652-214 Principles of Genetics

Credit Points:	12.50
Level:	2 (Undergraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: Semester 1, - 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:	*Genetics and the Evolution of Life* Bachelor of Biomedicine students: *Genes and Environment*
Corequisites:	None
Recommended Background Knowledge:	*Biology of Cells and Organisms* is recommended. Bachelor of Biomedicine students: *Biomolecules and Cells* is recommended
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:	Dr Belinda Appleton
Subject Overview:	This subject provides broad coverage of the study of genetics including: the DNA molecule and inheritance; the factors which modulate allele frequencies in natural populations; the genetic basis of phenotypic variation; genetic analysis in eukaryotes, viruses and bacteria; the nature of the genetic material; gene structure and function; quantitative inheritance.
Objectives:	Completion of this subject is expected to enhance a student’s ability to understand the fundamental principles of genetics and to describe the experiments used to establish them. Students will develop skills to apply these principles to solve genetic problems and demonstrate how genetic analysis can be used to investigate aspects of biology.
Assessment:	Three online tests of equal value during semester (30% in total); a 2-hour written examination in the examination period (70%).
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: application of fundamental scientific principles to solve new problems; application of scientific method through the development of hypotheses based on observations; planning effective work schedules to meet deadlines for assessable work; development of effective 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. This subject is available for credit in the Bachelor of Biomedicine course. This subject can be taken by itself, but is designed to be part of a two-semester sequence with *Genes and Genomes*. Both *Principles of Genetics* and *Genes and Genomes* (or 652-214, 521-213 and 536-250 prior to 2009) are prerequisites for third year level genetics subjects.
Related Course(s):	Graduate Diploma in Biotechnology
Related Majors/Minors/ Specialisations:	Genetics