

# BIOM20001 Molecular and Cellular Biomedicine

Credit Points:	25																				
Level:	2 (Undergraduate)																				
Dates & Locations:	2011, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.																				
Time Commitment:	Contact Hours: 99 hours: 6 x 1 hour lectures per week, 1 x 3 hour practicals/CAL per fortnight and 9 x 1 hour tutorials Total Time Commitment: 240 hours (including non-contact time)																				
Prerequisites:	<p>Pre-requisites are:</p> <table><tr><th>Subject</th><th>Study Period Commencement:</th><th>Credit Points:</th></tr><tr><td>BIOL10002 Biomolecules and Cells</td><td>Semester 1</td><td>12.50</td></tr><tr><td>CHEM10006 Chemistry for Biomedicine</td><td>Semester 1</td><td>12.50</td></tr><tr><td>BIOL10003 Genes and Environment</td><td>Semester 2</td><td>12.50</td></tr></table>			Subject	Study Period Commencement:	Credit Points:	BIOL10002 Biomolecules and Cells	Semester 1	12.50	CHEM10006 Chemistry for Biomedicine	Semester 1	12.50	BIOL10003 Genes and Environment	Semester 2	12.50						
Subject	Study Period Commencement:	Credit Points:																			
BIOL10002 Biomolecules and Cells	Semester 1	12.50																			
CHEM10006 Chemistry for Biomedicine	Semester 1	12.50																			
BIOL10003 Genes and Environment	Semester 2	12.50																			
Corequisites:	None																				
Recommended Background Knowledge:	The Level 1 prerequisite subjects should provide an appropriate background for this subject																				
Non Allowed Subjects:	<p>Non allowed subjects:</p> <table><tr><th>Subject</th><th>Study Period Commencement:</th><th>Credit Points:</th></tr><tr><td>PATH20001 Exploring Human Disease - Science</td><td>Semester 2</td><td>12.50</td></tr><tr><td>BCMB20002 Biochemistry and Molecular Biology</td><td>Semester 1, Semester 2</td><td>12.50</td></tr><tr><td>CEDB20003 Fundamentals of Cell Biology</td><td>Semester 1</td><td>12.50</td></tr><tr><td>GENE20002 Genes and Genomes</td><td>Semester 2</td><td>12.50</td></tr><tr><td>MIIM20001 Principles of Microbiology &amp; Immunology</td><td>Semester 1</td><td>12.50</td></tr></table>			Subject	Study Period Commencement:	Credit Points:	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	GENE20002 Genes and Genomes	Semester 2	12.50	MIIM20001 Principles of Microbiology & Immunology	Semester 1	12.50
Subject	Study Period Commencement:	Credit Points:																			
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																			
GENE20002 Genes and Genomes	Semester 2	12.50																			
MIIM20001 Principles of Microbiology & Immunology	Semester 1	12.50																			
Core Participation Requirements:	This subject requires active participation in laboratory activities. Students who feel that their disability may impact upon their active and safe participation in the subject are encouraged to discuss this with the unit coordinator and the Disability Liaison Unit: <a href="http://www.services.unimelb.edu.au/disability/">http://www.services.unimelb.edu.au/disability/</a>																				
Coordinator:	Dr Terry Mulhern																				
Contact:	Dr Terry Mulhern <a href="mailto:tmulhern@unimelb.edu.au">tmulhern@unimelb.edu.au</a> ( <a href="mailto:tmulhern@unimelb.edu.au">mailto:tmulhern@unimelb.edu.au</a> )																				
Subject Overview:	The subject introduces students to the molecular and cellular aspects of biological systems with particular emphasis on human biology. The course is arranged for students to generate an understanding of the molecular aspects of biology at the biomolecular, sub-cellular and cellular level, building up to the system and whole organism level, including and understanding of the molecular and cellular basis of infections and host cell responses. This multi-disciplinary subject is co-taught by staff in the departments of Anatomy and Cell Biology, Biochemistry and Molecular Biology, Genetics, Microbiology and immunology, and Pathology. There is particular emphasis on integration of these disciplines with students receiving both theoretical and practical knowledge of fundamental and frontier research and development in these areas.																				

<b>Objectives:</b>	<p>This multidisciplinary subject is expected to provide and understanding of:</p> <ul style="list-style-type: none"> <li># The building blocks of life;</li> <li># How the building blocks fit together in both prokaryotic and eukaryotic cells and biological systems;</li> <li># The molecular and cellular basis of infection, immunological response and pathological changes; and</li> <li># The experimental means by which the building blocks, cells and systems can be studied.</li> </ul>
<b>Assessment:</b>	2 intra-semester tests (2 x 15%); 2 written end of semester exams (2 X 30%) and continuous online tests (10%)
<b>Prescribed Texts:</b>	Alberts B, Johnson A, Lewis J, Raff M, Roberts K, Walter P, "Molecular Biology of the Cell", 5th Edition" Nelson D, Cox M, "Lehninger Principles of Biochemistry", 5th edition Mitchell R, Kumar V, Abbas A, Fausto N, "Pocket Companion to Robbins and Coltran Pathologic Basis of Disease", 7th edition
<b>Recommended Texts:</b>	<p>Griffiths, <i>"Introduction to Genetic Analysis"</i>, 9th edition</p> <p>Pierce BA, <i>"Genetics a Conceptual Approach"</i>, 2008, 3rd edition</p>
<b>Breadth Options:</b>	This subject is not available as a breadth subject.
<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>Generic Skills:</b>	<p>Completion of this subject is expected to provide students with the following skills:</p> <ul style="list-style-type: none"> <li># The ability to interpret scientific literature</li> <li># Familiarity with molecular and cell biology techniques</li> <li># The capacity to integrate knowledge across disciplines</li> <li># The ability to critically analyse scientific data</li> </ul>
<b>Notes:</b>	<p>This subject is only available to students enrolled in the Bachelor of Biomedicine.</p> <p>Students undertaking this unit should have access to an internet-enabled computer.</p>
<b>Related Course(s):</b>	Bachelor of Biomedicine