

## HPSC30035 Knowledge in the Making

<b>Credit Points:</b>	12.50																										
<b>Level:</b>	3 (Undergraduate)																										
<b>Dates &amp; Locations:</b>	This subject is not offered in 2011. Standard																										
<b>Time Commitment:</b>	Contact Hours: 3 (2x 1 Hour Lectures and 1x 1 hour tutorial each week.) Total Time Commitment: An average of 8.5 hours each week.																										
<b>Prerequisites:</b>	Students enrolling in this subject must be completing a Bachelor of Arts degree majoring in History and Philosophy of Science.																										
<b>Corequisites:</b>	None.																										
<b>Recommended Background Knowledge:</b>	At least 25 points (two subjects) of the following:																										
	<table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>HPSC20002 A History of Nature</td> <td>Not offered 2011</td> <td>12.50</td> </tr> <tr> <td>HPSC20001 Darwinism</td> <td>Not offered 2011</td> <td>12.50</td> </tr> <tr> <td>HPSC20009 Cybersociety</td> <td>Not offered 2011</td> <td>12.50</td> </tr> <tr> <td>PHIL20001 Science, Reason and Reality</td> <td>Not offered 2011</td> <td>12.50</td> </tr> <tr> <td>HPSC20010 Intimacy and Technology</td> <td>Semester 2</td> <td>12.50</td> </tr> <tr> <td>HPSC20020 God and the Natural Sciences</td> <td>Not offered 2011</td> <td>12.50</td> </tr> <tr> <td>HPSC20015 Astronomy in World History</td> <td>Semester 2</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	HPSC20002 A History of Nature	Not offered 2011	12.50	HPSC20001 Darwinism	Not offered 2011	12.50	HPSC20009 Cybersociety	Not offered 2011	12.50	PHIL20001 Science, Reason and Reality	Not offered 2011	12.50	HPSC20010 Intimacy and Technology	Semester 2	12.50	HPSC20020 God and the Natural Sciences	Not offered 2011	12.50	HPSC20015 Astronomy in World History	Semester 2	12.50		
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<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 Kristian Camilleri (<a href="http://www.pasi.unimelb.edu.au/hps/staff/camilleri/">http://www.pasi.unimelb.edu.au/hps/staff/camilleri/</a>)</b> <b><a href="mailto:kcam@unimelb.edu.au">kcam@unimelb.edu.au</a> (<a href="mailto:kcam@unimelb.edu.au">mailto:kcam@unimelb.edu.au</a>)</b>																										
<b>Subject Overview:</b>	How is scientific knowledge made? This question, which lies at the heart of the history, philosophy and sociology of science, forms the central focus of this subject. Beginning with the changing conceptions of natural knowledge that emerged in the 17th century, this subject examines some of the complex issues and contemporary debates surrounding the nature of scientific inquiry. Drawing on a range of case studies from the history of science, we pose questions like: How do scientists reach consensus over the results of experiment? How are new concepts formed in the absence of an established theoretical framework? Is scientific knowledge socially constructed? What epistemological conclusions follow from the view that phenomena are created in the laboratory rather than discovered in nature? Do different sciences such as biology and physics reflect fundamentally different approaches to scientific inquiry? Is scientific reasoning shaped by social, cultural and political context? In exploring questions such as these, students will be introduced to a range of different theoretical perspectives such as Steinle's notion of exploratory experiments, Fleck's idea of thought-collectives, Pickering's view of the mangle of practice, Rheinberger's concept of epistemic things, Hacking's styles of scientific reasoning and Canguilhem's notion of scientific ideologies.																										
<b>Objectives:</b>	Students who successfully complete this subject should:																										

	<ul style="list-style-type: none"> <li># Be familiar with a range of different historical, philosophical, and sociological approaches to the way knowledge is made in the sciences.</li> <li># Develop an appreciation of the role that interpretation and imagination play in the construction of scientific knowledge.</li> <li># Have a good grasp of the contemporary philosophical debates on the use of experiments and thought experiments in science.</li> <li># develop an ability to conduct critical research at third year level.</li> <li># through the written work develop a method of presenting an argument by developing critical analysis through synthesizing, and distinguishing between, a variety of arguments and ideas.</li> <li># gain the necessary critical acumen and store of relevant knowledge to be able to engage confidently and intelligently in contemporary debates in the history and philosophy of science.</li> </ul>
<b>Assessment:</b>	Written work totalling 4,000 words comprising of two essays, one due in the mid-semester break and the other due at the end of semester. This subject has a minimum hurdle requirement of 75% tutorial attendance. Regular participation in tutorials is required. Assessment submitted late without an approved extension will be penalised at 10% per day. In-class tasks missed without approval will not be marked. All pieces of written work must be submitted to pass this subject.
<b>Prescribed Texts:</b>	A Subject Reader will be available from the university Bookshop at the start of semester.
<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/2011/B-BMED">https://handbook.unimelb.edu.au/view/2011/B-BMED</a>)</li> <li># <b>Bachelor of Commerce</b> (<a href="https://handbook.unimelb.edu.au/view/2011/B-COM">https://handbook.unimelb.edu.au/view/2011/B-COM</a>)</li> <li># <b>Bachelor of Environments</b> (<a href="https://handbook.unimelb.edu.au/view/2011/B-ENVS">https://handbook.unimelb.edu.au/view/2011/B-ENVS</a>)</li> <li># <b>Bachelor of Music</b> (<a href="https://handbook.unimelb.edu.au/view/2011/B-MUS">https://handbook.unimelb.edu.au/view/2011/B-MUS</a>)</li> <li># <b>Bachelor of Science</b> (<a href="https://handbook.unimelb.edu.au/view/2011/B-SCI">https://handbook.unimelb.edu.au/view/2011/B-SCI</a>)</li> <li># <b>Bachelor of Engineering</b> (<a href="https://handbook.unimelb.edu.au/view/2011/B-ENG">https://handbook.unimelb.edu.au/view/2011/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 should:</p> <ul style="list-style-type: none"> <li># Develop skills in written and oral communication.</li> <li># Conduct independent research.</li> <li># Form defensible judgements on the basis of critical evaluation of conflicting arguments. Understand and analyse key conceptual and theoretical arguments.</li> <li># Develop their own argument based on empirical evidence.</li> <li># engage in critical reflection about the past and its connection to the present</li> </ul>
<b>Links to further information:</b>	<a href="http://www.pasi.unimelb.edu.au/">http://www.pasi.unimelb.edu.au/</a>
<b>Notes:</b>	This is the Capstone subject for the major in History and Philosophy of science. All students undertaking the major in History and Philosophy of science must enrol in this subject - normally in their final semester of enrolment.
<b>Related Course(s):</b>	Bachelor of Arts
<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>