

## 536-233 Research-based & Integrative Physiology

<b>Credit Points:</b>	12.500
<b>Level:</b>	Undergraduate
<b>Dates &amp; Locations:</b>	2008, This subject commences in the following study period/s: Semester 2, - Taught on campus.
<b>Time Commitment:</b>	Contact Hours: 36 hours of practical work and laboratory workshops; 12 hours of compulsory lectures; 12 hours of e-Learning activities; 36 hours of report writing Total Time Commitment: 120 hours
<b>Prerequisites:</b>	Physiology 536-201 and 536-222.
<b>Corequisites:</b>	Physiology 536-211
<b>Recommended Background Knowledge:</b>	None
<b>Non Allowed Subjects:</b>	Students who have completed 536-203 Integrative Physiology prior to 2005 will not be permitted to enrol in this subject.
<b>Core Participation Requirements:</b>	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.
<b>Coordinator:</b>	A Dantas
<b>Subject Overview:</b>	<p>The aim of this subject is to reinforce and extend student learning of experimental design from 536-222. Students undertake an assignment completed over several weeks, which requires them to identify a physiological problem, formulate a suitable hypothesis, select and test suitable techniques, design appropriate experimental protocols to test their hypothesis, collect and analyse their data, and write a scientific report on their findings. This aims to develop research skills for an enquiring graduate, which will be reinforced in 3rd year physiology and Honours. It also reinforces experimental research-led teaching approaches in lecture courses and not only prepares students for research-based literature reviews and writing in 3rd year physiology but also develops their investigative skills for lifelong learning.</p> <p>Furthermore this subject will use the latest computer-based recording systems to investigate body responses to various challenges that may involve exercise physiology, sensory function, nerve reflexes and acid-base balance. These experimental topics are covered in depth over three sessions: a preparatory session; the experiment; a discussion on the experimental results and underlying theory. Students will also complete some work online before and after experiments. The lectures will incorporate active interaction between students and lecturers using personal response system (PRS) clickers to answer questions during lectures.</p>
<b>Assessment:</b>	Five written reports of up to 1500 words each due during the semester (25%); class participation during the semester (5%); a written report on an assignment or extended experiment totalling up to 2000 words due during the semester (28%); ongoing assessment of e-Learning activities - 15 submissions of up to 400 words each due during the semester (10%); effective PRS participation and contributions (4%); a 2-hour written examination in the examination period (28%).
<b>Prescribed Texts:</b>	None
<b>Breadth Options:</b>	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.
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>
<b>Generic Skills:</b>	<p>Individual skills will concentrate on developing critical thinking, problem solving and research skills including: experimental design, physiological methods for investigating interacting body systems, data analysis (including statistics), appropriate interpretation of and conclusions from data and writing of scientific reports, developing physiological laboratory practices (including safety, ethics) and skills.</p> <p>Group skills include extended collaborative investigations, group communication and information presentation.</p>
<b>Notes:</b>	<p>Students enrolled in the BSc (pre-2008 BSc), BAsC or a combined BSc course will receive science credit for the completion of this subject.</p> <p>Not available for students enrolled in BBiomedSc.</p> <p>This is a practical subject. Students need to enrol separately for the lecture subject 536-211 Physiology:Control of Body Function.</p> <p>Experiments involving the use of animals are essential to this subject; exemption is not possible.</p> <p>Students must have a white laboratory coat, safety glasses and closed-topped footwear to comply with safety regulations. Also required are dissecting instruments and two note books. A laboratory manual must be purchased and an electronic audience response keypad leased from the Level 3 practical laboratory (Room N306, Medical Building, Level 3, North Wing) during the week before the start of the semester. Information regarding practical class session allocation will be emailed to students prior to the semester.</p>