

# SCIE10001 Science: A Study of Life and Environment

<b>Credit Points:</b>	12.5
<b>Level:</b>	1 (Undergraduate)
<b>Dates &amp; Locations:</b>	2016, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
<b>Time Commitment:</b>	Contact Hours: 3 x 2-hour classes per week, including approximately 16 hours of practical and/or laboratory work per semester Total Time Commitment: Estimated Total Time Commitment - 160 hours; which includes the 12-week semester and 4 weeks of non-teaching and assessment time
<b>Prerequisites:</b>	Entry into the Bachelor of Science (Extended)
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	Science study to Year 10 level, together with satisfactory completion of at least one VCE Unit 1/2 in Biology, Chemistry, Physics or Mathematics.
<b>Non Allowed Subjects:</b>	None
<b>Core Participation Requirements:</b>	<p>&lt;p&gt;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.&lt;/p&gt;         &lt;p&gt;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: &lt;a href="http://services.unimelb.edu.au/disability"&gt;http://services.unimelb.edu.au/disability&lt;/a&gt;&lt;/p&gt;</p>
<b>Coordinator:</b>	Assoc Prof Michelle Livett
<b>Contact:</b>	<a href="mailto:m.livett@unimelb.edu.au">m.livett@unimelb.edu.au</a> (mailto:m.livett@unimelb.edu.au)
<b>Subject Overview:</b>	<p>Science provides a view of the living world and its environment that uses observation and measurement to build an understanding of the function of parts of a system and the interactions between them. This subject aims to develop students' understanding of this evidence-based approach, integrating the contributions of biology, chemistry, earth sciences and physics. Careful development of students' academic skills will be embedded in this subject.</p> <p>Topics include:</p> <ul style="list-style-type: none"> <li># <i>The living world</i>: What is life? Evidence based observations of the interactions of living things with their environment, the cycling of energy through living systems, the role of environment in energy transfer;</li> <li># <i>The global environment</i>: The composition of Earth and geologic time, the global energy system and evolving global climates, atmosphere, ocean and water cycles, global ecology;</li> <li># <i>Matter and interactions</i>: an understanding of the basis of matter (atoms and molecule) and the organisation of matter at an atomic level, within the atmosphere and in water ways.</li> <li># <i>The consequences of change in the environment</i>: Living things and selective pressures, speciation and evolution;</li> </ul>
<b>Learning Outcomes:</b>	<p>To enable students to apply the methods of science to understanding the interaction between living beings and their environment, and develop their capacity to:</p> <ul style="list-style-type: none"> <li># explain the principles underpinning our understanding of the interaction between the living and non-living environment;</li> </ul>

	<ul style="list-style-type: none"> <li># apply these principles using logical reasoning, together with appropriate mathematical reasoning, to a variety of familiar and novel situations and problems in the biological and environmental sciences; and</li> <li># acquire experimental data using a range of measurement instruments and interpret these data.</li> </ul>
<b>Assessment:</b>	Ongoing assessment of class activities, including practical and laboratory work, equivalent to 1500 words. Satisfactory completion of this assessment, including 80% attendance, is required for a pass (20%) Two 20-minute tests, due weeks 4 and 8 (15%) Two written assignments, each equivalent to 500 words, due weeks 6 and 10 (15%) 2-hour examination at the end of semester. Satisfactory completion of this assessment is required for a pass (50%)
<b>Prescribed Texts:</b>	None
<b>Breadth Options:</b>	This subject is not available as a breadth subject.
<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>	<p>A student who completes this subject should be able to:</p> <ul style="list-style-type: none"> <li># explain their understanding of science principles and applications clearly, both in writing and orally;</li> <li># acquire and interpret experimental data and design experimental investigations;</li> <li># participate as an effective member of a group in discussions and practical work;</li> <li># think independently and analytically, and direct his or her own learning; and</li> <li># manage time effectively in order to be prepared for regular classes and assessment tasks.</li> </ul>
<b>Related Course(s):</b>	Bachelor of Science (Extended)