Bachelor of Biomedical Science (Laboratory Medicine)

Laboratory medicine applies scientific investigations to diagnose, treat and better understand disease processes.

It’s estimated that up to 70% of clinical decisions made by doctors are based on information provided by medical scientists.

This is a four-year program with a clinical placement, providing you with work-ready skills and experience in diagnostic pathology.

As a graduate of the laboratory medicine program you will be qualified as a medical scientist and play a vital role in the healthcare system. You will use diagnostic and scientific procedures on patient samples to investigate, identify and treat disease.

RMIT is the only Victorian university that offers all of the following majors in the clinical discipline streams: haematology, transfusion and transplantation science, cytopathology, histopathology, medical microbiology and clinical biochemistry.

You’ll have flexibility in choosing your major course disciplines. In your final year, you’ll have the opportunity to study a discipline-focused laboratory medicine project to develop your research skills.

**Industry connections**

You’ll undertake supervised professional practice clinical placement across Years 3 and 4 to give you work-ready skills and experience in a diagnostic pathway. You can undertake a 10-13 week overseas laboratory placement.

Laboratory medicine works in partnership with industry, which has input into the program through the Program Advisory Committee. Industry representatives teach practical classes. RMIT also has regular meetings with professional bodies, such as the Australian Institute of Medical Scientists (AIMS), Australasian Association of Clinical Biochemists (AACB), Australian Society of Microbiology (ASM), and Australian Society of Cytology (ASC).

**Career outlook**

This degree provides you with the accreditation needed to practice in diagnostic pathology.

Medical scientists work as part of a team with doctors, pathologists, scientists, technicians and laboratory assistants. They are in high demand and employment opportunities are excellent in Australia and overseas.

Major employers are diagnostic laboratories in teaching hospitals including Monash Medical Centre, St Vincent’s, Royal Melbourne, Royal Children’s, the Alfred and Austin hospitals.

Graduates are also employed in private pathology laboratories and in regional laboratories throughout Victoria.

**Professional recognition**

RMIT’s laboratory medicine is the only degree in Victoria that is professionally accredited by the Australian Institute of Medical Scientists (AIMS) and the only Australian degree accredited by the Institute of Biomedical Science (IBMS) in the UK.

This grants RMIT graduates automatic membership of AIMS and assists with employment potential as medical scientists.

You’ll also be eligible for membership of the New Zealand Institute of Medical Laboratory Science and the American Society for Clinical Laboratory Science.

**International opportunities**

You’ll have the opportunity to undertake 10 to 13 weeks of professional practice in an approved overseas laboratory in countries such as the UK, the USA, Ireland, Singapore, Korea and Sweden.

**Pathways**

Graduates of the RMIT Associate Degree in Applied Science biomedical stream who achieve a grade point average (GPA) of at least 2.0 out of 4.0 are guaranteed entry with one year of credit (equivalent to 120 credit points). Graduates with a GPA of less than 2.0 may apply and if successful in gaining a place, may be eligible for credit.

Graduates of the RMIT Diploma of Laboratory Technology (Pathology Testing) or Diploma of Laboratory Technology (Biotechnology) who are successful in gaining a place may also be eligible to apply for credit of up to one year.
Program structure

Year 1
You’ll undertake courses designed to provide a strong academic grounding in biological sciences. You’ll be introduced to the professional field of laboratory medicine via a hospital laboratory visit and basic studies in clinical disciplines.

Year 2
The clinical disciplines of haematology, transfusion and transplantation science, clinical biochemistry, histopathology, cytology, and medical microbiology are introduced in preparation for professional practice.

Year 3
You’ll undertake general pathology, molecular genetics and diagnostics. You’ll also study two major discipline streams.

In the second half of the year you’ll complete 20 weeks of supervised professional practice in a diagnostic, research or reference laboratory.

This full-time placement runs as a cooperative education year. It involves both the University and your placement laboratory. Students may have the opportunity to do 10 to 13 weeks as an overseas placement.

Year 4
In semester 1 you’ll complete further supervised professional practice. On return to RMIT you’ll complete courses in Integrative Pathology and Advanced Laboratory Medicine in a clinical discipline stream.

Program elective examples
- Clinical Biochemistry
- Cytopathology
- Haematology
- Histopathology
- Medical Microbiology
- Transfusion and Transplantation Science

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry for Life Sciences</td>
<td>Introduction to Medical Biochemistry</td>
<td>General Pathology</td>
<td>Professional Practice in Laboratory Medicine 1</td>
</tr>
<tr>
<td>Human Structure and Function 1</td>
<td>Human Structure and Function 2</td>
<td>Molecular Genetics and Diagnostics</td>
<td>Medical Informatics and Laboratory Management</td>
</tr>
<tr>
<td>Biology of the Cell</td>
<td>Introduction to Microbiology, Immunology and Genetics</td>
<td>Program elective</td>
<td>Program elective</td>
</tr>
<tr>
<td>Introduction to Laboratory Medicine</td>
<td>Statistics and Epidemiology</td>
<td></td>
<td>Principles of Professional Practice</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Advanced Laboratory Medicine</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>University elective</td>
</tr>
</tbody>
</table>

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 one of Biology or Chemistry and a study score of at least 20 in one of Mathematics (any) or Physics; 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.

Working With Children Check: Students must hold a valid Working With Children Check prior to undertaking the clinical components of this program.

Police check: Students must present evidence of a successful National Police Records Check prior to undertaking the clinical components of this program.

Immunisations: Prior to commencing professional practice, you should be vaccinated for Hepatitis B.

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