HPSC30035 Knowledge in the Making

Credit Points:	12.50
Level:	3 (Undergraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus. Standard
Time Commitment:	Contact Hours: 3 hours each week Total Time Commitment: An average of 8.5 hours each week.
Prerequisites:	To enrol in this subject, a student must be completing a major in History & Philosophy of Science. Normally two level 2 HPS subjects.
Corequisites:	None None
Recommended Background Knowledge:	Successful completion of two HPS subjects at either second or third year level Knowledge gained in completing prerequisites
Non Allowed Subjects:	None None
Core Participation Requirements:	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 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 : http://www.services.unimelb.edu.au/disability/
Coordinator:	Dr Kristian Camilleri
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Subject Overview:	How is scientific knowledge produced? This has been a central question for the history, philosophy and sociology of science, but one that continues to generate much controversy and disagreement. In this subject we explore a number of different approaches to the problem of how scientific knowledge is constructed, with a central focus on the role of experiments, both real and imaginary. We will examine the extent to which knowledge of the natural world is formed through the encounter with 'reality', but also shaped by interpretation, imagination, social practice and the use of technologies. The subject focuses a range of issues centring around the idea that scientific knowledge depends largely on actively intervening in the world, rather than simply passively observing it. Some of the key questions we pose in this subject are: What role does concept formation play in the act of discovery? How can the creation of new phenomena in artificial situations reveal something about nature? Can theories be conclusively refuted by experiment? In what sense is scientific knowledge socially constructed? Can thought-experiments tell us anything new about the world if they rely primarily on our imagination and not on direct observation?
Objectives:	Students who successfully complete this subject should: # Be familiar with a range of different historical, philosophical, and sociological approaches to the way knowledge is made in the sciences. # Develop an appreciation of the role that interpretation and imagination play in the construction of scientific knowledge.

	# Have a good grasp of the contemporary philosophical debates on the use of experiments and thought experiments in science. # develop an ability to conduct critical research at third year level. # 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. # 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.
Assessment:	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.
Prescribed Texts:	A Subject Reader will be available from the university Bookshop at the start of semester.
Breadth Options:	This subject potentially can be taken as a breadth subject component for the following courses: # **Bachelor of Biomedicine (https://handbook.unimelb.edu.au/view/2010/B-BMED)** # **Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2010/B-COM)** # **Bachelor of Environments (https://handbook.unimelb.edu.au/view/2010/B-ENVS)** # **Bachelor of Music (https://handbook.unimelb.edu.au/view/2010/B-MUS)** # **Bachelor of Science (https://handbook.unimelb.edu.au/view/2010/B-SCI)** # **Bachelor of Engineering (https://handbook.unimelb.edu.au/view/2010/355AA)** 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.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	Students who successfully complete this subject should: # Develop skills in written and oral communication. # Conduct independent research. # Form defensible judgements on the basis of critical evaluation of conflicting arguments. Understand and analyse key conceptual and theoretical arguments. # Develop their own argument based on empirical evidence. # engage in critical reflection about the past and its connection to the present
Links to further information:	http://www.pasi.unimelb.edu.au/hps/
Notes:	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.
Related Course(s):	Bachelor of Arts
Related Majors/Minors/ Specialisations:	History & Philosophy of Science History and Philosophy of Science History and Philosophy of Science History and Philosophy of Science Major