

536-301 Cardiovascular Health: Genes & Hormones

Credit Points:	12.500
Level:	Undergraduate
Dates & Locations:	2008, This subject commences in the following study period/s: Semester 1, - Taught on campus.
Time Commitment:	Contact Hours: 30 hours of lectures, 12 hours of collaborative learning, multimedia workshops and assignments Total Time Commitment: 120 hours
Prerequisites:	Physiology 536-201, 536-211, and 536-222.BBiomedSc students: 521-213 and 536-250.BE(Biomed) students: 521-225 and 536-225.The Head of Department will consider exemptions for students who passed 536-201 and 536-211 but have not completed 536-222.
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 L Delbridge; A/Prof M Wlodek
Subject Overview:	<p>This subject focuses on the physiology of cardiovascular health with an emphasis on cardiac, vascular, renal and endocrine homeostasis. Studies will follow the programmed development of the cardiovascular system from gene to cell and organ. Students should develop an understanding of how genes and environment interact in early development and at maturity to shape cardiovascular health in populations and individuals.</p> <p>Themes of study include principles of endocrine action; factors controlling heart, kidney and vascular growth and function; interaction of genetic and environmental influences; adaptations in pregnancy and human pathophysiology. Students will be introduced to experimental approaches and models in physiology and current controversies in cardiovascular research. Disturbances in physiological function will be studied to gain insight into the molecular and cellular bases of disease processes. These disturbances include hypertension, cardiac hypertrophy and arrhythmia, diabetes and pre-eclampsia. The role of early developmental influences in programming later disease states will be considered together with the cardiovascular health impacts of post-natal nutrition and adult dietary interventions.</p> <p>In this subject the lectures are supplemented with group discussions where assignment tasks are explored with the assistance of specialist tutors. Multimedia activities to support lecture themes are incorporated. Students will be introduced to the primary research literature and will select articles of current interest to analyse for their assignments.</p> <p>On completion of this subject students should have:</p> <ul style="list-style-type: none"> # established a sound factual understanding of cardiovascular structure, function and development at both organ and cellular levels; # developed the skills to consider the role of genes and environment in shaping cardiovascular health; # gained knowledge of the important endocrine bases for maintenance of cardiovascular homeostatis; and # achieved proficiency in reading, analysing and evaluating current scientific literature in the field of cardiovascular pathophysiology.

Assessment:	Three written assignments/reports of up to 1500 words each due during the semester (40%); a 3-hour written examination in the examination period (60%).
Prescribed Texts:	None
Breadth Options:	<p>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.</p> <p>This subject or an equivalent will be available as breadth in the future.</p> <p>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.</p> <p>2009 subjects to be offered as breadth will be finalised before re-enrolment for 2009 starts in early October.</p>
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Notes:	<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>This subject is recommended for BSc students undertaking a physiology major or BBiomedSc students undertaking a specialisation in Physiological Genomics or Biotechnology and Therapeutics or BE(Biomed) students undertaking bioengineering.</p> <p>The material covered in this subject provides an appropriate background for those students wishing to undertake 536-304 Seminars and Experimental Physiology.</p> <p>Formerly known as 536-301 Integrative Physiology: Heart & Kidney.</p>
Related Course(s):	<p>Bachelor of Arts and Bachelor of Science</p> <p>Bachelor of Arts and Sciences</p> <p>Bachelor of Biomedical Science</p> <p>Bachelor of Science</p> <p>Graduate Diploma in Biotechnology</p>