

## 606-303 Plant Systematics and Evolution

<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 1, - Taught on campus. Lectures and practical work, including a one day excursion
<b>Time Commitment:</b>	Contact Hours: 24 lectures (two per week), 24 hours practical work, one-day excursion Total Time Commitment: 120 hours total time commitment.
<b>Prerequisites:</b>	<i>Plant Biodiversity or Flora of Victoria.</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>	Prof Pauline Yvonne Ladiges
<b>Subject Overview:</b>	<p>This subject will introduce the general principles and modern methods of systematics: how to discover the phylogeny (relationships) of organisms using both morphological characters and molecular (DNA) data; how to use this information to improve the classification systems of plants and fungi; how to study aspects of evolution, coevolution and historical biogeography; and how to integrate information from living and fossil plants to discover the past and date evolutionary events. Examples of the diversity and evolution of Australian plants and fungi - both fossil and living forms - will be used throughout this subject. Topics studied include:</p> <ul style="list-style-type: none"> <li># homology and form;</li> <li># numerical methods in systematics, phenetics and cladistics;</li> <li># historical biogeography;</li> <li># evolution of vascular plants, especially gymnosperms and angiosperms;</li> <li># fossils;</li> <li># fungi.</li> </ul>
<b>Objectives:</b>	<p>At the completion of the subject, students should gain:</p> <ul style="list-style-type: none"> <li># a knowledge of modern methods of phylogenetic systematics, including the application of morphological and molecular data;</li> <li># skills in analysing systematic data, including the use of computer interactive programs; and</li> <li># a knowledge of the evolution and diversity of Australian flora, both living and fossil groups of plants and fungi.</li> </ul>
<b>Assessment:</b>	A 1500-word essay (15%) and a 2000 word practical report (15%) due during the semester; a 3-hour written examination in the examination period (70%).

<b>Prescribed Texts:</b>	None
<b>Breadth Options:</b>	<p>This subject potentially can be taken as a breadth subject component for the following courses:</p> <ul style="list-style-type: none"> <li># <b>Bachelor of Arts</b> (<a href="https://handbook.unimelb.edu.au/view/2009/D09">https://handbook.unimelb.edu.au/view/2009/D09</a>)</li> <li># <b>Bachelor of Commerce</b> (<a href="https://handbook.unimelb.edu.au/view/2009/F04">https://handbook.unimelb.edu.au/view/2009/F04</a>)</li> <li># <b>Bachelor of Environments</b> (<a href="https://handbook.unimelb.edu.au/view/2009/A04">https://handbook.unimelb.edu.au/view/2009/A04</a>)</li> <li># <b>Bachelor of Music</b> (<a href="https://handbook.unimelb.edu.au/view/2009/M05">https://handbook.unimelb.edu.au/view/2009/M05</a>)</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>Notes:</b>	<p>Students enrolled in the BSc (pre-2008 BSc), BAsc or a combined BSc course will receive science credit for the completion of this subject.</p> <p>Previously known as <i>Systematics of Plants and Fungi</i> and <i>Botany Systematics and Evolution</i>.</p>
<b>Related Majors/Minors/Specialisations:</b>	Botany