

# Genetics

<b>Year and Campus:</b>	2016																								
<b>Coordinator:</b>	Dr John Golz																								
<b>Contact:</b>	Email: <a href="mailto:jgolz@unimelb.edu.au">jgolz@unimelb.edu.au</a> (mailto:jgolz@unimelb.edu.au)																								
<b>Overview:</b>	<p>On completion of this course students should have achieved:</p> <ul style="list-style-type: none"> <li># a broad knowledge in the field of genetics;</li> <li># a capacity to use experimentation in genetics to understand aspects of biology; and</li> <li># a capacity to integrate various theoretical and experimental approaches to problems in genetics.</li> </ul>																								
<b>Learning Outcomes:</b>	<p><b>Areas of specialisation</b></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>																								
<b>Structure &amp; Available Subjects:</b>	<ul style="list-style-type: none"> <li># Discipline Core subjects (12.5 points);</li> <li># Elective subjects (37.5 points);</li> <li># Research Project (50 points).</li> </ul>																								
<b>Subject Options:</b>	<p><b>Discipline Core</b></p> <p>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>May</td> <td>12.50</td> </tr> <tr> <td>GENE90018 Advanced Topics in Genetics B</td> <td>Not offered 2016</td> <td>12.50</td> </tr> </tbody> </table> <p><b>Electives</b></p> <p>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>SCIE90013 Communication for Research Scientists</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table> <p><i>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.</i></p> <p>-</p> <p><b>Research Project</b></p> <p>The research project is taken over two semesters and the assessment consists of a research proposal (30%) and minor thesis (70%).</p>	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	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
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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):**

Postgraduate Diploma in Science