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## 1. Course description

The first half of the course gives an introduction to selected topics in general philosophy of science that are of particular interest to social scientists (such as problems of demarcation, verification-confirmation-falsification-corroboration, theory change, normativity, realisminstrumentalism, idealization, theory reduction, social science laws and performativity). The second half of the course focuses on the intertwined topics of probability, rationality, and causation: we are going to discuss interpretations of probability, Dutch book arguments, Bayesianism, and topics in (probabilistic) causality.

## 2. General remarks

A course website with links to reading assignments will be available at:  $\label{eq:http://hps.elte.hu/~gyepi/methsocsci}$ 

Classes will be held *off*line, on Thursdays between 12:15-13:45, in room 224 of the I building of ELTE at Astoria (BI-2-224).

The lectures, readings, and reading assignments are in English and sufficient reading/speaking skills are expected. The instructor makes the required readings available. For the second half of the course basic knowledge of probability theory and of statistics is useful but not required.

Plagiarism and/or copying of each others' work will be severely penalized in this course.

While discussion of the topics among students is encouraged, all submitted work should be your own work.

## 3. Requirements

Your grade gets determined on the basis of two components:

- (25%): reading assignments: links to 11 reading assignments will be made available on the course website. 25% of your grade score will be determined on the basis of your best 8 answer scores to these reading assignments; if you submit more than 8, only your best 8 will count towards your grade. **IMPORTANT**: the deadline for the submission of your answers is 9am on the morning of the class for which the reading was assigned! The deadline is strict and no late submissions are accepted!
- (75%): oral exam. You can choose a topic in philosophy of science that was discussed during the semester and prepare a 10 minutes long talk which you are supposed to present during the oral exam. The key focus of your presentation should be on philosophical problems/questions but the presentation should be self-contained and accessible to an intelligent person who hears from you about it first. The presentation is evaluated on the basis of the truth, clarity, structure and coherence of the presented material, and to a smaller extent on the presentation's delivery fit in the 10 minutes timeframe. After the presentation we spend 10-15 minutes with discussing the topic of your presentation, which may also include questions related to issues that were discussed during the relevant lectures and/or in the relevant course readings.

## 4. Planned topics and required readings

The literature listed below can be accessed from here: http://hps.elte.hu/~gyepi/methsocsci

Lecture 01. What makes a science a science? The problem of demarcation.

(No readings for this lecture.)

**Lecture 02.** Logical constructivism, induction, verification, confirmation, falsification, corroboration.

reading: Godfrey-Smith, P – Theory and Reality: An Introduction to the Philosophy of Science (2003) – Chapter 3 and 4.

Lecture 03. Kuhn, Lakatos, Bloor.

reading: Hands, D W – Popper and Lakatos in Economic Methodology (1993).

Lecture 04. Normativity in science.

reading: Mongin, P – Value Judgments and Value Neutrality in Economics (2006).

Lectuer 05. Realism, anti-realism, and instrumentalism in economics.

reading: Friedman, M – The Methodology of Positive Economics (1953).

optional reading: Hausman, D M – Problems with Realism in Economics (1998).

Lecture 06. Theories vs. models, "realistic assumptions" in economics.

reading: Sugden, R – Credible Worlds The Status of Theoretical Models in Economics (2000).

optional reading: Gibbard, A; H R Varian – Economic Models (1978).

Lecture 07. Theory reduction. Does macroeconomics need microfoundations?

reading: Hoover, K D – Does Macroeconomics Need Microfoundations (2001)

Lecture 08. Are there laws in the social sciences? Performativity.

reading: Roberts, J – There are No Laws in the Social Sciences (2004).

*optional reading*: Mackenzie, D – Is economics performative? Option theory and the construction of derivatives markets (2006).

Lecture 09. Interpretations of probability.

reading: Earman, J; Salmon, W – The Confirmation of Scientific Hypotheses (1992) – Section 2.7-2.8 (selection).

Lecture 10. Subjective probability. Dutch book arguments, Savage's theorem. reading: Gillies, D – Philosophical Theories of Probability-Routledge (2000) – Chapter 4 (selection). Lecture 11. Bayesian confirmation theory.

reading: Earman, J; Salmon, W – The Confirmation of Scientific Hypotheses (1992) – Section 2.9-2.10.

Lecture 12. Causality. Probabilistic causality, Simpsons' paradox, structural and Granger causation in econometrics.

reading: Hoover, K D – Causality in Economics and Econometrics (2006).