

## 650-142 Genetics & The Evolution of Life

<b>Credit Points:</b>	12.500
<b>Level:</b>	Undergraduate
<b>Dates &amp; Locations:</b>	2008, This subject commences in the following study period/s: Semester 2, - Taught on campus. Lectures, practicals, tutorials and computer workshops.
<b>Time Commitment:</b>	Contact Hours: 36 one-hour lectures (three per week), 30 hours of practical activities, pre-laboratory activities and computer workshops (independent learning tasks), averaging 3 hours per week and 10 one-hour tutorial/workshop sessions Total Time Commitment: 120 hours
<b>Prerequisites:</b>	None
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	None
<b>Non Allowed Subjects:</b>	Credit cannot be gained for this subject and 600-142 (before 2004), 600-132 (before 2004) or 650-132
<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. 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.
<b>Coordinator:</b>	Associate Professor Dawn Gleeson
<b>Subject Overview:</b>	Topics studied include the nature of variation, inheritance, genes and chromosomes, human genetics, DNA replication, gene action and expression, population genetics, selection, the genetics of speciation, molecular evolution, evolutionary biology and the origin of life, classification of organisms diversity of life, communities, ecosystems and the relationship of organisms to their environment, human impact, preserving habitats and genetic variation.
<b>Assessment:</b>	A 40 minute, on-line multiple choice test held mid-semester (10%); work in practical classes during the semester, made up of written work not exceeding 1500 words, assessment of practical skills within the practical class, and no more than 4 short multiple choice tests (25%), completion of 4 independent learning tasks throughout the semester (5%); a 3-hour written examination on theory and practical work in the examination period (60%). A pass in the practical work is necessary to pass the subject
<b>Prescribed Texts:</b>	Biology, An Australian Focus (RB Knox, PY Ladiges, BK Evans and R Saint), 3rd edn, McGraw-Hill, 2004.
<b>Breadth Options:</b>	This subject potentially can be taken as a breadth subject component for the following courses: <ul style="list-style-type: none"> <li># Bachelor of Arts</li> <li># Bachelor of Commerce</li> <li># Bachelor of Environments</li> <li># Bachelor of Music</li> </ul> <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>	Students will develop generic skills in:

	<ul style="list-style-type: none"> <li># manipulating laboratory equipment, in particular using microscopes and gel electrophoresis;</li> <li># the recording of observations and the analysis and interpretation of data;</li> <li># the statistical analysis of genetic data; and</li> <li># accessing information sources and discerning use of the world wide web.</li> </ul>
<b>Notes:</b>	<p>Students enrolled in the BSc (both pre-2008 and new degrees), BAsC or a combined BSc course will receive science credit for the completion of this subject.</p> <p>Experiments involving the use of animals are an essential part of this subject; exemption from these experiments is not possible.</p> <p>This is a joint botany, genetics and zoology subject.</p> <p>Students are expected to enrol in both biology 650-141 (semester 1) and 650-142 (semester 2).</p>
<b>Related Course(s):</b>	<p>Bachelor of Agricultural Science/Bachelor of Commerce          Bachelor of Agriculture          Bachelor of Arts          Bachelor of Optometry          Bachelor of Veterinary Science(PV)          Diploma in Arts (Environmental Studies)</p>