

Genetics

Year and Campus:	2012																								
Coordinator:	Professor Jim Camakaris																								
Contact:	Email: j.camakaris@unimelb.edu.au (mailto:j.camakaris@unimelb.edu.au)																								
Overview:	<p>On completion of this course students should have achieved:</p> <ul style="list-style-type: none"> # 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. 																								
Objectives:	<p>Areas of specialisation</p> <p>The coursework and research components of this Postgraduate Diploma in Science 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.</p>																								
Structure & Available Subjects:	<ul style="list-style-type: none"> # Discipline Core subjects (12.5 points); # Elective subjects (37.5 points); # Research Project (50 points). 																								
Subject Options:	<p>Discipline Core Students must select one of:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>GENE90012 Advanced Topics in Genetics A</td> <td>Not offered 2012</td> <td>12.50</td> </tr> <tr> <td>GENE90018 Advanced Topics in Genetics B</td> <td>March, May</td> <td>12.50</td> </tr> </tbody> </table> <p>Electives Students must select three subjects from the following:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>BTCH90005 Advanced Molecular Biology Techniques</td> <td>Semester 2</td> <td>12.50</td> </tr> <tr> <td>BTCH90009 Genomics and Bioinformatics</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>BIOL90001 Microscopy for Biological Sciences</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>SCIE90006 Scientists,Communication & the Workplace</td> <td>Semester 2</td> <td>12.50</td> </tr> </tbody> </table> <p>Students can substitute up to 25 points of approved third-year level Genetics subjects if this is recommended by the stream coordinator.</p> <p>-</p> <p>Research Project</p> <p>The research project is taken over two semesters and the assessment consists of a research proposal (30%) and minor thesis (70%).</p> <p>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.</p>	Subject	Study Period Commencement:	Credit Points:	GENE90012 Advanced Topics in Genetics A	Not offered 2012	12.50	GENE90018 Advanced Topics in Genetics B	March, May	12.50	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	SCIE90006 Scientists,Communication & the Workplace	Semester 2	12.50
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	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/		
Related Course(s):	Postgraduate Diploma in Science		