1
CXA643	Medical Microbiology B	2
CXA222	Histopathology	1
or		
CXA212	Pathology of Common Diseases	1

ELECTIVE UNITS

CXA121	Histology*	2
CXA386	Research & Topics in Health Science	2
CXA211	Immunology	1
CXA300	Human Molecular Biology	1
CXA302	Environmental Microbiology, Infection Control & Regulations	2
CXA602	Quality Assurance & Data Handling	1
	One alternative approved elective	

* CXA121 Histology may also be available as a summer semester unit

SAMPLE PROGRAMMES

The following programmes are provided as an indication of possible pathways, based on undergraduate study. Students should contact the School to discuss individual programmes.

Bachelor of Health Science (UTAS)

- Bioscience Stream

(Clinical Chemistry stream completed as part of undergraduate programme.)

	Unit Code	Unit Name	Semester
Core	CXA231	Haematology 1	2
	CXA632	Haematology 2	1
	CXA333	Transfusion Science	2
Core	CXA642	Medical Microbiology A	2
	CXA643	Medical Microbiology B	1
Electives:	CXA121	Histology	2
	CXA602	Quality Assurance & Data Handling	1
	CXA302	Environmental Microbiology, Infection Control & Regulations	2

Bachelor of Science – Microbiology Major

Core	CXA231	Haematology 1	2
	CXA632	Haematology 2	1
	CXA333	Transfusion Science	2
Core	CXA251	Clinical Chemistry 1	2
	CXA652	Clinical Chemistry 2	1
	CXA353	Clinical Chemistry 3	2
Core	CXA642	Medical Microbiology A	1
	CXA643	Medical Microbiology B	2

Bachelor of Science – Biochemistry Major

Core	CXA231	Haematology 1	2
	CXA632	Haematology 2	1
	CXA333	Transfusion Science	2
Core	CXA241	General & Medical Microbiology	1
	CXA642	Medical Microbiology A	1
	CXA643	Medical Microbiology B	2
Core	CXA251	Clinical Chemistry 1	1
	CXA652	Clinical Chemistry 2	2