

SCIE90009 Critical Analysis in Science

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	This subject is not offered in 2011.
Time Commitment:	Contact Hours: 36 hours: 1 x one-hour workshop per week and 2 x one-hour lecture per week. Total Time Commitment: 108 hours
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	Students undertaking this subject will be expected to regularly access an Internet-enabled computer. Students undertaking this subject will be expected to learn how to use specific software to aid in the formation of argumentation skills. For the purposes of considering requests for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements for this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: http://www.services.unimelb.edu.au/disability/
Contact:	Email: j.pearce@unimelb.edu.au
Subject Overview:	How do scientists come to a consensus when there is no absolute proof, such as the advent of the Greenhouse Effect? This subject looks at different methods of scientific reasoning, of casting a critical eye over scientific work, and of critiquing good and bad science research. Students will be introduced to methodical ways of presenting an argument. They will explore unresolved problems in science, design scientific trials and experiments, and will write a meta-analysis paper in the form of a briefing paper to a corporate or government head about a current topic that relies on scientific reports.
Objectives:	The objectives of this subject are to teach students to: <ul style="list-style-type: none"> # examine how scientific data are used by scientists to form opinions and inform public debate. # make overt a process for developing arguments from such data. # prepare students for the kind of employment they might eventually gain as chief technical officers of bio-tech start-up companies, programme managers in funding agencies, product development managers, and managers in government agencies responsible for certification of biotechnologies.
Assessment:	Students will submit two written exercises during the semester, one early semester, one mid semester, each the equivalent of 1000 words (20%); make an oral presentation towards the end of the semester (10%); and submit a 6000 word written report (70%).
Prescribed Texts:	None
Recommended Texts:	None
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	Upon completion of this subject, students should develop skills in; <ul style="list-style-type: none"> # literature search and analysis; # critical thinking, and argumentation; and

	# independent learning.
Related Course(s):	Master of Information Systems Master of Information Systems Master of Information Systems Master of Science (Botany) Master of Science (Chemistry) Master of Science (Earth Sciences) Master of Science (Epidemiology) Master of Science (Geography) Master of Science (Information Systems) Master of Science (Physics) Master of Science (Zoology)