

GENE20003 Experiments in Genetics

Credit Points:	12.50																											
Level:	2 (Undergraduate)																											
Dates & Locations:	This subject is not offered in 2014. NOTE: in 2015 this subject will be offered only in Semester 2																											
Time Commitment:	Contact Hours: 1 x one hour lecture per week, 1 x three hour practical per week, 1 x one hour computer assisted learning per week (on average). Total Time Commitment: Estimated total time commitment of 120 hours																											
Prerequisites:	<table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>BIOL10005 Genetics & The Evolution of Life</td> <td>Semester 2</td> <td>12.50</td> </tr> </tbody> </table> <p>Plus one of the following two subjects (either can be taken concurrently):</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>GENE20001 Principles of Genetics</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>GENE20002 Genes and Genomes</td> <td>Semester 2</td> <td>12.50</td> </tr> </tbody> </table> <p>Bachelor of Biomedicine students: All three of the following (GENE20001 can be taken concurrently)</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>BIOL10002 Biomolecules and Cells</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>BIOL10003 Genes and Environment</td> <td>Semester 2</td> <td>12.50</td> </tr> <tr> <td>GENE20001 Principles of Genetics</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	BIOL10005 Genetics & The Evolution of Life	Semester 2	12.50	Subject	Study Period Commencement:	Credit Points:	GENE20001 Principles of Genetics	Semester 1	12.50	GENE20002 Genes and Genomes	Semester 2	12.50	Subject	Study Period Commencement:	Credit Points:	BIOL10002 Biomolecules and Cells	Semester 1	12.50	BIOL10003 Genes and Environment	Semester 2	12.50	GENE20001 Principles of Genetics	Semester 1	12.50
Subject	Study Period Commencement:	Credit Points:																										
BIOL10005 Genetics & The Evolution of Life	Semester 2	12.50																										
Subject	Study Period Commencement:	Credit Points:																										
GENE20001 Principles of Genetics	Semester 1	12.50																										
GENE20002 Genes and Genomes	Semester 2	12.50																										
Subject	Study Period Commencement:	Credit Points:																										
BIOL10002 Biomolecules and Cells	Semester 1	12.50																										
BIOL10003 Genes and Environment	Semester 2	12.50																										
GENE20001 Principles of Genetics	Semester 1	12.50																										
Corequisites:	None																											
Recommended Background Knowledge:	None																											
Non Allowed Subjects:	None																											
Core Participation Requirements:	For the purposes of considering applications for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005) and Students Experiencing Academic Disadvantage Policy, this subject requires all students to actively and safely participate in laboratory activities. Students who feel their disability may impact upon their participation are encouraged to discuss this with the Subject Coordinator and the Disability Liaison Unit. http://www.services.unimelb.edu.au/disability/																											
Contact:	Email: stephenh@unimelb.edu.au (mailto:stephenh@unimelb.edu.au)																											
Subject Overview:	The subject provides coverage of the techniques and experimental designs used in genetic, cytogenetic and molecular genetic analysis of microorganisms and higher organisms by the performance of laboratory experiments and problem analysis. Lectures emphasise the principles involved in these experiments and the wider applications of these principles and techniques.																											
Learning Outcomes:	Students completing this subject should have: competence in undertaking the experimental methods used in genetics; an understanding of the application of genetic principles to																											

	experimental strategies; the ability to analyse data generated from their own experiments; experience in writing scientific reports; experience in using computers for genetic exercises.
Assessment:	A written class test held mid-semester (10%); a combination of online assessment of experiments and written reports during the semester (40%); a 2-hour written examination in the examination period (50%)
Prescribed Texts:	A J Griffiths et al, Introduction to Genetic Analysis, 10th Ed. W H Freeman and Co.
Breadth Options:	<p>This subject potentially can be taken as a breadth subject component for the following courses:</p> <ul style="list-style-type: none"> # Bachelor of Arts (https://handbook.unimelb.edu.au/view/2014/B-ARTS) # Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2014/B-COM) # Bachelor of Environments (https://handbook.unimelb.edu.au/view/2014/B-ENVS) # Bachelor of Music (https://handbook.unimelb.edu.au/view/2014/B-MUS) <p>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.</p>
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 understanding of the relationship between theory and experimental data; the use of appropriate laboratory equipment for experiments; the assessment of data and its significance including statistical analysis; report writing; planning of work schedules to accomplish laboratory tasks and to meet deadlines; collaborative work to accomplish common goals; an understanding of laboratory safety; the application of computers for data analysis and retrieval of relevant information.
Notes:	<p>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.</p> <p>This subject is available for credit in the Bachelor of Biomedicine course.</p> <p>Previously known as 652-216 Molecular & General Genetics Practical (prior to 2009).</p> <p>Special requirements: laboratory coat.</p>
Related Majors/Minors/Specialisations:	<p>Genetics</p> <p>Science credit subjects* for pre-2008 BSc, BAsC and combined degree science courses</p> <p>Science-credited subjects - new generation B-SCI and B-ENG.</p> <p>Selective subjects for B-BMED</p>