Genetics

Year and Campus:	2016
Coordinator:	A/Prof Alex Andrianopoulos
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Overview:	On completion of this course students should have achieved: # a broad knowledge in the field of genetics; # a capacity to use experimentation in genetics to understand aspects of biology; and # a capacity to integrate various theoretical and experimental approaches to problems in genetics.
Learning Outcomes:	**Areas of specialisation** The coursework and research components of this Graduate Diploma in Science (Advanced) enable students to further their knowledge in the following areas: classical genetics; the history of genetics; population and evolutionary genetics; ecological genetics; molecular genetics; and developmental genetics. Typical research projects study aspects of heavy metal detoxification mechanisms in plants and animals; copper metabolism in mammals and the role of copper in neurodegenerative diseases; gene regulation in fungi; the ecological, evolutionary and molecular genetics of insecticide resistance; evolutionary genetics; and developmental genetics.
Structure & Available Subjects:	# Discipline Core subjects (12.5 points); # Elective subjects (37.5 points); # Research Project (50 points).
Subject Options:	***Subject prerequisites:*** For stream specific requirements please **click here (http://science.unimelb.edu.au/available-stream-requirements%20)** . **Discipline Core** Students must select one of:

Subject	Study Period Commencement:	Credit Points:
GENE90012 Advanced Topics in Genetics A	May	12.50
GENE90018 Advanced Topics in Genetics B	Not offered 2016	12.50

Electives

Students must select three subjects from the following:

Subject	Study Period Commencement:	Credit Points:
BTCH90005 Advanced Molecular Biology Techniques	Semester 2	12.50
BTCH90009 Genomics and Bioinformatics	Semester 1	12.50
BIOL90001 Microscopy for Biological Sciences	Semester 1	12.50
SCIE90013 Communication for Research Scientists	Semester 1	12.50

OR 12.5 or 25 points of other approved subjects, including up to 25 points of approved third-year level Genetics subjects, if this is recommended by the stream coordinator.

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Research Project

The research project is taken over two semesters and the assessment consists of a research proposal (30%) and minor thesis (70%).

	Depending on the coursework subjects taken a student would normally enrol in a combination of Research Project subjects as indicated below to ensure they have completed 50 points by the end of the course.

Subject	Study Period Commencement:	Credit Points:
GENE90013 Advanced Genetic Research	Semester 1, Semester 2	12.50
GENE90015 Advanced Genetic Research	Semester 1, Semester 2	25
GENE90016 Advanced Genetic Research	Semester 1, Semester 2	37.50

Links to further information:	http://graduate.science.unimelb.edu.au/
Notes:	This program does not have a mid-year intake.
Related Course(s):	Graduate Diploma in Science (Advanced)