CHEM10006 Chemistry for Biomedicine

Credit Points:	12.50
Level:	1 (Undergraduate)
Dates & Locations:	2012, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus. Lectures, practicals, tutorials/workshops, computer-aided learning.
Time Commitment:	Contact Hours: 3 x one hour lectures per week, 1 x three hour lab/workshop per week, 1 x one hour tutorial/workshop session per week, 6 hours of computer-aided learning during the semester, 8 hours of independent learning tasks during semester. Total Time Commitment: Estimated total time commitment of 120 hours.
Prerequisites:	Admission into the Bachelor of Biomedicine course.
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	For the purposes of considering applications for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005) and Students Experiencing Academic Disadvantage Policy, 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. Hhttp://www.services.unimelb.edu.au/disability/
Coordinator:	Prof Muthupandian Ashokkumar
Contact:	first-year-director@chemistry.unimelb.edu.au
Subject Overview:	An introduction to biomedical chemistry including the nature of (1) orbitals and bonding, (2) chirality and its relevance to biology and medicine, (3) organic molecules and functional groups, (4) their reactivity, (5) the structure and reactivity of bio-polymers, (6) properties of solutions, (7) the bio-geo-chemical cycles of selected elements, (8) energy acquisition, storage and transport and (9) the bio-metals.
Objectives:	To provide students with an understanding of the principles of chemistry underlying biomedical science.
Assessment:	A 30-minute on-line mid-semester test (5%); ongoing assessment of practical laboratory and workshop activity (20%) and a 3-hour written examination in the examination period (75%). Satisfactory completion of practical laboratory and workshop activity is necessary to pass the subject. Independent learning tasks need to be completed in order to pass the subject.
Prescribed Texts:	J McMurry, Organic Chemistry 8th Ed, Brooks/Cole, Cengage Learning 2012. S S Zumdahl, Chemical Principles 6th Ed, Houghton Mifflin, 2008.
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:	This subject encompasses particular generic skills so that on completion students should have developed skills relating to:

	# the organization of work schedules that permit appropriate preparation time for tutorials, practical classes and examinations. # the use of electronic forms of communication. # the utilisation of computer-aided learning activities to enhance understanding. # the performance of basic manipulations with laboratory equipment. # the recording of observations, the analysis of information and the interpretation data within a laboratory setting. # accessing information from the library employing both electronic and traditional means. # working collaboratively with other students. # the use of conceptual models. # problem solving. # critical thinking.
Notes:	This subject is only available to students enrolled in the Bachelor of Biomedicine. Required equipment: laboratory coat and safety glasses. It is recommended that students have access to a molecular model kit.
Related Course(s):	Bachelor of Biomedicine