Philosophy of science is concerned with the characteristics of scientific reasoning. Typical questions are: how does scientific inference work? In what sense are scientific theories about the world? What distinguishes science from non-science? The course will provide a survey of main topics in the field. The first unit presents a brief account of the field’s historical evolution. Afterwards, the focus lies on contemporary issues.

The course consists of lecture elements and discussion. Each unit is accompanied by specific literature. The literature should be read by everyone in advance and will be addressed in our discussions. Please check out the page about a week before the first unit about the literature.

**Credits** based on 2 assignment papers (about 3000 words each, submission deadline January 9 2017.)

The course will be given in English.

A brief program:

1: (Oct. 26) A GENERAL PERSPECTIVE

What is philosophy of Science?

 History 1: Mach, Poincare and Duhem

 History 2: Logical Empiricism

2: (Nov. 2)FINDING A THEORY

 Induction and its problems

 Abduction

Conceived and unconceived alternatives

3: Nov. 9) CONFIRMING AND REJECTING A THEORY

 Falsification and protective belts

Bayesian Confirmation

Relying on science

4: (Nov. 16) THE INNER LIFE OF A THEORY

 Causation

 Explanation

 Laws

5: (Nov. 23) THE DYNAMICS OF SCIENCE

Paradigm change

Reduction and Unification

 Eternal theory succession?

6: (Dec. 7) IS IT REAL?

 Scientific Realism

 Empiricism

 In between

7: (Dec. 14) GENERAL PHILOSOPHY OF SCIENCE VS. PHILOSOPHIES OF SCIENCES

 The trend towards compartmentalization

 Philosophy of physics

Other sciences