

GENE20003 Experiments in Genetics

Credit Points:	12.5																													
Level:	2 (Undergraduate)																													
Dates & Locations:	2016, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.																													
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 170 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
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Corequisites:	None																													
Recommended Background Knowledge:	None																													
Non Allowed Subjects:	None																													
Core Participation Requirements:	<p><p>For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry.</p> <p>It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: http://services.unimelb.edu.au/disability</p></p>																													
Coordinator:	Mr Stephen Hardy																													
Contact:	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/2016/B-ARTS) # Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2016/B-COM) # Bachelor of Environments (https://handbook.unimelb.edu.au/view/2016/B-ENVS) # Bachelor of Music (https://handbook.unimelb.edu.au/view/2016/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>Genetics</p> <p>Science-credited subjects - new generation B-SCI and B-ENG.</p> <p>Selective subjects for B-BMED</p>