

B-BMED Bachelor of Biomedicine

Year and Campus:	2012 - Parkville
CRICOS Code:	058838G
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Level:	Undergraduate
Duration & Credit Points:	300 credit points taken over 36 months full time. This course is available as full or part time.
Coordinator:	The Program Director for the Bachelor of Biomedicine is Professor David Williams
Contact:	<p>MDHS Student Centre Level 1, Brownless Biomedical Library The University of Melbourne</p> <p>Enquiries: Telephone: +61 3 834 45890 Email: sc-mdhs@unimelb.edu.au (mailto:sc-mdhs@unimelb.edu.au)</p>
Course Overview:	<p>The Bachelor of Biomedicine requires completion of a total of 300 points of study over three years full time, usually comprising four subjects per semester. Alternatively, the course can be completed in six or seven years part time.</p> <p>The core of the degree builds understanding of the structure and function of the body and consideration of the determinants of health and disease, including genetic and environmental influences.</p> <p>The integrated core program culminates in final year subjects that deal with contemporary issues in biomedicine and aspects of medical conditions from the molecular and cellular, right up to the population level.</p> <p>Depth within a particular biomedical discipline is achieved by completing 50 points (4 subjects) in a major at Level 3.</p> <p>Students also take between 50-75 points from other discipline areas. These 'breadth' subjects are designed to bridge disciplines, sharpening skills of logic, analysis and multidisciplinary problem solving.</p>
Objectives:	<p>The Bachelor of Biomedicine prepares students for the challenges of advancing knowledge in biomedicine and its translation to health care delivery and research.</p> <p>It provides the solid foundation necessary to prepare students for health-related and other graduate professional programs, as well as specialised graduate research.</p> <p>The core program of the degree includes knowledge of the biological bases and integrated structure and function of the body, and consideration of their interaction with environmental influences as determinants of health and disease.</p>
Course Structure & Available Subjects:	<p>Students must complete 300 points comprising:</p> <ul style="list-style-type: none"> # 225 points of core (biomedicine/science discipline) subjects including: <ul style="list-style-type: none"> # At least 75 points at Level 1 including the compulsory subjects or approved equivalents. # At least 62.5 points at Level 2 including the compulsory subjects or approved equivalents. # At least 75 points at Level 3 including the compulsory subjects or approved equivalents and including the 50 points of a prescribed major. # 50 points of breadth subjects including at least 12.5 points at Level 2 or Level 3 # 25 points (either biomedicine/science discipline subjects or breadth subjects) at Level 1, 2 or 3 <p>Note:</p> <ul style="list-style-type: none"> # No more than 125 points at Level 1 may be included in the Bachelor of Biomedicine

- # No more than 37.5 points of breadth at Level 1 may be included in the Bachelor of Biomedicine
- # Progression: Students must normally complete 50 points of study at one subject year level before proceeding to the next subject year level. In particular, at least 50 points at Level 1, including BIOL10002 Biomolecules & Cells, BIOL10003 Genes & Environment and CHEM10006 Chemistry for Biomedicine must be completed before students may proceed to Level 2 core subjects.

The core (biomedicine/science discipline) component of the Bachelor of Biomedicine is comprised of:

Core: compulsory subjects (150 points):

- # 75 points at first year level.
- # 50 points at second year level.
- # 25 points at third year level.

Core: major sequence at third year level (50 points):

- # 50 points of a major in a biomedicine discipline. The subjects taken in the major would normally follow on from relevant compulsory and selective subjects chosen at the second year level. Some Level 3 subjects only require the core compulsory subjects as prerequisites.

Core: selective subjects (25 points):

- # Non-compulsory biomedicine/science discipline subjects approved as core in this course. At least 12.5 points must be at Level 2. See below for a comprehensive list of selective subjects.

**Majors/Minors/
Specialisations**

Bachelor of Biomedicine - Majors

Bachelor of Biomedicine majors allow students to specialise in a particular area gaining a breadth and depth of study. A major in this course comprises 50 points at subject Level 3 in a particular biomedicine discipline:

Major/Minor/Specialisation
Biochemistry and Molecular Biology
Bioengineering Systems
Biotechnology
Cell and Developmental Biology
Defense & Disease
Genetics
Human Structure and Function
Microbiology, Infection and Immunology
Neuroscience
Pathology
Pharmacology
Physiology

Core selective subjects in the Bachelor of Biomedicine

A full list of subjects available as credit (core selectives) for the Bachelor of Biomedicine (B-BMED). This list includes a small number of subjects which are not available for B-BMED students - such subjects are clearly highlighted.

Major/Minor/Specialisation
Science-credited subjects - new generation B-SCI and B-ENG. Core selective subjects for B-BMED.

Subject Options:**First Year Level Core Compulsory Subjects (75 points, six subjects)**

All students

Subject	Study Period Commencement:	Credit Points:
BIOL10002 Biomolecules and Cells	Semester 1	12.50
BIOL10003 Genes and Environment	Semester 2	12.50
CHEM10006 Chemistry for Biomedicine	Semester 1	12.50

Three additional subjects for students NOT intending to complete the Bioengineering Systems major

Subject	Study Period Commencement:	Credit Points:
MAST10011 Experimental Design and Data Analysis	Semester 1, Semester 2	12.50

Plus one of the following mathematics subjects (choice depends on student's background in mathematics):

Subject	Study Period Commencement:	Credit Points:
MAST10005 Calculus 1	Semester 1, Semester 2	12.50
MAST10006 Calculus 2	Semester 1, Semester 2	12.50
MAST10007 Linear Algebra	Summer Term, Semester 1, Semester 2	12.50
MAST10008 Accelerated Mathematics 1	Semester 1	12.50
MAST10009 Accelerated Mathematics 2	Semester 2	12.50

Plus one of the following physics subjects (choice depends on student's background in physics)

Subject	Study Period Commencement:	Credit Points:
PHYC10007 Physics for Biomedicine	Semester 2	12.50
PHYC10006 Physics 2: Life Sciences & Environment	Semester 2	12.50

Three additional subjects for students intending to complete the Bioengineering Systems major

Subject	Study Period Commencement:	Credit Points:
ENGR10003 Engineering Systems Design 2	Summer Term, Semester 2	12.50

Plus two mathematics subjects (choice depends on student's background in mathematics).

Either both

Subject	Study Period Commencement:	Credit Points:
MAST10006 Calculus 2	Semester 1, Semester 2	12.50
MAST10007 Linear Algebra	Summer Term, Semester 1, Semester 2	12.50

Or both

Subject	Study Period Commencement:	Credit Points:
MAST10008 Accelerated Mathematics 1	Semester 1	12.50
MAST10009 Accelerated Mathematics 2	Semester 2	12.50

Second Year Level Core Compulsory Subjects (50 points, two subjects)

Subject	Study Period Commencement:	Credit Points:
BIOM20001 Molecular and Cellular Biomedicine	Semester 1	25
BIOM20002 Human Structure and Function	Semester 2	25

(Alternative subjects at second year level equivalent to BIOM20002 Human Structure and Function are available for students undertaking study abroad or exchange in semester 2 of their second year)

Third Year Level Core Compulsory Subjects (25 points, two subjects)

Subject	Study Period Commencement:	Credit Points:
BIOM30002 Biomedicine: Molecule to Malady	Semester 1	12.50
BIOM30001 Frontiers in Biomedicine	Semester 2	12.50

Third Year Core Major sequence

50 points of prescribed study in a biomedicine discipline – see previous section 'Majors/Minors/Specialisations'.

Core Selective subjects

25 points of selective subjects

A selective is a subject available as contributing to the core of the B-BMED. See above link to '**Core selective subjects in the Bachelor of Biomedicine**' for a full list.

N.B.

- # Selectives may have prerequisites and/or corequisites.
- # Some subjects on the list cannot be taken as selectives in the Bachelor of Biomedicine as they are non-allowed subjects to core subjects – these include the following:

Subject	Study Period Commencement:	Credit Points:
BIOL10004 Biology of Cells and Organisms	Semester 1	12.50
BIOL10005 Genetics & The Evolution of Life	Semester 2	12.50
CHEM10003 Chemistry 1	Semester 1, Semester 2	12.50
CHEM10004 Chemistry 2	Summer Term, Semester 2	12.50
PATH20001 Exploring Human Disease - Science	Semester 2	12.50
BCMB20002 Biochemistry and Molecular Biology	Semester 1, Semester 2	12.50
CEDB20003 Fundamentals of Cell Biology	Semester 1	12.50
MIIM20001 Principles of Microbiology & Immunology	Semester 1	12.50
ANAT20006 Principles of Human Structure	Semester 1, Semester 2	12.50

PHYS20008 Human Physiology	Semester 1, Semester 2	12.50
----------------------------	------------------------	-------

The following psychology subjects are also not available as selectives in the Bachelor of Biomedicine (however they are available as breadth)

Subject	Study Period Commencement:	Credit Points:
PSYC30022 Advanced Personality & Social Psychology	Semester 2	12.50
PSYC30016 Developing Persons in Social Worlds	Semester 1	12.50
PSYC20008 Developmental Psychology	Semester 1	12.50
PSYC30015 Organisational Psychology	Semester 2	12.50
PSYC20009 Personality and Social Psychology	Semester 2	12.50
PSYC30012 The Unconscious Mind	Semester 1	12.50

In addition to the list of Core selective subjects in the Bachelor of Biomedicine, the following subject is also approved as a selective in the Bachelor of Biomedicine.

Subject	Study Period Commencement:	Credit Points:
MIIM20002 Microbes, Infections and Responses	Semester 2	12.50

It is possible that other subjects not currently identified as a selective subject in the Bachelor of Biomedicine could also be approved. Such a subject would need to be in a biomedicine, science or related field. Contact the EPSC for advice on the process for seeking approval

Breadth Options:

Breadth subjects offer you the opportunity to choose additional subjects from outside your major study area (**learn more about breadth subjects** (<http://breadth.unimelb.edu.au/breadth/info/index.html>)) .

View breadth subjects for this course ([//faces/htdocs/user/breadth/BreadthSearchResults.jsp?breadthcourse=B-BMED&year=2012](http://faces/htdocs/user/breadth/BreadthSearchResults.jsp?breadthcourse=B-BMED&year=2012)) .

Breadth Tracks:

Available Breadth Tracks

Entry Requirements:

For the most up to date admission requirements, go to <http://www.futurestudents.unimelb.edu.au> (<http://www.futurestudents.unimelb.edu.au/>)

Core Participation Requirements:

The Bachelor of Biomedicine 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 requires all students to enrol in subjects where they will require: the ability to comprehend complex science, technology and/or engineering systems related information; the ability to clearly and independently communicate a knowledge and application of science, technology and/or engineering systems principles and practices during assessment tasks; 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 are additional inherent academic requirements for some major studies and subjects, and these requirements are listed within the description of the requirements for each of these majors and 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: <http://www.services.unimelb.edu.au/disability/>

Further Study:	<p>The Bachelor of Biomedicine degree provides pathways to honours, graduate professional entry degrees or, upon completion of appropriate research training preparation following the BBiomed, research higher degrees</p> <p>Honours Depending on the major undertaken, students may apply for an Honours program upon completion of the Bachelor of Biomedicine. Further details are available on the BBiomed website:</p> <p>http://www.bbiomed.unimelb.edu.au/ (http://www.bbiomed.unimelb.edu.au/)</p> <p>Graduate Professional Entry Degrees For students who wish to continue professional studies at graduate level, the degree provides a pathway into a range of graduate professional entry programs, some of which also provide research training.</p> <p>http://futurestudents.unimelb.edu.au/grad/grad-programs/professional-entry (http://futurestudents.unimelb.edu.au/grad/grad-programs/professional-entry)</p> <p>Research Higher Degrees For students who wish to explore biomedicine research questions in greater depth, there will be opportunities to proceed to Research Higher Degrees at masters and doctoral level. Research training preparation within the Honours year, Postgraduate Diploma or a Masters degree will be required as preparation for a research higher degree.</p>
Graduate Attributes:	<p>The Bachelor of Biomedicine is delivered by staff who are members of a vibrant research community in biomedicine and related disciplines. The integrated core curriculum across all years of the course spans traditional disciplinary boundaries in the development of fundamental understanding of the biomedical sciences and the acquisition of practical, analytical, problem-solving and communication skills. Collaborative learning is emphasised as students work in laboratories, tutorials and small groups and undertake peer review. Studies in the biomedical sciences equip students to explore the complex relationships that determine health outcomes in various settings and to become leaders in delivering effective therapies and health care strategies to combat threats to individual and public health within local, national and global communities. The larger University of Melbourne learning community encompasses many aspects of cultural diversity and students in Biomedicine will be exposed to this during the course.</p>
Generic Skills:	<p>The Bachelor of Biomedicine develops fundamental skills in the scientific method, critical thinking and problem solving, analysis of evidence, written and oral communication, and the ability to work collaboratively in teams.</p>
Links to further information:	<p>http://www.bbiomed.unimelb.edu.au/</p>