652-214 Principles of Genetics

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: 48 hours of lectures, problem classes and computer exercises Total Time Commitment: 120 hours
Prerequisites:	Biology 650-142 or 650-132 (prior to 2004: 600-142 or 600-132). Biology 650-141 or 650-131 (prior to 2004: 600-141 or 600-131) is recommended.
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:	Dr B Appleton
Subject Overview:	This subject provides a coverage of genetics from the DNA molecule and inheritance to the factors which modulate allele frequencies in natural populations; the genetic and molecular basis of phenotypic variation; genetic analysis in eukaryotes, viruses and bacteria; the nature of the genetic material; gene structure and function; quantitative inheritance; and genes at the population level. 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 during semester (30% in total); a 2-hour written examination in the examination period (70%). The intra-semester tests are of equal value.
Prescribed Texts:	A J Griffiths et al, Introduction to Genetic Analysis, 9th ed. W H Freeman and Co.
Breadth Options:	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.
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 application of fundamental scientific principles to solve new problems; in the application of scientific method through the development of hypotheses based on observations; and in planning efffective work schedules to meet deadlines for assessable work.

Notes:	Students enrolled in the BSc (pre-2008 BSc), BASc or a combined BSc course will receive science credit for the completion of this subject. This subject can be taken by itself, but is designed to be part of a two-semester sequence with 652-215. Both 652-214 and 652-215 (or 652-214, 521-213 and 536-250) are prerequisites for 300-level genetics subjects.
Related Course(s):	Graduate Diploma in Biotechnology