

## 652-304 Genetic Analysis

<b>Credit Points:</b>	12.50
<b>Level:</b>	3 (Undergraduate)
<b>Dates &amp; Locations:</b>	2009, This subject commences in the following study period/s: Semester 2, - Taught on campus. Lectures, tutorials and practicals.
<b>Time Commitment:</b>	Contact Hours: One 1-hour lecture per week; one 1-hour tutorial per week; one 3-hour practical per week. Total 60 hours. Total Time Commitment: 120 hours total time commitment.
<b>Prerequisites:</b>	<i>Experiments in Genetics</i> (652-216 Molecular & General Genetics Practical, prior to 2009) and <i>Evolutionary Genetics &amp; Genomics</i> (652-301 Genomes and Evolution, prior to 2009) and <i>Genes: Organisation and Function</i> (652-302 Molecular Genetics, prior to 2009).  Bachelor of Biomedicine students: a second year subject level practical unit in science, and <i>Evolutionary Genetics &amp; Genomics</i> and <i>Genes: Organisation and Function</i> .
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	None
<b>Non Allowed Subjects:</b>	None
<b>Core Participation Requirements:</b>	It is University policy to take all reasonable steps to minimise the impact of disability upon academic study and reasonable steps will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact upon their active and safe participation in a subject are encouraged to discuss this with the relevant subject coordinator and the Disability Liaison Unit.
<b>Coordinator:</b>	Dr Charles Robin
<b>Subject Overview:</b>	The subject provides a capstone experience for students majoring in Genetics. It involves lectures and practical exercises which demonstrate advanced principles and techniques of genetic analysis from classical and population genetics to modern molecular technology. An emphasis is placed on student participation in experimental design and data analysis. Tutorials will be used to illustrate modern aspects of Genetics by the in-depth consideration of current publications in the field.
<b>Objectives:</b>	Upon completion of the subject, students should have: understood the application of genetic principles and different experimental designs in classical, molecular and genetic analysis; appreciated the advantages and disadvantages of these different designs; developed a detailed understanding of the techniques employed in experimental designs; experienced the use of particular laboratory techniques and analytical approaches in different areas of genetics; become proficient in the analysis and interpretation of data derived from their own experimentation and that of others; the use of bioinformatics to analyse complex genetic data; gained experience in the written and oral presentation of scientific data; and developed an appreciation of the scientific literature and how experimental results in Genetics are presented in publications.
<b>Assessment:</b>	Written assignments/problem solving tasks due during semester (40%); practical reports due during semester (30%); a 2 –hour written examination in the examination period (30%)
<b>Prescribed Texts:</b>	None
<b>Breadth Options:</b>	This subject potentially can be taken as a breadth subject component for the following courses: # <b><u>Bachelor of Arts</u></b> ( <a href="https://handbook.unimelb.edu.au/view/2009/D09">https://handbook.unimelb.edu.au/view/2009/D09</a> ) # <b><u>Bachelor of Commerce</u></b> ( <a href="https://handbook.unimelb.edu.au/view/2009/F04">https://handbook.unimelb.edu.au/view/2009/F04</a> ) # <b><u>Bachelor of Environments</u></b> ( <a href="https://handbook.unimelb.edu.au/view/2009/A04">https://handbook.unimelb.edu.au/view/2009/A04</a> )

	<p># <b>Bachelor of Music</b> (<a href="https://handbook.unimelb.edu.au/view/2009/M05">https://handbook.unimelb.edu.au/view/2009/M05</a>)</p> <p>You should visit <b>learn more about breadth subjects</b> (<a href="http://breadth.unimelb.edu.au/breadth/info/index.html">http://breadth.unimelb.edu.au/breadth/info/index.html</a>) and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.</p>
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>
<b>Generic Skills:</b>	Completion of this subject is expected to enhance the generic skills of a student in: the design and planning of work schedules to accomplish laboratory tasks; the ability to work collaboratively with others to accomplish common goals; the safe use of appropriate laboratory equipment and techniques for experiments; the assessment of data and its significance including statistical analysis and an ability to present data in the form of reports; the ability to communicate information both verbally and in writing; the application of computer technology for data retrieval, analysis and use of relevant information from the scientific literature; an appreciation of how modern science can be applied.
<b>Notes:</b>	Students enrolled in the BSc (pre-2008 BSc), BASc or a combined BSc course will receive science credit for the completion of this subject.
<b>Related Course(s):</b>	Bachelor of Biomedical Science Graduate Diploma in Biotechnology
<b>Related Majors/Minors/ Specialisations:</b>	Biotechnology Genetics