

# SEEP SYLLABUS

<b>Course title:</b>	History & Philosophy of Science: Ontology, Epistemology, Methodology			
<b>Teacher(s):</b>	Prof. Dr. Clive L. Spash			
<b>Course credit:</b>	ECTS: 8		Hours per week: 4	
<b>Semester</b>	<input checked="" type="checkbox"/> S1	<input type="checkbox"/> S2	<input type="checkbox"/> S3	<input type="checkbox"/> S4
<b>Expected prior knowledge</b>	<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No	
<b>Teaching method(s):</b>				
<b>Type(s) of evaluation:</b>	<input checked="" type="checkbox"/> Exam		<input checked="" type="checkbox"/> Written report	
	<input checked="" type="checkbox"/> Participation / Presentation		<input checked="" type="checkbox"/> Group project	
	Other	Reading assignments		
<b>Short course description</b>	<p>This course provides an introduction to Western history and philosophy of science. Starting from the basic question of ‘what is science?’, the course moves on to concepts of ontology, epistemology and methodology. The meaning of argumentation is explored, specifically induction and deduction. Theories of explanation in a scientific context are described. The course then covers the history of Western philosophy focussing on specific key thinkers from ancient Greece through to the enlightenment. The history and philosophy of science is brought up to date with coverage of the Vienna Circle, the role of constructivism, theories of paradigm shifting and finally critical realism. Critical realism is presented as providing a pathway between naïve objectivism and constructivism.</p> <p>You will be provided with a foundation for understanding how knowledge is created and validated in the natural and social sciences. Understanding different approaches and justifications for epistemologies and methodologies will allow you to critically evaluate the grounds upon which different experts make their knowledge claims in public policy fora. At the end of the course you should understand the history and origin of ideas in Western philosophy of science, role of validating information, the basis for using different methods and the creation of knowledge in a critical social science.</p>			
<b>Topics (summary keywords)</b>	Aristotle, Plato, Descartes, Aquinas, Locke, Hume, Kant; truth; deduction; induction; British empiricism; modernity; history of thought; economic methodology; science-policy; critical realism			
<b>Selected readings:</b>	<p>There is no textbook for this class. Lectures provide content, specific reading tasks are assigned for seminars and supplementary (optional) reading provided.</p> <p>Two general books for the philosophy of science are suggested as useful background reading:</p> <ul style="list-style-type: none"> <li>• Chalmers, A.F. (1999). What is this thing called Science? Buckingham: Open University Press.</li> </ul>			

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- Okasha, S. 2016. Philosophy of Science: A Very Short Introduction. Oxford: University Press.

A book that poses the need for realism in social science within the context of postmodern challenges to older approaches is

- Sayer, A. (2000). Realism and Social Science. London: Sage

Amongst the more specific selected readings discussed in class the following provide insight across a range of issues covered. They require reading more than once!

- Danermark, B., Ekstrom, M., Jakobsen, L., Karlsson, J.C. (2002) Generalization, scientific inference and models for an explanatory social science. In: Explaining Society: An Introduction to Critical Realism in the Social Sciences. London, Routledge: pp. 73-114.
- Sayer, A. (2010) Theory, observation and practical adequacy. In: Method in Social Science: A Realist Approach. London, Routledge: pp. 31-57.

An excellent critical guide to theories of causation, a central topic in philosophy of science, is:

- Mumford, S. and R. L. Anjum. 2013. Causation: A Very Short Introduction. Oxford: University Press.