

ENTRY REQUIREMENTS

Minimum university entry requirements apply, including Chemistry CHM5C and Mathematics (MAP5C or MME5C). Chemistry and mathematics bridging units are offered over the summer semester.

FOR MORE INFORMATION

Full details of courses are published on the UTAS website www.utas.edu.au/courses

OR CONTACT

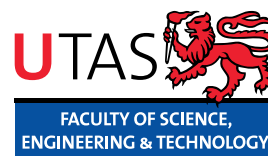
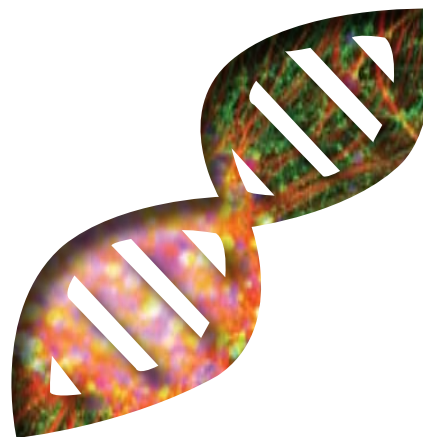
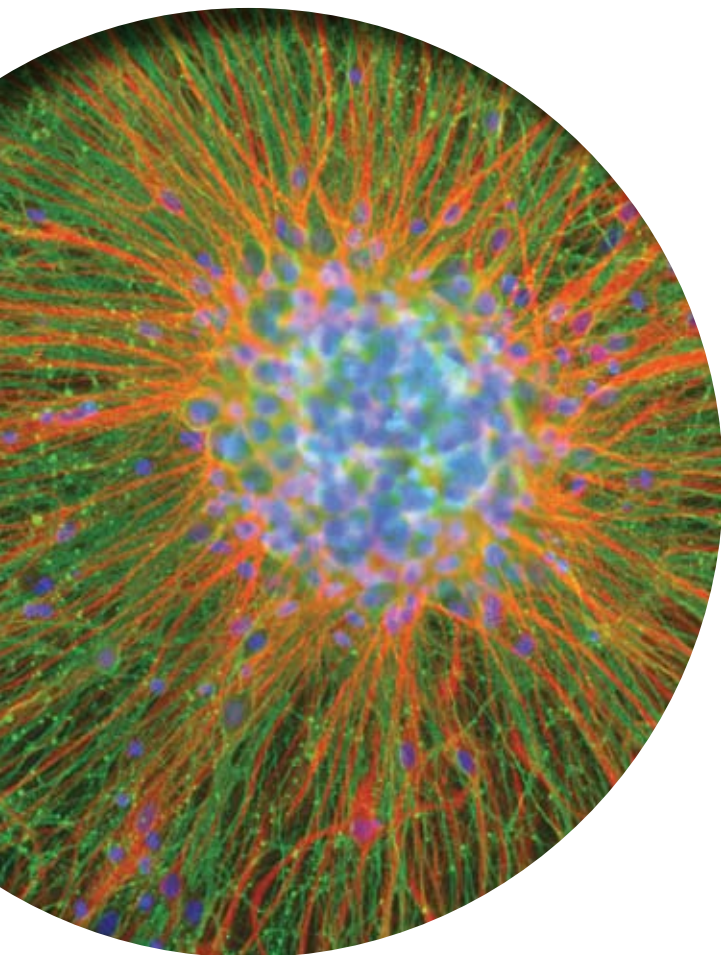
Dr Anthony Koutoulis
Degree Coordinator
Phone: (03) 6226 2737
Email: Anthony.Koutoulis@utas.edu.au

Faculty of Science, Engineering & Technology
University of Tasmania
Private Bag 50
Hobart, Tasmania 7001
Phone: (03) 6226 2125
Fax: (03) 6226 7809
Email: scieng@utas.edu.au
www.utas.edu.au/scieng

Biotechnology



FACULTY OF SCIENCE, ENGINEERING & TECHNOLOGY



CRICOS Provider Code: 00586B

Photographic acknowledgements include Adele Vincent.

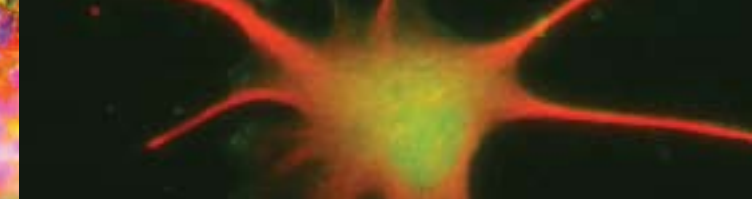
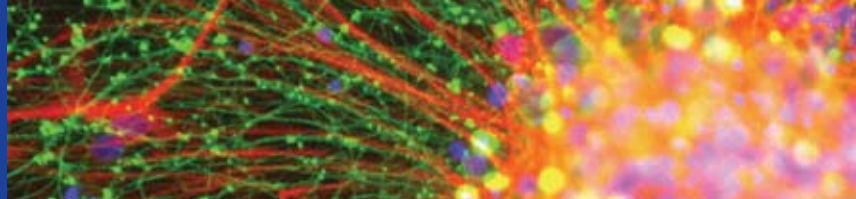
The Faculty of Science, Engineering and Technology encourages applicants from all equity groups.

1986| December 2006

UNIVERSITY OF TASMANIA

DID YOU KNOW

that researchers have estimated that if you took all the DNA from an average person and put it together end-to-end, it would reach the sun and back over 500 times?



BIOTECHNOLOGY

WHAT IS BIOTECHNOLOGY?

Biotechnology encompasses a broad range of science and technology that utilises living organisms for the benefit of humankind. This relatively new field of science is producing the latest developments in areas such as gene technology, medical research, tissue culture, agriculture, horticulture, aquaculture, bioinformatics and bioprospecting.

Some examples of biotechnology applications are:

- gene therapy, tissue engineering of replacement organs
- production of drugs, vaccines and diagnostic tests
- plant breeding to improve resistance to pests, diseases and saline conditions
- food manufacturing of bakers' yeast, cheese, yoghurt, vinegar and soy sauce
- biological recovery of heavy metals from mine tailings and other industrial sources
- bioremediation of soil and water polluted with toxic chemicals

BACHELOR OF BIOTECHNOLOGY

The Bachelor of Biotechnology at the University of Tasmania is a comprehensive course that gives students the necessary knowledge, skills, competencies and tools for employment in industry and research organisations in the expanding biotechnology sector.

WHAT MAKES US DISTINCTIVE?

- The course structure allows students to specialise in key areas.
- We have extensive links with the biotechnology industry.
- Work experience placements are encouraged during the course.

STRENGTH IN DIVERSITY

The Bachelor of Biotechnology has a number of compulsory subjects that provide a strong scientific base to the degree and offers optional units from different schools and faculties, including Agricultural Science, Biochemistry, Chemistry, Computing, Information Systems, Law, Management, Medicine, Plant Science and Zoology.

COURSE STRUCTURE

Year 1

Biology of Animals (12.5%)
Biology of Plants (12.5%)
Cell Biology, Genetics and Evolution (12.5%)
Chemistry 1A (12.5%)
Chemistry 1B (12.5%)
Data Handling and Statistics 1 (12.5%)

plus 25% from the following electives:

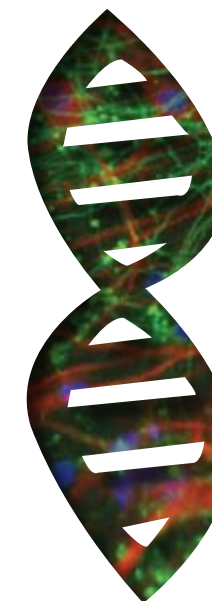
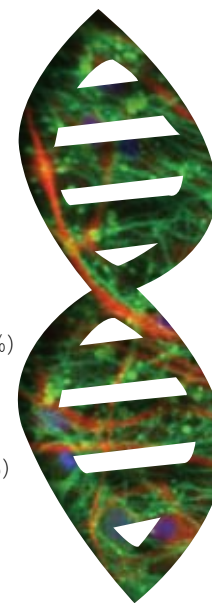
Building Interactive Multimedia Systems (12.5%)
Computer Applications (12.5%)
Ecology (12.5%)
Human Biology (25%)
Information Modelling and Infrastructures (12.5%)
Introduction to Management (12.5%)
Physics for Applied & Life Science (12.5%)
Programming and Problem Solving (12.5%)
Sustainable Resource Management (12.5%)

Year 2

Biochemistry: Metabolism & Nutrition (12.5%)
Chemistry for Life Sciences (12.5%)
Microbiology and Mycology (12.5%)
Molecular Biology in Health & Disease (12.5%)
Plant Genetics and Molecular Biology (12.5%)

plus 37.5% from the following electives:

Advanced Web Development (12.5%)
Analytical Chemistry (12.5%)
Animal Evolution and Ecology (12.5%)
Data Handling and Statistics 2 (12.5%)
Database Management Systems (12.5%)
Entrepreneurship and Creativity (12.5%)
Foundations of Entrepreneurship (12.5%)
Functional Biology of Animals (12.5%)
Human Physiology (25%)
Pharmacology (12.5%)
Plant Biodiversity (12.5%)
Plant Development and Physiology (12.5%)



Year 3

Biochemistry for Biotechnology (25%)
Cell Biology (12.5%)
Genetics (12.5%)

plus 50% from the following electives:

Advanced Biochemistry for Biotechnology (25%)
Applied Food Safety Microbiology (12.5%)
Applied Physiology (12.5%)
Biosynthesis & Function of Natural Products (12.5%)
Biotechnology Law (12.5%)
Chemotherapy and Infection (12.5%)
Clinical Pharmacokinetics 3 (12.5%)
Entrepreneurship and Innovation (12.5%)
Food Microbiology (12.5%)
Instrumental Analytical Chemistry (12.5%)
Intellectual Property (12.5%)
Law and Ethics of Health Care (12.5%)
Medical Microbiology and Immunology (12.5%)
Microbial Ecology and Evolution (12.5%)
Molecular Ecology and Evolution (12.5%)
Neuroscience A (12.5%)
Neuroscience B (12.5%)
Plant Science Research (12.5%)
Project Evaluation and Planning (12.5%)
Reproduction and Endocrinology for Conservation (12.5%)
Toxicology (12.5%)

FURTHER STUDY

Students who successfully complete a Bachelor of Biotechnology may go on to a fourth (honours) year. During this year, students undertake a supervised project in biotechnology applications in one of the following areas: chemistry, medical science, microbiology, plant science or zoology.

For suitably qualified graduates, there are opportunities to undertake research higher degrees at the masters or doctoral levels.