

GENE30005 Human and Medical Genetics

Credit Points:	12.50						
Level:	3 (Undergraduate)						
Dates & Locations:	2012, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.						
Time Commitment:	Contact Hours: 3 x one hour lectures per week. Total Time Commitment: Estimated total time commitment of 120 hours						
Prerequisites:	<table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>GENE20001 Principles of Genetics</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	GENE20001 Principles of Genetics	Semester 1	12.50
Subject	Study Period Commencement:	Credit Points:					
GENE20001 Principles of Genetics	Semester 1	12.50					
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 Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: http://www.services.unimelb.edu.au/disability/						
Coordinator:	Prof James Camakaris						
Contact:	Email: j.camakaris@unimelb.edu.au (mailto:j.camakaris@unimelb.edu.au)						
Subject Overview:	This subject focuses on several key areas in contemporary human genetics: mutation in humans and its molecular basis; polymorphisms; selection and its consequences; gene mapping; strategies for identifying genes which cause human disease; the molecular basis of genetic diseases; genetics of cancer and ageing; the Human Genome Project and its applications; screening for genetic diseases; genetic counselling, human cytogenetics and gene environment interactions. Ethical issues will be discussed in context in various sections of the course.						
Objectives:	Upon completion of the subject, students should have: appreciated the importance of genes in influencing human health, disease and evolution; recognised ways in which environmental factors may modify the effects of genes; understood the basic techniques and concepts of molecular genetics and human genomics which permit findings at the DNA level to be related to phenotype; appreciated the ethical issues raised by the application of molecular techniques to human variation; developed skills in use and application of methods of gene mapping and linkage in humans.						
Assessment:	One assignment (problem based) less than 1000 words due during semester (10%); two short tests (written and/or online) during semester (each 10%); a 3-hour written examination in the examination period (70%).						
Prescribed Texts:	None						
Breadth Options:	This subject potentially can be taken as a breadth subject component for the following courses:						

	<p># Bachelor of Arts (https://handbook.unimelb.edu.au/view/2012/B-ARTS)</p> <p># Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2012/B-COM)</p> <p># Bachelor of Environments (https://handbook.unimelb.edu.au/view/2012/B-ENVS)</p> <p># Bachelor of Music (https://handbook.unimelb.edu.au/view/2012/B-MUS)</p> <p>You should visit learn more about breadth subjects (http://breadth.unimelb.edu.au/breadth/info/index.html) and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.</p>
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	Completion of this subject is expected to enhance the generic skills of a student in: the ability to read relevant literature and be able to interpret this in order to answer detailed questions on both theory and methodology; the ability to understand how new scientific data relevant to the human condition is acquired and applied to old and new problems in society; an appreciation for how modern knowledge in human biology is relevant to an understanding of our past and future; the ability to use information technology to acquire relevant knowledge; the ability to think clearly about the application of scientific principles to the consideration of ethical issues.
Notes:	<p>This subject is available for science credit to students enrolled in the BSc (both pre-2008 and new degrees), BAsc or a combined BSc course.</p> <p>This subject is available for credit in the Bachelor of Biomedicine.</p> <p>Previously known as 652-305 Human Genetics (prior to 2009).</p>
Related Majors/Minors/Specialisations:	<p>Biotechnology (pre-2008 Bachelor of Science)</p> <p>Genetics</p> <p>Molecular Biotechnology (specialisation of Biotechnology major)</p> <p>Science credit subjects* for pre-2008 BSc, BAsc and combined degree science courses</p> <p>Science-credited subjects - new generation B-SCI and B-ENG. Core selective subjects for B-BMED.</p>
Related Breadth Track(s):	Human Genetics