536-250 Integrated Biomedical Science II

Credit Points:	25.000
Level:	Undergraduate
Dates & Locations:	2008, This subject commences in the following study period/s: Semester 2, - Taught on campus.
Time Commitment:	Contact Hours: 72 hours of lectures and 48 hours of practicals and computer-aided learning classes Total Time Commitment: 240 hours
Prerequisites:	521-213 Integrated Biomedical Science I.
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. Students who feel their disability may impact upon their active and safe participation in a subject are encouraged to discuss this with the relevant subject coordinator and the Disability Liaison Unit.
Coordinator:	A/Prof R Kemm
Subject Overview:	The overall aim will be to build on the knowledge developed in 521-213 Integrated Biomedical Science I and to extend coverage to include the intermediary metabolism, organ and whole systems physiology and tissue biology, genes and gene expression and the major regulatory systems. The biochemistry stream (22 lectures) will cover metabolism, bioenergetics, waste elimination, regulation of metabolism including the molecular basis of cell signaling, molecular mechanisms and regulation of gene replication, expression and protein synthesis. Biochemistry will also combine with physiology to cover integrated whole body responses to metabolic and physiological stress and nutrition. The physiology stream (50 lectures) will incorporate active interaction between students and lecturers using personal response system (PRS) clickers to answer questions during lectures. Lectures will address the transduction of neurotransmitter, hormone and other messages; control systems common to many organs, the autonomic nervous system,the endocrine system and research approaches in experimental investigations. Coverage of specific organ systems will include renal, respiratory and cardiovascular systems, digestive and excretory, reproductive, locomotor, neurophysiology (taught with relevant histology and structure in conjunction with anatomy and cell biology). The practical work will be designed to develop and extend experimental, data analysis and interpretation skills in biochemistry and physiology techniques.
Assessment:	Weekly assessment of written practical class reports of less than 1500 words (14%); computer-aided learning classes (5%); online e-learning (5%); effective PRS participation and contributions (5%); one scientific report in a journal format of less than 2000 words due during semester (9%); one 1-hour written examination held mid-semester (14%); two 2-hour written examinations in the examination period on theory and practical work (24% each).
Prescribed Texts:	None
Breadth Options:	This subject is a level 2 or level 3 subject and is not available to new generation degree students as a breadth option in 2008. This subject or an equivalent will be available as breadth in the future. Breadth subjects are currently being developed and these existing subject details can be used as guide to the type of options that might be available. 2009 subjects to be offered as breadth will be finalised before re-enrolment for 2009 starts in early October.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees

Generic Skills:	Upon completion of this subject, students should be able to develop communication skills (written and oral), critical thinking and analytical skills and participate effectively as a team member.
Notes:	This subject is only available to Bachelor of Biomedical Science students.
Related Course(s):	Bachelor of Biomedical Science