

## BH-BMED Bachelor of Biomedicine (Degree with Honours)

<b>Year and Campus:</b>	2011 - Parkville
<b>CRICOS Code:</b>	073113J
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>
<b>Level:</b>	Undergraduate
<b>Duration &amp; Credit Points:</b>	100 credit points taken over 12 months full time. This course is available as full or part time.
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<b>Course Overview:</b>	<p>The Bachelor of Biomedicine (Honours) provides an advanced, specialised year of study that follows students' completion of the requirements of the Bachelor of Biomedicine. It extends students' knowledge and skills through a supervised research project together with advanced coursework in related areas of study.</p> <p>The Bachelor of Biomedicine (Honours) is available in the following programs.</p> <p>Anatomy and Cell Biology          Biochemistry and Molecular Biology          Genetics          Hearing Sciences (Otolaryngology)          Medical Biology (Walter and Eliza Hall Institute)          Medicine (Austin and Northern Health)          Medicine (Royal Melbourne Hospital and Western Health)          Medicine (St Vincent's Hospital)          Microbiology and Immunology          Oral Health Science          Paediatrics          Pathology          Pharmacology          Physiology          Primary Care (General Practice)          Psychopharmacology (Psychiatry (Austin and Northern Health))          Surgery (Austin and Northern Health)          Veterinary Bioscience          Vision Sciences          Zoology</p>
<b>Objectives:</b>	<p>The Bachelor of Biomedicine honours year provides students with the opportunity to integrate their previous science or technology studies with advanced studies in their biomedicine field of interest, and focus their knowledge, skills and intellect on an exciting piece of original research. Each program within the BBiomed (Hons) comprises two components:</p> <ul style="list-style-type: none"> <li># The advanced coursework component provides opportunities for increasing students' depth of knowledge in their particular areas of interest and expanding the theoretical basis on which they will undertake their research work. It provides students with the opportunity to develop expertise in the broad scientific field(s) in which their individual research project is placed, including the methodologies of the relevant field(s), and the use of the scientific literature in their specialist area of study.</li> <li># The research project provides students with the opportunity to apply their knowledge and technical skills in a supervised research project and develop skills in experimental design, project implementation and in the communication of the outcomes of a research project. The project develops students' technical and data acquisition skills, their problem-solving and critical thinking capacities in the context of research, their skills in communicating to a variety of audiences and the application of appropriate risk assessment and ethical approval processes.</li> </ul> <p>Honours also develops students' capacity for independent study and research that will help develop maturity and skills for transition to employment in a range of occupations and industries or a research higher degree.</p>

<p><b>Course Structure &amp; Available Subjects:</b></p>	<p><b>Course Structure</b></p> <p>The BBiomed Honours programs are prescribed 100-point programs (equivalent to eight 12.5-point subjects) comprising Advanced Coursework and Research Project components as outlined below.</p> <p>The balance between the advanced coursework and research project components may vary from program to program, with each comprising at least 25 points and no more than 75 points of the 100-point program. The balance specific to each program will be specified in the handbook entry for each program.</p> <p><b>1. Advanced coursework:</b></p> <ul style="list-style-type: none"> <li>• Two 12.5-point science advanced coursework subjects.</li> </ul> <p>The coordinator of the honours program in which the student is enrolled must approve each student's advanced coursework program.</p> <p>Each student's advanced coursework program will comprise advanced coursework subjects offered by one or more departments teaching into the degree's honours program, which may include cognate subjects offered in relevant Masters degrees where students meet the prerequisite requirements of those subjects.</p> <p>The honours coordinator may approve a student including one 12.5-point third year level coursework subject. Inclusion of a third-year-level subject will also require approval of the appropriate subject coordinator.</p> <p><b>2. Research project:</b></p> <ul style="list-style-type: none"> <li>• A research project subject or subjects with a total points-value of 75 points.</li> </ul> <p><b>Course Duration</b></p> <p>The Honours year in 2011 runs from 14 February 2011 to 19 November 2011. Please note that individual Honours programs may have their own start and finish dates within these times. You should contact the Honours Coordinators of individual departments regarding the precise start and finish dates of a given program.</p> <p>In 2011, the University dates for Honours (i.e the earliest starting and latest finishing dates) are as follows:</p> <p>Semester 1 entry</p> <ul style="list-style-type: none"> <li># Orientation program may begin no earlier than Monday 7 February</li> <li># Honours project may begin no earlier than Monday 14 February</li> <li># Honours assessment may end no later than Friday 19 November</li> <li># Total duration of project: 40 weeks</li> </ul> <p>For semester 1 entrants, up to four weeks of leave may be taken within the 40-week period, in negotiation with the project supervisor, for a total of 36 weeks required for the program.</p> <p>Semester 2 entry</p> <ul style="list-style-type: none"> <li># Orientation program may begin no earlier than Monday 19 July</li> <li># Honours project may begin no earlier than Monday 26 July</li> <li># Honours assessment may end no later than Friday 10 June 2012</li> <li># Total duration of project: 46 weeks</li> </ul> <p>For Semester 2 entrants, up to ten weeks of leave may be taken within the 46-week period, in negotiation with the project supervisor, for a total of 36 weeks required for the program.</p> <p><b>Completion Requirements</b></p> <p>To be awarded honours students must gain:</p> <ul style="list-style-type: none"> <li># a pass in at least 100-points of subjects in their chosen program;</li> <li># a result of at least 65% in the research project;</li> <li># a weighted credit-point average of 65% or greater.</li> </ul> <p>Students may be given permission to repeat an advanced coursework honours subject/ component, or enrol in additional subject(s), in order to meet the requirement to pass 100 points. However the honours result will be determined over all subjects for which a result is entered. When the weighted credit-point average is less than 65% the honours degree will not be awarded.</p>
<p><b>Subject Options:</b></p>	<p><b>Specialisations</b></p> <p>Each honours project is offered by one of the following departments / institutes. Some projects are offered within multiple departments / institutes. Please refer to the <b>MDHS Honours website</b> (<a href="http://www.sc.mdhs.unimelb.edu.au/why-honours">http://www.sc.mdhs.unimelb.edu.au/why-honours</a>) for full details on selecting a project.</p> <p><b>Anatomy and Cell Biology</b></p>

Students must complete 25 points of advanced coursework and a 75 point research project as follows:

Subject	Study Period Commencement:	Credit Points:
BIOM40001 Introduction To Biomedical Research	Not offered 2011	12.50
ANAT40002 Seminars in Anatomy and Cell Biology	Semester 1	12.50
ANAT40001 Anatomy & Cell Biology Research Project	Semester 1	25
ANAT40005 Anatomy & Cell Biology Research Project	Semester 2	50

### **Biochemistry and Molecular Biology**

Students must complete 25 points of advanced coursework and a 75 point research project as follows:

Subject	Study Period Commencement:	Credit Points:
BCMB40002 Advanced Studies in Biochemistry A	Semester 1, Semester 2	12.50
BCMB40007 Advanced Studies in Biochemistry B	Semester 1	12.50
BCMB40001 Biochemistry Research Project	Semester 1	25
BCMB40006 Biochemistry Research Project	Semester 1, Semester 2	50

### **Genetics**

Students must complete 25 points of advanced coursework and a 75 point research project as follows:

Subject	Study Period Commencement:	Credit Points:
GENE90012 Advanced Topics in Genetics A	Semester 1	12.50
GENE40006 Critical Review in Genetic Research	Semester 1	12.50
GENE40001 Genetics Research Project	Semester 1	25
GENE40005 Genetics Research Project	Semester 1, Semester 2	50

### **Hearing Sciences (Otolaryngology)**

Students must complete 25 points of advanced coursework and a 75 point research project as follows:

Subject	Study Period Commencement:	Credit Points:
BIOM40001 Introduction To Biomedical Research	Not offered 2011	12.50
OTOL40002 Otolaryngology Advanced Coursework	Semester 1	12.50
OTOL40001 Otolaryngology Research Project	Semester 1	25
OTOL40003 Otolaryngology Research Project	Semester 2	50

### **Medical Biology (Walter and Eliza Hall Institute)**

Students must complete 25 points of advanced coursework and a 75 point research project as follows:

Subject	Study Period Commencement:	Credit Points:
BMSC40004 Approaches To Medical Research	Semester 1	12.50
BMSC40007 Postgraduate Lectures in Medical Biology	Semester 1	12.50
BMSC40003 Medical Biology Research Project	Semester 1	25

BMSC40008 Medical Biology Research Project	Semester 2	50
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**Medicine (Austin and Northern Health)**

Students must complete 25 points of advanced coursework and a 75 point research project as follows:

Subject	Study Period Commencement:	Credit Points:
BIOM40001 Introduction To Biomedical Research	Not offered 2011	12.50
MEDI40002 Advanced Studies in Biomedicine	Semester 1	12.50
MEDI40014 Biomedicine Research Project	Semester 1	25
MEDI40015 Biomedicine Research Project	Semester 1, Semester 2	50

**Medicine (Royal Melbourne Hospital and Western Health)**

Students must complete 25 points of advanced coursework and a 75 point research project as follows:

Subject	Study Period Commencement:	Credit Points:
BIOM40001 Introduction To Biomedical Research	Not offered 2011	12.50
MEDI40004 Seminars in Translational Medicine	Semester 1	12.50
MEDI40012 Research Project	Semester 2	50
MEDI40003 Research Project	Semester 1	25

**Medicine (St Vincent's Hospital)**

Students must complete 25 points of advanced coursework and a 75 point research project as follows:

Subject	Study Period Commencement:	Credit Points:
BIOM40001 Introduction To Biomedical Research	Not offered 2011	12.50
MEDI40006 Biomedical Advanced Coursework	Semester 1, Semester 2	12.50
MEDI40005 Biomedicine Research Project - St Vincents	Semester 1	25
MEDI40013 Biomedicine Research Project - St Vincents	Semester 2	50

**Microbiology and Immunology**

Students must complete 25 points of advanced coursework and a 75 point research project as follows:

Subject	Study Period Commencement:	Credit Points:
MIIM40002 Advanced Microbiology and Immunology I	Semester 1	12.50
MIIM40007 Advanced Microbiology and Immunology II	Semester 1	12.50
MIIM40005 Microbiology and Immunology Research Project	Semester 1	25
MIIM40006 Microbiology and Immunology Research Project	Semester 2	50

**Oral Health Science**

Students must complete 25 points of advanced coursework and a 75 point research project as follows:

Subject	Study Period Commencement:	Credit Points:
BIOM40001 Introduction To Biomedical Research	Not offered 2011	12.50

DENT40003 Advances in Oral Health Research	Semester 2	12.50
DENT40002 Oral Health Sciences Research Project	Semester 1, Semester 2	37.50

**Paediatrics**

Students must complete 25 points of advanced coursework and a 75 point research project as follows:

Subject	Study Period Commencement:	Credit Points:
BIOM40001 Introduction To Biomedical Research	Not offered 2011	12.50
PAED40002 The Biology of Human Health and Disease	Semester 1	12.50
PAED40001 Paediatrics Research Project	Semester 1	25
PAED40005 Paediatrics Research Project	Semester 2	50

**Pathology**

Students must complete 25 points of advanced coursework and a 75 point research project as follows:

Subject	Study Period Commencement:	Credit Points:
BIOM40001 Introduction To Biomedical Research	Not offered 2011	12.50
PATH40002 Critical Analysis of Pathology Research	Semester 1	12.50
PATH40001 Pathology Research Project	Semester 1	25
PATH40005 Pathology Research Project	Semester 2	50

**Pharmacology**

Students must complete 25 points of advanced coursework and a 75 point research project as follows:

Subject	Study Period Commencement:	Credit Points:
BIOM40001 Introduction To Biomedical Research	Not offered 2011	12.50
PHRM40002 Advanced Topics in Pharmacology	Semester 1	12.50
PHRM40001 Pharmacology Research Project	Semester 1	25
PHRM40006 Pharmacology Research Project	Semester 2	50

**Physiology**

Students must complete 25 points of advanced coursework and a 75 point research project as follows:

Subject	Study Period Commencement:	Credit Points:
BIOM40001 Introduction To Biomedical Research	Not offered 2011	12.50
PHYS90008 Advanced Seminars in Physiology	Semester 1	12.50
PHYS40005 Physiology Research Project	Semester 1	25
PHYS40006 Physiology Research Project	Semester 2	50

**Primary Care (General Practice)**

Students must complete 25 points of advanced coursework and a 75 point research project as follows:

Subject	Study Period Commencement:	Credit Points:
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BIOM40001 Introduction To Biomedical Research	Not offered 2011	12.50
GENP40002 Introduction to Primary Care Research	Semester 1	12.50
GENP40000 Primary Health Care Research Project	Semester 1	25
GENP40001 Primary Health Care Research Project	Semester 2	50

### **Psychopharmacology [Psychiatry(Austin and Northern Health)]**

Students must complete 25 points of advanced coursework and a 75 point research project. Please refer to Medicine (Austin and Northern Health) for the subjects to be completed.

### **Surgery (Austin and Northern Health)**

Students must complete 25 points of advanced coursework and a 75 point research project as follows:

Subject	Study Period Commencement:	Credit Points:
BIOM40001 Introduction To Biomedical Research	Not offered 2011	12.50
SURG40002 Advanced Studies in Biomedicine: Surgery	Semester 1	12.50
SURG40005 Surgery and Biomedicine Research Project	Semester 1	25
SURG40001 Surgery and Biomedicine Research Project	Semester 2	50

### **Veterinary Bioscience (Faculty of Veterinary Science)**

Students must complete 25 points of advanced coursework and a 75 point research project as follows:

Subject	Study Period Commencement:	Credit Points:
BIOM40001 Introduction To Biomedical Research	Not offered 2011	12.50
MAST40001 Research Philosophies and Statistics	Semester 1	12.50
VETS40014 Advanced Seminars in Veterinary Science	Semester 1, Semester 2	12.50

### **Vision Sciences (Optometry and Vision Sciences)**

Students must complete 25 points of advanced coursework and a 75 point research project as follows:

Subject	Study Period Commencement:	Credit Points:
OPTO40008 Vision Science Research Project	Semester 1, Semester 2	37.50

### **Zoology**

Students must complete 25 points of advanced coursework and a 75 point research project as follows:

Subject	Study Period Commencement:	Credit Points:
ZOOL40001 Zoology (Links) Research Project	Semester 1, Semester 2	25
BIOL90002 Biometry	July	12.50
ZOOL90007 Graduate Seminar in Population Biology	Semester 1	12.50
ZOOL90005 Reproduction & Regeneration: Techniques	Not offered 2011	12.50

#### **Entry Requirements:**

- The Selection Committee will evaluate the applicant's ability to pursue successfully the course using the following criteria
  - a University of Melbourne Bachelor of Biomedicine,
  - a Standard Grade Point Average (SGPA) of at least 65%.
- The Selection Committee may conduct interviews and tests and may call for referee reports or employer references to elucidate any of the matters referred to above.

	<p>Notes:</p> <p>a. Ranking students during selection will be based on their Standard Grade Point Average (SGPA).</p> <p>b. Some honours programs include specified prerequisites for entry to that particular program in addition to the entry requirements for the BBiomed (hons) year.</p> <p>c. Entry into an Honours program is subject to the capacity of the department(s) or schools(s) offering the program to provide adequate supervision in a project appropriate to the interests and preparation of the individual student.</p>
<p><b>Core Participation Requirements:</b></p>	<p>The Bachelor of Biomedicine (honours) welcomes applications from students with disabilities. It is University and degree policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the degree. The Bachelor of Biomedicine (honours) requires all students to enrol in subjects where they will require: (1) the ability to comprehend complex science and technology related information; (2) the ability to clearly and independently communicate a knowledge and application of science, and technology principles and practices during assessment tasks; (3) the ability to actively and safely contribute in clinical, laboratory, and fieldwork/excursion activities. Students must possess behavioural and social attributes that enable them to participate in a complex learning environment. Students are required to take responsibility for their own participation and learning. They also contribute to the learning of other students in collaborative learning environments, demonstrating interpersonal skills and an understanding of the needs of other students. Assessment may include the outcomes of tasks completed in collaboration with other students. There may be additional inherent academic requirements for some subjects, and these requirements are listed within the description of the requirements for each of these subjects. Students who feel their disability will impact on meeting this requirement are encouraged to discuss this matter with the relevant Subject Coordinator and the Disability Liaison Unit: <a href="http://www.services.unimelb.edu.au/disability/">http://www.services.unimelb.edu.au/disability/</a></p>
<p><b>Further Study:</b></p>	<p>The opportunity to specialise during the honours year provides a strong foundation for the future direction of graduates. Graduates may progress to higher degree research in the sciences at the Masters or Doctorate level. They are also eligible to progress to a range of graduate coursework programs.</p>
<p><b>Graduate Attributes:</b></p>	<p>The Melbourne Experience enables our Bachelor of Biomedicine (Honours) graduates to become: Academically excellent Our graduates will be expected to: have a strong sense of intellectual integrity and the ethics of scholarship have a broad knowledge of science across a range of fields, with an in-depth understanding in one or more scientific disciplines understand the methods of science, and the history and evolution of scientific concepts be intellectually curious and apply a rigorous, critical and logical approach to enquiry understand the principles of sound project and experimental design, including data analysis, and apply this understanding to an independent research project reach a high level of achievement in writing, generic research activities, problem-solving and communication apply outstanding analytical, quantitative and technical skills to problem solving and, where relevant, design be critical and creative thinkers, with an aptitude for continued self-directed learning be adept at learning in a range of ways, including through information and communication technologies Knowledgeable across disciplines Our graduates will be expected to: examine critically, synthesise and evaluate knowledge across a broad range of disciplines expand their analytical and cognitive skills through learning experiences in diverse subjects have the capacity to participate fully in collaborative learning and to confront unfamiliar problems have a set of flexible and transferable skills for different types of employment, including: excellent organisational, planning and time management skills ability to access, evaluate and utilise information from diverse sources ability to communicate their ideas effectively in both written and verbal formats to both specialists and non-specialists knowledge, skills and attitude that enable adaptation to scientific, technological and social change. Leaders in communities Our graduates will be expected to: initiate and implement constructive change in their communities, including professions and workplaces have excellent interpersonal and decision-making skills, including an awareness of personal strengths and limitations mentor future generations of learners engage in meaningful public discourse, with a profound awareness of community needs Attuned to cultural diversity Our graduates will be expected to: value different cultures be well-informed citizens able to contribute to their communities wherever they choose to live and work have an understanding of the social and cultural diversity in our community respect indigenous knowledge, cultures and values Active global citizens Our graduates will be expected to: accept social and civic responsibilities be advocates for improving the sustainability of the environment have a broad global understanding, with a high regard for human rights, equity and ethics</p>
<p><b>Generic Skills:</b></p>	<p>Graduates of the Bachelor of Biomedicine (honours) programs will have been provided with the opportunity to develop the skills to:</p>

	<ul style="list-style-type: none"><li># Use and evaluate scientific literature;</li><li># Apply their understanding to the design and implementation of a research plan;</li><li># Acquire, analyse, evaluate and interpret data using appropriate techniques;</li><li># Communicate advanced concepts in their discipline in written and oral form;</li><li># Exercise responsibility for their own learning;</li><li># Work effectively in teams, both collaboratively and independently;</li><li># Manage their time effectively.</li></ul>
<b>Links to further information:</b>	<a href="http://www.mdhs.unimelb.edu.au/future_students/honours">http://www.mdhs.unimelb.edu.au/future_students/honours</a>
<b>Notes:</b>	For department contact details, please refer to: <a href="http://www.mdhs.unimelb.edu.au/future_students/honours/choosing_a_program">http://www.mdhs.unimelb.edu.au/future_students/honours/choosing_a_program</a> ( <a href="http://www.mdhs.unimelb.edu.au/future_students/honours/choosing_a_program">http://www.mdhs.unimelb.edu.au/future_students/honours/choosing_a_program</a> )