The **Master of Biomedical Science** program is a postgraduate specialty degree, which has been created to provide an alternate pathway into a research career and/or PhD studies, and to offer additional professional training for a career in science. In the Masters program, you are able to undertake a substantial research project, and also select coursework subjects to develop your technical, communication, business and professional skills. A variety of 'Discipline' and 'Professional' subjects are offered across the University from which you can select.

*(From 2014 the previously offered Master of Science (Biomedical & Health Sciences) by the Melbourne Graduate School of Science is renamed and offered as the Master of Biomedical Science, by the Melbourne Medical School. The course structure, subject offerings and entry requirements will remain unchanged. During the interim period of enquiry and application through 2013, students are encouraged to follow the application process outlined.)*

**Honours** is a fourth-year undergraduate program which gives you the opportunity to draw together your previous studies and focus your knowledge and skills on an original research project. The Honours program is a one year extension of your undergraduate degree, which gives you a taste of what working as a scientist would be like as a career, allows you to demonstrate academic excellence in an area of special interest to you, and provides an entry point for further research higher degree study (ie PhD).

Departments offer a range of research projects which can be tailored to fit the Masters or Honours context. Discussions with individual potential supervisors will be helpful for you in determining how a project might take shape if it is configured to fit within the Masters or Honours framework.

In most Departments the **Masters and Honours students interact extensively** and share some core coursework components. The course outlines are summarized in the Table below.

Overall, **Masters students complete 200 points** of coursework / project work over 4 semesters and **Honours students complete 100 points** of coursework / project work over 2 semesters. Both student groups take the core Discipline 'BIOM40001 Introduction to Biomedical Research'. Usually Masters students will take this subject in the first semester of their course enrolment. Masters students complete a research project which comprises 125 points and Honours students complete a project comprising 75 points (including Literature Review and Oral Presentation tasks). During their enrolment, Masters students will take additional 'Professional Skills' subjects and other 'Discipline Subjects' (to complete the 200 points as indicated in the table below).

<table>
<thead>
<tr>
<th>Program Component</th>
<th>Description</th>
<th>Masters (points/200)</th>
<th>Honours (points/100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Discipline subject</td>
<td>Introduction to Biomedical Research BIOM40001 (or equivalent substitute)</td>
<td>12.5</td>
<td>12.5</td>
</tr>
<tr>
<td>Research Project</td>
<td>Literature Review, Thesis, &amp; Oral Presentations</td>
<td>125</td>
<td>75</td>
</tr>
<tr>
<td>Other Discipline subjects</td>
<td>Usually includes at least one Dept-specified subject</td>
<td>37.5</td>
<td>12.5</td>
</tr>
<tr>
<td>Professional Skills</td>
<td></td>
<td>25</td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>200 points</strong></td>
<td><strong>100 points</strong></td>
</tr>
</tbody>
</table>

Details of the Core Discipline subject BIOM40001 are provided below. Some Departments have a substitute 'Method' style core subjects and may also identify certain compulsory additional Discipline subject/s. Information specific to the the Masters application process then follows.
Masters and Honours – Core ‘Discipline’ Subject

BIOM40001 Introduction to Biomedical Research (12.5 points)

This subject uses a structured approach to introduce students to processes and strategies at the core of modern biomedical research. In a series of 10 x 2hr tutorials, students are guided through the need for – and tools of – testable hypothesis formulation, data management and evaluation, data presentation, and research outcome communication. Specific case examples of experimental design and statistical testing techniques are considered. In the course of this, students are introduced to appropriate statistical approaches and software. Ethical practices relevant to both animal and human experimental biomedical research are reviewed and inculcated. Broad issues relating to research conduct and management are addressed in the context of Discussion Workshops. These topics include critical reading skills, management of intellectual property, scientific integrity and fraud, conflict of interest, e-research, publication production, reference management and archiving of data. Additional Workshops deal with advanced techniques utilised in contemporary medical research.

The objectives of this subject are

- To develop a mature understanding of experimental design, experimental implementation, data evaluation and communication as it relates to modern biomedical research, in a broad ethical context.
- To acquire competency in statistical analysis, hypothesis testing and data presentation.
- To generate awareness of, and appropriate behaviours relating to, ethical conduct of animal and human experimental ethics, including regulatory requirements.
- To appreciate the need for the active management of intellectual property issues, scientific integrity and conflict of interest in a contemporary biomedical research context.
- To become aware of the scientific and technical basis of selected advanced techniques in biomedical research.

Introduction to Biomedical Research (BIOM40001) is a two week intensive program taken prior to the commencement of Semester 1.
The Master of Biomedical Science) is an important step into the world of Graduate study. You have increased independence to direct and manage your learning and training program to suit your career goals – in research and professional realms. The program, with extended time allocation for research, allows you to tackle a project at greater depth and possibly to employ more technically demanding techniques.

As the program extends over 2 years, your opportunities to be involved in detailed planning of your project and moving your work through to publication are increased. You will achieve a postgraduate qualification of recognized Discipline relevance to take you on the road confidently into further higher degree research. You will also develop competence in a range of professional skill areas relevant to science which might include technical, business, planning and communication strengths. Course structure information is available at:


Entry Requirements

A Bachelor degree with a major in an appropriate discipline (ie a discipline related to the research project area of investigation) with at least an H3 (65%) in the third year Major subjects or equivalent.

Students may commence a MBiomedSc program in Semester 1 or Semester 2, with Supervisor agreement, although Semester 1 is preferred.

Masters Research Project and non-core subject selection

The program is designed to combine professional training with completion of a substantial original Research Project. You need to identify and arrange provisional acceptance from a Supervisor. Some advice about how to find a supervisor and some possible project areas is available at:

http://graduate.science.unimelb.edu.au/master-of-science-biomedical-health-sciences

Along with your research project, you will be taking at least one Course core Discipline subject (Introduction to Biomedical Research BIOM40001minars in Physiology PHYS90008), and you will select a range of other ‘Professional Skills’ subjects (2 x 12.5pts)) units and ‘Discipline Subjects’ (additional 3 x 12.5 pts) to complete a total of 200 points over 4 semesters. Depending on available subjects and selections, some students may be able to gain credit for Discipline or Professional Skills subjects taken over the summer. Introduction to Biomedical Research (BIOM40001) is a two week intensive program taken prior to the commencement of Semester 1 which provides flexibility for involvement in other subjects and early progress with your research project in the first year of enrolment.

Non Core Discipline Subjects (select 3 = 37.5 points)

In addition to the Course core Discipline subject required (25 pts, BIOM40001), you may select an additional 3 Discipline subjects. Your Department may specify one or more Departmental Core subjects, allowing Student and Supervisor discretion to determine any other subjects which need to be selected. These additional Discipline subjects could be selected from Masters programs offered by other Departments or Schools or could be undergraduate subjects related to your research project.

You may select:

- Other relevant Department subjects (offered at 500 and 600 level)
- Other relevant undergraduate subject (offered at 300 level)

Professional Skills (select 2 = 25 points)

Beyond your Research project and the core and selected Discipline subjects, you will also select 2 ‘Professional Skills’ subjects. These subjects provide you with broad professional training in areas of communication, social context of science, and business management. A list of available subjects is at https://handbook.unimelb.edu.au/view/2012/R05-RH
How to apply for MBiomedSc

Course Code MC-BMEDSC

1. Applications for the Masters are made directly via the University online application system from September. Timely applications close on 30 November. Late applications can be considered for admission (but may not be eligible for competitive fee places or bursaries).

2. Talk with academic staff offering projects you are interested in. Find out what is involved. Talk to the students in the labs. Talk with the Department Masters Coordinator if you have questions about the overall course structure.

3. When you are ready to make a formal application, you must lodge an online application to the Melbourne Graduate School of Science (who are handling the admission process for Melbourne School of Medicine during transition to 2014).

   http://graduate.science.unimelb.edu.au/apply.php

   You will be required to nominate a Department, Supervisor and Project.

4. Wait for your letter of offer in the mail early-mid December. If you do not receive an offer for one, you will be assessed for any other applications made.

5. Complete the Faculty acceptance form and follow enrolment instructions for 2014.

As for Honours, Commonwealth supported places (CSP) are competitively available for eligible Masters students and HECS funding arrangements for fees apply. Overseas and Australian Fee places are also offered (and Fee Help support is available for local students). Students entering the Masters program need to check the banding classification of specific subjects to determine overall fees payable as some selected Discipline and Professional Skills subjects may be in fee bands which are different (possibly lower) than fee bands which apply to natural and physical sciences, mathematics and statistics fee band subjects. Some students may qualify for scholarship funding.

http://www.futurestudents.unimelb.edu.au/admissions/fees

Local students applying for the Masters may be eligible for financial support

Enquiries

Department Masters Coordinators/Administrative Contacts
(see list attached)

Masters Admission Administration
Melbourne Graduate School of Science
David Caro Building (Building 192)

Tel: 61 3 8344 6128
Admissions gradscience-apps@unimelb.edu.au
Coursework Team graduate-science@unimelb.edu.au

MMS Masters Coordinator
Prof Lea Delbridge
Department of Physiology
lmd@unimelb.edu.au
The Master of Biomedical Science: Department Coordinators/Contacts

Master of Biomedical Science students may be enrolled through Departments of the School of Medicine. Currently participating Departments are listed below – more Departments are expected to be involved in 2014. Students may undertake projects located at the partner Institutes of the School. A ‘Responsible Academic Department’ will be required to oversee Institute enrollment, and this is usually arranged through collaborative contact between institutes and Departments of the School.

<table>
<thead>
<tr>
<th>Dept / Academic Unit</th>
<th>Academic Coordinator</th>
<th>Academic Coordinator email</th>
<th>Administration Contact</th>
<th>Administration Contact email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy &amp; Neuroscience</td>
<td>Dr Peter Kitchener</td>
<td><a href="mailto:pkitc@unimelb.edu.au">pkitc@unimelb.edu.au</a></td>
<td>Tricia Hartshorn</td>
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</tr>
<tr>
<td>Physiology</td>
<td>Prof Lea Delbridge</td>
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</tr>
<tr>
<td>Biochemistry &amp; Mol Biol (Bio21 Inst)</td>
<td>A/Prof Marie Bogoyevitch</td>
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</tr>
<tr>
<td>Florey - Neuroscience &amp; Mental Health</td>
<td>Other Responsible Depts as identified</td>
<td></td>
<td>Rachel Mostacci</td>
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<td></td>
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<td>RMH Med &amp; Surg (incl Radiol, O&amp;G)</td>
<td>Dr Caroline Marshall</td>
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<td>St Vincents (Surgery)</td>
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<tr>
<td>Peter Mac</td>
<td>Other Responsible Depts as identified</td>
<td></td>
<td>Dr Caroline Owen</td>
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<td></td>
<td>Dr Chad Bousman (Parkville)</td>
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