

625-104 The Earth, Atmosphere and Oceans

Credit Points:	12.50
Level:	1 (Undergraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: Semester 2, - Taught on campus. Lectures, laboratory based practical work and field excursions.
Time Commitment:	Contact Hours: 36 one-hour lectures (three per week), 12 two-hour practicals (one per week) and one day of field work. Total Time Commitment: 120 hours total time commitment.
Prerequisites:	None.
Corequisites:	None
Recommended Background Knowledge:	<i>The Global Environment</i> is recommended. Knowledge of VCE physics and mathematics is desirable but not essential
Non Allowed Subjects:	Students who have received credit for both 625-102 and 625-103 (prior to 2008) are excluded from taking this subject for credit.
Core Participation Requirements:	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.
Coordinator:	Assoc Prof Stephen John Gallagher
Subject Overview:	<p>This subject will allow students to gain a deeper understanding of the processes governing the geological and climatic evolution of the Earth. This will be achieved via a series of field trips, hands on and theoretical investigations employing Victoria's geology and meteorology in case studies.</p> <p>The first part reviews minerals, rocks and fossils. This is followed by a field trip to the Mornington Peninsula to collect fossils, rocks and minerals that are used to interpret the geological evolution of the region.</p> <p>The second part is a review of the climate and oceanography of the Earth, and a discussion of fundamental meteorological processes. Using a series of meteorological case studies, practical application of atmospheric and oceanographic analyses will be applied to our regional environment.</p> <p>A third series of studies includes structural, metamorphic and economic aspects of our regional geology. These studies are integrated with a field case study at Studley Park.</p> <p>On completion of this subject, students should understand concepts of meteorology and climate and be able to identify the basic components that make up planet Earth. Students should appreciate the contribution of geology and meteorology to the interpretation of the history of planet Earth.</p>
Objectives:	This subject builds upon the theoretical big picture approach of <i>The Global Environment</i> . It provides greater depth to many of the topics introduced in <i>The Global Environment</i> and integrates geological, oceanographic and climate studies to a gain an understanding of the evolution of the Melbourne and Victorian environment via a series of case studies. On completion of this subject students should appreciate how different types of data, samples and observations are integrated to interpret Earth processes. Students should also have begun to develop practical skills in the acquisition of data in the field and laboratory, essential to unravelling such processes.
Assessment:	Assessment of field exercises during the semester (12%); short tests held during practical sessions (3%); two meteorology short answer assignments during semester (10%); a 2-hour

	practical examination held during the semester (25%); a 3-hour written examination in the examination period (50%). A reading topic will be assessed in the examination.
Prescribed Texts:	Hamblin and Christiansen, Earth's Dynamic Systems, 11th edn, Prentice Hall.
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/2009/D09) # Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2009/F04) # Bachelor of Environments (https://handbook.unimelb.edu.au/view/2009/A04) # Bachelor of Music (https://handbook.unimelb.edu.au/view/2009/M05) <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:	On completion of this subject students should be able to apply their discipline knowledge to issues of public debate. These include the ozone hole, the greenhouse effect and sea level rise. The subject will provide experience in presenting technical topics in written form, a skill that is useful in later work. Students will also participate in some simple collaborative projects that will enable them to develop skills for the design and completion of technical experiments. Other generic skills acquired in this subject include learning how to sharpen observation skills and how to grapple with unravelling complex processes.
Notes:	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.
Related Majors/Minors/Specialisations:	Earth Sciences First year earth sciences