

## HPSC10002 Science and Pseudoscience

<b>Credit Points:</b>	12.50
<b>Level:</b>	1 (Undergraduate)
<b>Dates &amp; Locations:</b>	This subject is not offered in 2013. Standard
<b>Time Commitment:</b>	Contact Hours: 3 (2x 1 Hour Lectures each week and 1x 1 hour tutorial for 11 weeks) Total Time Commitment: An average of 8 hours per week.
<b>Prerequisites:</b>	None.
<b>Corequisites:</b>	None.
<b>Recommended Background Knowledge:</b>	None.
<b>Non Allowed Subjects:</b>	None.
<b>Core Participation Requirements:</b>	For the purposes of considering request 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 of 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: <a href="http://www.services.unimelb.edu.au/disability/">http://www.services.unimelb.edu.au/disability/</a>
<b>Contact:</b>	<b>Dr Gerhard Wiesenfeldt</b> ( <a href="http://hps.unimelb.edu.au/about/staff/wiesenfeldt/">http://hps.unimelb.edu.au/about/staff/wiesenfeldt/</a> ) <b><a href="mailto:gerhardw@unimelb.edu.au">gerhardw@unimelb.edu.au</a></b> ( <a href="mailto:gerhardw@unimelb.edu.au">mailto:gerhardw@unimelb.edu.au</a> )
<b>Subject Overview:</b>	Is there a good way to decide which ideas, theories and practices belong to science and which do not? This so-called demarcation problem is a central issue in the philosophy of science. As modern societies rely on science, in our daily lives as well as in policy decisions, this issue is much more than an academic debate: Which kind of evidence should we trust and which kind of research should we spend money on? On the other hand, should we discard knowledge that does not fulfil the standards of science? Is it justified to call such knowledge fields 'pseudoscience'? Does a demarcation between scientific and non-scientific knowledge say anything about the truth of both kinds of knowledge? This subject will discuss which (if any) criteria we should use to distinguish between science and non-science. We will scrutinise the claims for a scientific basis of various ideas and fields of knowledge, among them astrology, acupuncture, Darwinian evolution, creationism, string theory, and climate change scepticism.
<b>Objectives:</b>	Students who have successfully completed the subject will <ul style="list-style-type: none"> <li># have good understanding of the differences between scientific and non-scientific knowledge.</li> <li># understand the role this demarcation has in modern societies.</li> <li># have a reasonable knowledge of central theories in the philosophy of science.</li> <li># Be able to reflect on the role of academic discourse in the wider public</li> </ul>
<b>Assessment:</b>	An essay of 2000 words 50% (due during the examination period) and three short written assignments (totalling 50%) to be submitted throughout the semester. Hurdle requirement: students must attend a minimum of 75% of tutorials in order to pass this subject. Regular participation in tutorials is required. Assessment submitted late without an approved extension will be penalised at 10% per day. After five working days late assessment will not be marked. In-class tasks missed without approval will not be marked. All pieces of written work must be submitted in order to pass this subject.
<b>Prescribed Texts:</b>	A subject reader will be made available at the start of semester.

<b>Recommended Texts:</b>	<ul style="list-style-type: none"> <li># Alan F. Chalmers, <i>What Is this Thing Called Science?</i> 3rd edition, St. Lucia: University of Queensland Press, 1999.</li> <li># Harry Collins and Trevor Pinch, <i>The Golem: What You Should Know about Science.</i> 2 nd edition. Cambridge: Cambridge University Press, 1998.</li> <li># Massimo Pigliucci, <i>Nonsense on Stilts: How to Tell Science from Bunk.</i> Chicago: The University of Chicago Press, 2010.</li> </ul>
<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 Biomedicine</b> (<a href="https://handbook.unimelb.edu.au/view/2013/B-BMED">https://handbook.unimelb.edu.au/view/2013/B-BMED</a>)</li> <li># <b>Bachelor of Science</b> (<a href="https://handbook.unimelb.edu.au/view/2013/B-SCI">https://handbook.unimelb.edu.au/view/2013/B-SCI</a>)</li> <li># <b>Bachelor of Engineering</b> (<a href="https://handbook.unimelb.edu.au/view/2013/B-ENG">https://handbook.unimelb.edu.au/view/2013/B-ENG</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>Generic Skills:</b>	<p>Students who successfully complete this subject will:</p> <ul style="list-style-type: none"> <li># develop skills in written and oral communication.</li> <li># conduct independent research.</li> <li># make appropriate use of scholarly literature in mounting an argument.</li> <li># form defensible judgements based on a critical evaluation of conflicting arguments.</li> <li># give a qualified assessment of knowledge claims.</li> </ul>
<b>Links to further information:</b>	<a href="http://hps.unimelb.edu.au/">http://hps.unimelb.edu.au/</a>
<b>Related Majors/Minors/Specialisations:</b>	<p>History and Philosophy of Science  History and Philosophy of Science  History and Philosophy of Science  History and Philosophy of Science Major</p>
<b>Related Breadth Track(s):</b>	<p>Science, Technology and Society  Science and its Margins</p>