

- Faculté des lettres et sciences humaines
- [www.unine.ch/lettres](http://www.unine.ch/lettres)

### Séminaire I : Philosophy of Science (2PH1316)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
<b>Pilier principal B A - philosophie</b>	<b>Cours: 2 ph</b>	Voir ci-dessous	4
<b>Pilier secondaire B A - philosophie</b>	<b>Cours: 2 ph</b>	Voir ci-dessous	4

ph=période hebdomadaire, pg=période globale, j=jour, dj=demi-jour, h=heure, min=minute

#### Période d'enseignement:

- Semestre Printemps

#### Equipe enseignante

Kathrin Koslicki

#### Contenu

What is science? What distinguishes science from pseudoscience? Why is science so successful? Is there such a thing as scientific method? If yes, does this method disclose to us facts of the world or merely provide us with a tool to navigate the world? In other words, is science cumulative and progressive? How are scientific theories developed? What is the rationality of theory change? Do values affect science? If yes, how? Do scientific theories influence social values as well? What is the role of science and technology in a democratic society? This seminar examines various answers to these and related questions. In particular, we will critically examine different attempts to define "scientific method" and to distinguish science from pseudoscience. We will also pay attention to how these different accounts try to justify the prominent role of science in advancing our knowledge of the world. We will conduct our investigations by looking at how scientific theories and scientific practices have evolved throughout history.

#### Forme de l'évaluation

The methods of assessment for this seminar are comprised of the following components:

- (1) Two short papers (50% of final grade, 25% each)
- (2) Short weekly comments (30% of final grade)
- (3) In-class presentations (10% of final grade)
- (4) Attendance and participation (10% of final grade)

(1) The two short papers should be approximately 4-5 pages long (~1000-1250 words). The first paper can be on any suitable topic relevant to the readings and materials discussed in class during the first half of the semester. The second paper can be on any suitable topic relevant to the readings and materials discussed in class during the second half of the semester. Guidelines and a detailed grading rubric with criteria of evaluation will be made available. Students will receive assistance in finding a suitable topic as well as feedback on a draft before handing in the final version of their papers. (2) The short weekly comments (max. 1 page) for each meeting should raise questions or objections concerning the readings discussed in the seminar during that week. Students are encouraged to bring up these questions or objections during class discussion. (3) Students will be asked to give an in-class presentation of approximately 15-20 minutes at least once, and possibly more than once, during the semester. The in-class presentation should ideally help students find a paper topic, although it is not required that the topic of the presentation will also become the topic of the paper. (4) Attendance and participation are expected and required. Students will receive high marks for participation, if they are successful at demonstrating their engagement with the material discussed in this seminar, e.g., by contributing to class discussions regularly and in a constructive way; by attending office hours or scheduling appointments; by communicating via email; etc. Work that is not submitted by the required deadline, without good cause, will not be accepted and will automatically result in a failing grade for that assessment.

Due Dates: The first short paper is due on April 15, 2020; the second short paper is due on July 15, 2021. Both papers will be returned to students with comments and a grade. If the grade is not satisfactory (below 4), students will have the opportunity to hand in a revised version of their papers by August 15, 2021.

Assessment criteria: level of preparedness; clarity of oral and written expression; specification of technical terms used; structure (e.g., plan, logical organization of ideas); ability to highlight key points; persuasiveness of arguments; originality and creativity of positions defended; speed of reflection during oral presentations.

Language of instruction: The language of instruction for this seminar will be English.

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## **Séminaire I : Philosophy of Science (2PH1316)**

### **Documentation**

Chalmers, Alan F. (2013): What is This Thing Called Science?, 4th Edition, Hackett Publishing Company, Indianapolis, IN

This text and additional readings for this course will be made available online.

### **Pré-requis**

None.

### **Forme de l'enseignement**

Seminar, 2 hours per week, Wednesday, 10:00-12:00, Spring semester.

### **Objectifs d'apprentissage**

Au terme de la formation l'étudiant-e doit être capable de :

- Examine how philosophers apply key concepts and principles to central problems in the philosophy of science.
- Write well-organized and well-reasoned argumentative papers on a particular text, problem, or position advanced in the philosophy of science.
- Define key concepts used in the philosophy of science, such as falsification, underdetermination, etc., and apply these concepts to distinguish scientific explanations from non-scientific explanations.
- Formulate the main influences and connections between the philosophy of science and other areas of philosophy as well as connected disciplines, such as the natural and social sciences, etc.
- Analyse the principal historical and contemporary theories of the scientific method.
- Recognise how prominent figures in the philosophy of science are influenced by, and have influenced, their predecessors or successors.
- Discuss central texts in the philosophy of science.
- Identify the principal positions associated with prominent figures in the philosophy of science.
- Work with other students to contribute to group projects.
- Present well-reasoned arguments orally and in writing for the acceptance or rejection of arguments and theories in the philosophy of science.
- Explain different views regarding the role of social values in scientific research and theory.
- Compare the main views regarding the relationship of scientific theories to reality, such as realism, instrumentalism, and structuralism.