431-673 Clinical Engineering

Credit Points:	12.500
Level:	Graduate/Postgraduate
Dates & Locations:	2008, This subject commences in the following study period/s: Semester 2, - Taught on campus.
Time Commitment:	Contact Hours: 36 Hours; Non contact time commitment 84 Hours Total Time Commitment: Not available
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	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. 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
Subject Overview:	This subject introduces students to the special requirements necessary for managing Medical Devices and Clinical/Biotechnological Environments. Topics covered include: detailed analysis of the cardiopulmonary system, including computer-aided modelling of the cardiovascular system and respiratory system; electrical devices that monitor/support these systems, international/national electrical/biological regulatory bodies and standards.
Assessment:	Assignments/reports (70%) and one assignment of 2,000 words equivalent based upon a computer-based project using MATLAB/LABVIEW (30%).
Prescribed Texts:	None
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:	On successful completion, students should be able to: # describe the structure and function of cellular and cardiopulmonary systems # interpret various measures of dynamic responses of the cardiopulmonary system # calculate vascular resistances using thermodilution techniques # implement and evaluate a physiological model on a computer # develop models for analysing physiological systems to determine physiological parameters Design a monitoring system to monitor a specific physiological process # describe the principles underlying various life support devices # identify types of medical devices and their safety requirements # identify clinical and biotechnological workplace areas with their specialised environmental requirements # identify the type of methodology required to analyse different systems using clinical studies
Related Course(s):	Master of Biomedical Engineering

	Master of Engineering Science(Biomedical Enginering)