Bachelor of Science (Biotechnology)/Bachelor of Biomedical Science

This double degree will give you an insight into human and animal biology as you explore ways to improve health and treat disease.

You will graduate with majors in microbiology, cell and molecular biology and an optional major of biochemistry.

Biomedical science courses allow you to understand how the human body functions, and the responses of the body to various diseases, exercise, diet, internal disturbances and environmental influences.

You will learn how techniques in molecular biology and genetics are applied to problems including diagnosing genes that cause cancer, making crops and livestock less vulnerable to disease, and making food safer. You will gain skills to work in biotechnology and biomedical research.

You will complete studies in cell biology, physiology, microbiology and molecular biology including proteomics. You can also choose to study anatomy, neuroscience, cardiovascular biology, industrial microbiology and applied biochemistry.

Industry connections
Throughout the program you will have the opportunity to work on research projects and practical activities, often undertaken in collaboration with industry.

The final year Science Project course involves either an industry placement or the opportunity to work on an industry-suggested project.

In Practical Biomedical Sciences course you will have further opportunities to undertake either a work placement or be assessed on professional or vocational work in a workplace setting (real or simulated) and receive feedback from those involved in your industry.

Career outlook
Graduates work in research, production and testing positions in government and private laboratories.

Potential employers include:
- government (state and Commonwealth)
- medical research institutes (e.g. Walter and Eliza Hall Institute)
- hospitals
- universities
- private industry.

Professional recognition
Graduates qualify for professional membership of:
- The Australian Society for Microbiology
  www.theasm.org.au
- The Australian Society for Biochemistry and Molecular Biology
  www.asbmb.org.au

International opportunities
RMIT partners with over 150 organisations around the world to provide you with global work and study opportunities. You could spend a semester studying abroad, take part in a study tour or complete an international internship.
Program structure

Year 1
You’ll study foundation courses in human biology, cell biology, genetics, animals, chemistry and statistics, along with microbiology and immunology.

Year 2
Second year will broaden your knowledge of microbiology, biochemistry and genetics. You’ll also start your biomedical training by studying molecular biology, biochemistry, physiology and developmental cell biology.

Year 3
You’ll study medical microbiology, cellular communication, statistics and epidemiology, bioinformatics and immunology.

Year 4
During your final year, you will master techniques such as gene transfer, microarrays and real-time DNA analysis. You’ll learn how to apply these techniques to problems in human and animal health. This may include detection of pathogens, development of vaccines, breeding, crops (drought and disease resistance) and microbes (fermentation). You will also study the regulatory requirements of biotechnology. You’ll have two opportunities to do short research projects or work experience placements.

Program elective examples
- Head and Visceral Anatomy
- Cardiovascular Biology
- Industrial Microbiology
- Medicines, Drugs and Poisons
- Outbreak: The Detection and Control of Infectious Disease
- Limb and Trunk Anatomy
- Neuroscience
- Biology of Tissue Growth and Repair
- Laboratory and Fieldwork Safety
- Biomolecules and Cellular Regulation
- Applied Biochemistry

Entrance requirements
Successful completion of an Australian Year 12 senior secondary certificate of education or equivalent.

Prerequisites
Current Year 12 prerequisites Units 3 and 4 – a study score of at least 20 in Chemistry and a study score of at least 20 in one of Mathematical Methods or Specialist Mathematics; and a study score of at least 25 in any English (except EAL) or at least 30 in English (EAL).

Additional information
Non-Year 12 applicants may submit additional information if they would like it to be considered. For semester 1 intake, this can be completed through the VTAC Personal Statement online. For semester 2 intake, this can be completed through the personal statement in the Apply Direct application.

This information is designed for Australian and New Zealand citizens and permanent residents of Australia.

Disclaimer: Every effort has been made to ensure the information contained in this publication is accurate and current at the date of printing. For the most up-to-date information, please refer to the RMIT University website before lodging your application. Visit www.rmit.edu.au.