GENE20001 Principles of Genetics

Credit Points:	12.50
Level:	2 (Undergraduate)
Dates & Locations:	2011, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 3 x one hour lectures per week; 1 x one hour problem class per week. Total Time Commitment: Estimated total time commitment 120 hours
Prerequisites:	Completion of **Subject** / **Study Period Commencement:** / **Credit Points:** BIOL10005 Genetics & The Evolution of Life / Semester 2 / 12.50 Bachelor of Biomedicine students: **Subject** / **Study Period Commencement:** / **Credit Points:** BIOL10003 Genes and Environment / Semester 2 / 12.50
Corequisites:	None
Recommended Background Knowledge:	Completion of **Subject** / **Study Period Commencement:** / **Credit Points:** BIOL10004 Biology of Cells and Organisms / Semester 1 / 12.50 Bachelor of Biomedicine students: **Subject** / **Study Period Commencement:** / **Credit Points:** BIOL10002 Biomolecules and Cells / Semester 1 / 12.50
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:	Assoc Prof Alex Andrianopoulos
Contact:	**Email: alex.a@unimelb.edu.au (mailto:alex.a@unimelb.edu.au)**
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/assignments 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/2011/B-ARTS)** # **Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2011/B-COM)** # **Bachelor of Environments (https://handbook.unimelb.edu.au/view/2011/B-ENVS)** # **Bachelor of Music (https://handbook.unimelb.edu.au/view/2011/B-MUS)** 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 GENE20002 Genes and Genomes. Both GENE20001 Principles of Genetics and either GENE20002 Genes and Genomes or BIOM20001 Molecular and Cellular Biomedicine are prerequisites for third year level genetics subjects.
Related Course(s):	Bachelor of Science
Related Majors/Minors/ Specialisations:	Science credit subjects* for pre-2008 BSc, BASc and combined degree science courses
Related Breadth Track(s):	General Genetics Human Genetics