

511-121 Introduction to Biomedical Science

Credit Points:	25.00
Level:	1 (Undergraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: Semester 1, - Taught on campus.
Time Commitment:	Contact Hours: 96 hours of lectures. Total Time Commitment: Not available
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	<p><p>For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry.</p> <p><p>It is University 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 University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: http://services.unimelb.edu.au/disability</p></p> </p>
Coordinator:	Prof Stephen Harrap
Subject Overview:	This subject covers the principles of whole body structure and function, cellular structure and function, the importance of genes, proteins and biological membranes and the homeostatic mechanisms involved at the molecular, cellular and corporate level.
Objectives:	<p>On completion of this subject students should understand:</p> <ol style="list-style-type: none"> 1. The structure and function of: <ol style="list-style-type: none"> a) biomembranes; b) different cell types and how they interact in organ systems; 2. The function of genes in the normal processes determining cellular growth and proliferation; 3. The relationship between: <ol style="list-style-type: none"> a) abnormalities in these genes and the development of cancer; b) chemical structure and function of proteins; c) normal cellular growth and function; 4. The molecular basis of human genetics, chromosome replication, gene function, regulation and mutation; 5. The organisation into systems of anatomical structures which contribute to a common function; 6. Whole body structure and function; 7. The range of normality in structure and function of cells, organs and the human body; 8. Control systems in cells and organs of the normal human body; 9. Development, growth and ageing; 10. The major types of disease processes; 11. The characteristics and behaviour of micro-organisms and their relationship to infectious disease; 12. Bacterial and viral chromosome replication and gene expression and the relevance of these processes to the application of antibiotics in disease treatment; and 13. Immune response to infection.

Assessment:	One 2-hour written examination at the end of the semester and three, 30-minute multiple choice question tests during the semester.
Prescribed Texts:	None
Recommended Texts:	<p>Cotran RS, Kumar V and Collins T 1999 <i>Robbins' Pathologic Basis of Disease</i> 6th ed, Saunders</p> <p>Gelehrter TD, Collins FS and Ginsburg D 1998 <i>Principles of Medical Genetics</i> 2nd ed, Williams and Wilkins</p> <p>Mims CA <i>et al.</i> 1998 <i>Medical Microbiology</i> 2nd ed, Mosby</p> <p>Rang HP, Dale MM and Ritter JM 1995 <i>Pharmacology</i> 3rd ed, Churchill Livingstone</p> <p>Sherwood L 2003 <i>Human Physiology</i> , 5th ed, Thomson Learning</p> <p>Stryer L 1995 <i>Biochemistry</i> 4th ed, Freeman</p>
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	<ul style="list-style-type: none"> # Problem solving and decision making skills; # Communication and interpersonal skills; # Experience in program design and implementation; # Evaluation and advocacy; # Planning and time management skills; # Capacity and motivation for continuing independent learning; # Appreciation of, and sensitivity to, cultural diversity; # Leadership skills; and # Respect for intellectual integrity and scientific truth
Links to further information:	http://www.unimelb.edu.au/HB/2008/subjects/511-121.html
Related Course(s):	Bachelor of Dental Science