Bachelor of Biomedical Science

In this flexible program, you’ll develop a broad understanding of human anatomy, physiology and pathology from cellular to systems level.

Biomedical science forms the basis of our understanding of how human and animal bodies function, and the responses of the body to various diseases, exercise, diet, internal disturbances and environmental influences.

It is a broad area of science that is all about understanding the human body and how it interacts with disease – how it occurs, what happens and how we can control, cure and prevent it. Biomedical sciences involve an understanding of anatomy and human physiology as well as cell biology and biochemistry.

In addition to a fundamental understanding of biomedical sciences you’ll have the opportunity to select specialist electives in your final year. You will also gain an understanding of the research process and experience with the modern technologies used in biomedical research.

The program is an ideal preparation for graduate entry into health sciences programs such as medicine, physiotherapy and dentistry, allowing you to meet all necessary prerequisites.

Career outlook

This degree can lead you to work in leading fields such as genetic engineering, cancer research, neuroscience, and DNA profiling and stem cell research.

Biomedical scientists study all aspects of the human body and the impact of disease. They study symptoms, causes and treatments in an attempt to better understand and tackle disease. They can work in specialty areas that can include scientific research and developmental science.

Our biomedical science program produces highly skilled graduates with advanced theoretical and practical knowledge in selected areas of biochemical, physiological and related medical sciences.

Employers and industry professionals contribute to the ongoing development of the program. Their involvement ensures that the program remains relevant to your needs as a graduate and to the needs of graduate employers.

Graduates can work in:
- research in universities, hospitals and biomedical research institutes
- medical and pharmaceutical research
- public and private diagnostic centres
- therapeutic research laboratories
- applied health areas such as health promotion and administration

You can also go on to postgraduate studies in biomedical science in universities and research institutes.

Industry connections

During third year’s Practical Biomedical Science you’ll have the chance to gain experience in the workplace, including with RMIT’s own scientists, analytical laboratories in hospitals, and science and medical research opportunities in industry and academic institutes.

Professional recognition

Depending on courses chosen in your final year and meeting specific criteria, you will be eligible for membership to the following societies:
- Ausbiotech
- Australasian Society for Human Biology (ASHB)
- Australian and New Zealand Society for Cell and Developmental Biology (ANZSCDB)
- Australian Physiological Society (AuPS)
- Australian Society for Medical Research (ASMR)
- Australian Society of Biochemistry and Molecular Biology (ASBMB)
- Genetics Society of Australia (GSA)
- Human Genetics Society of Australasia (HGSA)
- Mutagenesis and Experimental Pathology Society of Australia (MEPSA)

International opportunities

There are opportunities within the program for study abroad or to obtain international experience.
Program structure

You'll be able to choose electives to suit your interests. All areas provide a strong foundation for progression into research and other health-related careers.

Year 1
You'll cover chemistry, human biology, cell biology, genetics, microbiology, immunology and statistics.

Year 2
You'll study biochemistry, human physiology, cell biology and anatomy. Depending on your area of specialisation, you may choose electives in immunology, histology or microbiology.

Year 3
You will have a choice of studying molecular biology, biochemistry, cell biology, anatomy, advanced physiology, pathology or microbiology. You'll also undertake a short research project or work experience placement.

Program elective examples:
- Histology
- Tissue growth and repair
- Cardiovascular Biology
- Gene Technologies
- General Pathology
- Head and Visceral Anatomy
- Clinical Immunology
- Microbiology
- Neuroscience

Year 1
<table>
<thead>
<tr>
<th>Biology of the Cell</th>
<th>Introduction to Biomedical Science</th>
<th>Chemistry for Life Sciences</th>
<th>Statistics and Epidemiology</th>
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<tbody>
<tr>
<td>Introduction to Medical Biochemistry</td>
<td>Introduction to Human Biosciences</td>
<td>Introduction to Microbiology, Immunology and Genetics</td>
<td>University elective</td>
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Year 2
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<tr>
<th>Biochemistry and Molecular Biology 1</th>
<th>Human Physiology 1: Body Systems</th>
<th>Developmental and Cell Biology</th>
<th>Program elective</th>
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<tbody>
<tr>
<td>Biochemistry and Molecular Biology 2</td>
<td>Human Physiology 2: Body Systems</td>
<td>Limb and Trunk Anatomy</td>
<td>University elective</td>
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Year 3
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<tr>
<th>Cellular Communication</th>
<th>Program elective</th>
<th>Program elective</th>
<th>Program elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical Biomedical Sciences</td>
<td>Program elective</td>
<td>Program elective</td>
<td>Program elective</td>
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</tbody>
</table>

Compulsory courses           Program electives           University electives

Please note: This is an example of the program structure. Courses may change and may not be available each semester.

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.