

650-121 Biomolecules and Cells

Credit Points:	12.50
Level:	1 (Undergraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: Semester 1, - Taught on campus. Lectures, practicals, tutorials and computer workshops.
Time Commitment:	Contact Hours: 36 lectures (three per week), 30 hours of practical activities, pre-laboratory activities and computer workshops and ten 1-hour tutorial/workshop sessions Total Time Commitment: 120 hours total time commitment.
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	It is University policy to take all reasonable steps to minimise the impact of disability upon academic study and reasonable steps will be made to enhance a student's participation in the University's programs. This subject requires all students to actively and safely participate in laboratory activities. Students who feel their disability may impact upon their participation are encouraged to discuss this with the subject coordinator and the Disability Liaison Unit.
Coordinator:	Assoc Prof Dawn Yvonne Gleeson
Subject Overview:	This subject aims to familiarise students with modern concepts of molecular, and cell biology as a foundation for further studies in biomedicine. To major topics are addresses. <i>Cell and molecular biology</i> includes the chemical building blocks of life, functioning cells, permeability, cell evolution and endosymbiosis; cell organelles, their structure and function; movement across membranes, the cell wall and extracellular matrix; cell metabolism: enzymes and cellular reactions, energy transformations and energy recycling, provide example phytochemistry, cell division, mitosis and meiosis; <i>Multicellularity</i> includes a discussion of cells as part of systems, cells involved in transport; excitable cells; cells that communicate and signalling, cells that absorb, cells of the immune system reproductive cells, tissue culture and cloning.
Objectives:	.
Assessment:	A multiple choice test held mid-semester (10%); work in practical classes during the semester, made up of written work not exceeding 1500 words, assessment of practical skills within the practical class, and no more than four short multiple choice tests (25%), completion of independent learning tasks (5%) a 3-hour written examination of theory and practical work in the examination period (60%). A pass in the practical work is necessary to pass the subject.
Prescribed Texts:	W K Purves, G H Orians, H C Heller & D Sadava, Life. 8th Ed. Sinaver/Freeman, 2007
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:	At the completion of this subject students should be able to: <ul style="list-style-type: none"> # plan effective work schedules to be prepared for tutorials, practical classes and examinations. # be familiar with electronic forms of communication and be discerning in the use of the web for seeking information. # integrate the computer software packages into the course to assist learning. # dissection techniques and the preparation of slides; # the recording of observations and the analysis and interpretation of data;

	<ul style="list-style-type: none"># the preparation of biological drawings;# manipulating laboratory equipment, in particular using microscopes; and# accessing information sources and discerning use of the world wide web
Notes:	<p>This subject is only available to students enrolled in the Bachelor of Biomedicine.</p> <p>Experiments involving the use of animals are an essential part of this subject; exemption from these experiments is not possible.</p> <p>Required Equipment - laboratory coat, dissection kit.</p>