

652-215 Genes and Genomes

Credit Points:	12.50
Level:	2 (Undergraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: Semester 2, - Taught on campus.
Time Commitment:	Contact Hours: Three 1-hour lectures per week; one 1-hour tutorial per week. Total 48 hours. Total Time Commitment: 120 hours total time commitment.
Prerequisites:	<i>Biology of Cells and Organisms</i> and <i>Genetics and the Evolution of Life</i>
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	Bachelor of Biomedicine subject - <i>Molecular and Cellular Biomedicine</i>
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:	Dr John Francis Golz
Subject Overview:	The subject emphasises the molecular basis of gene structure and expression in prokaryotes and eukaryotes; the processes of DNA replication, mutation and recombination; the methods used for gene isolation, analysis; and application to genetic problems, an introduction to the fundamental genetic principles underlying development and the molecular evolution of genes and genomes.
Objectives:	Completion of this subject is expected to enhance a student's: understanding of the molecular basis of gene structure, expression and regulation in prokaryotes and eukaryotes; understanding of DNA replication, recombination and mutagenesis; appreciation of the organization of genes and genomes in a variety of organisms and the nature of molecular evolution; skills in solving problems and analysing data using a molecular genetic approach.
Assessment:	A written class test held mid-semester (10%); two online tests of equal value during the semester (15% in total); a 2-hour written examination in the examination period (75%)
Prescribed Texts:	A J Griffiths et al, Introduction to Genetic Analysis, 9th ed. W H Freeman and Co.
Breadth Options:	This subject potentially can be taken as a breadth subject component for the following courses: # Bachelor of Arts (https://handbook.unimelb.edu.au/view/2009/D09) # Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2009/F04) # Bachelor of Environments (https://handbook.unimelb.edu.au/view/2009/A04) # Bachelor of Music (https://handbook.unimelb.edu.au/view/2009/M05) 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.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	Completion of this subject is expected to provide students with the following skills which are transferable to new settings even though they have been acquired in the context of studies in

	Genetics: understanding how cross-disciplinary approaches can yield fundamental scientific knowledge; critical thinking, problem-solving and analytical skills to solve new problems; development of hypotheses based on observations; planning effective work schedules to meet deadlines for assessable work and; group and collaborative interactions.
Notes:	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. Not available to students enrolled in the BBiomedSc. Not available to students enrolled in the Bachelor of Biomedicine course.
Related Course(s):	Graduate Diploma in Biotechnology