

Master's Program in Statistics and Data Mining: 720A04 Philosophy of Science, spring 2019

Teacher: Valdi Ingthorsson (valdi.ingthorsson@gmail.com)

Course literature: Ladyman, J, *Understanding Philosophy of Science*, Routledge, London, 2002. See additional readings below.

Schedule

Week	Day	Date	Time	Description	Room
13	Ons	27/3	8.15-10	Introduction of central themes in the philosophy of science. We will be covering questions like “what is science”, “how to distinguish science from pseudo-science”, “what is truth”, and “what is knowledge”?	
15	Ons	10/4	10-12	We will be looking at various ideas about how we justify scientific theories. Induction, deduction, abduction, and the hypothetical-deductive method. <i>Ch. 1–2, 7 in Understanding Philosophy of Science</i>	
17	Tis	23/4	10-12	Major schools of thought about what science should be: positivism, falsificationism, theory of scientific paradigms, hermeneutics. <i>Ch. 3–4 in Understanding Philosophy of Science</i>	
17	Tis	30/4	10-12	Discussion seminar about papers about the distinctions between natural and human science, and between science and pseudo-science. Obligatory	
20	Tue	14/5	15-17	Realism and antirealism about science. <i>Ch. 5–6 in Understanding Philosophy of Science</i>	
22	Fre	24/5	17:00	Home exam handed in through Lisam.	

Please note that the Discussion seminar on the 30/4 is obligatory. If you nevertheless are absent, you will be required to compensate for that by handing in written answers to discussion questions. Lectures are not obligatory, but you are advised that they will make the home examination so much easier.

Home examination will consist in 6 essay style questions requiring answers of approximately 1-1,5 pages each. If you do not hand in the home examination on the required date, or fail to pass the examination, another home examination will be made available with a due date of 7 June and again 7 September. Beyond that you will have to wait until the next occasion the course is given.

Additional readings

Additional literature:

Alan Sokal, "What is science and why should we care?",
www.physics.nyu.edu/faculty/sokal/sense_about_science_PUBL.pdf

Hansson, Sven-Ove, "Science and Pseudo-science", Stanford Encyclopedia of Philosophy,
<http://plato.stanford.edu/entries/pseudo-science/>

Ioannidis, J.P.A., "Why Most Published Research Findings Are False", PLoS Medicine, 2005 2: 8,
available at <http://robotics.cs.tamu.edu/RSS2015NegativeResults/pmed.0020124.pdf>

Ingthorsson, R. D. "The Natural vs. The Human Sciences: Myth, Methodology, and Ontology",
Discusiones Filosóficas 22(1): 13–29, 2013, May 2013, available at
https://www.academia.edu/3553833/The_Natural_vs._The_Human_Sciences_Myth_Methodology_and_Ontology