

What is HPS?

History and Philosophy of Science (HPS) investigates how the sciences really work. Using historical and philosophical methods it examines this question with the help of concrete examples taken from the sciences. It thereby entails two approaches, the history of science and the philosophy of science, being brought together in a single area of research.

The historical approach investigates the development of scientific issues, theories, and methods in connection with the cultural and social aspects of the scientists, their instruments, and the institutions involved. *The philosophical approach* focuses on the conceptual analysis and reconstruction of scientific theories, arguments, and methods. Both approaches benefit from their integration with each other in HPS. New light is shed on classical epistemological questions in the philosophy of science by evidence from the history of science; and in turn historical developments in science can be analysed epistemologically with regards to changing standards of rationality and argumentation.

HPS is a relatively new, steadily growing research area. Practiced in the second half of the 19th century by pioneers like Ernst Mach and Pierre Duhem, it was institutionalised in academia in the middle of the 20th century. Today it is being taught at major universities all over the world.

HPS also takes part in an open dialogue with other areas of science studies such as the Social Studies of Science.

What does the HPS master's degree course offer?

Students on the course learn to think in terms of historical categories and contexts of development and to apply them in a research context. They also learn to analyse philosophical arguments, to critically examine philosophical solutions to problems, and to present arguments in order to justify them. They obtain a deep knowledge of the general history and philosophy of science together with their foundations, methods and historiography. Selected topics and problems from these areas are studied in depth. For both research areas, technical knowledge of specific scientific research topics is indispensable and will be guided by individual research interests.

Why study HPS at the University of Vienna?

The University of Vienna offers an institutional connection between the history of science and the philosophy of science that is unique on an international scale. Vienna also looks back on a rich tradition in the area of HPS: Ernst Mach (1838-1916), a pioneer of HPS, and the famous Vienna Circle centred around the philosopher of science Moritz Schlick (1882-1936) were among those who worked here. This tradition is now being revived by several chairs and research focus areas at the University of Vienna:

- At the Department of Philosophy and the Department of Contemporary History: a joint professorship of History and Philosophy of Science; a chair of Applied Theory of Science and Epistemology.
- At the Department of History: a professorship of Modern History with a focus on the History of Science; study group for the history of science.
- An HPS MA is the perfect basis for the newly instituted doctoral programme "The Sciences in Historical, Philosophical and Cultural Contexts":

- <http://dkplus-sciences-contexts.univie.ac.at/>
- The Institute Vienna Circle of the University of Vienna.
- Multiple institutional and informal links with departments in the social, cultural and natural sciences.

Is HPS the right course for me?

The HPS master's degree course is mainly designed for students graduating with a BA in philosophy and/or history who have an interest in the phenomenon "science" which they want to develop in more depth. Furthermore the HPS master's programme offers graduates from other disciplines in the natural, cultural, and social sciences a unique opportunity to view the scientific landscape from a wider perspective, and within this context add to the historical and epistemological dimensions of their discipline:

- How does science come about? How do scientific theories change over the course of the history of science? Is there such a thing as "the" science? How should the relationship between the generation and the foundation of scientific knowledge be understood?
- How should we interpret scientific knowledge? In what sense can we say that electrons, genes and numbers exist? What are experiments? How do experiments and everyday experiences relate to each other? What can thought experiments show? What does each of the different scientific methods offer?
- How do science, society and politics interact? What social conditions enable scientific research? Can science as a social phenomenon produce objective knowledge? Do scientists proceed rationally?

HPS offers a unique environment for all those students who want to dedicate themselves to these exciting questions from a methodological, epistemological and historical perspective.

Structure of the HPS master's degree course

As they come from different disciplines, students bring well-founded knowledge of specific areas to their master's course. In view of this, the introductory stage provides a compensatory module complementing that background (Module 1). At the same time, the introductory colloquium will help form the basis for discussion and cooperation among the students (Module 2). This is followed by a solid training in history of science and philosophy of science (Modules 3 and 4). Specific proficiency in one of the sciences can be gained individually with regard to the student's own research (Module 5). A research class will accompany the students' work on their theses (Module 6).

Structure

Modules	ECTS
M1 alternative obligation module M1.1 Philosophy M1.2 History M1.3 specialized science	20
M2 Methods and issues	10
M3 History of science	20
M4 Philosophy of science	20
M5 Specialisation module	10
M6 Research module	5
Master's thesis	30
Master's exam	5
Total	120

Enquiries and contact

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Enrolment

Admission Office
 University of Vienna
 Universitätsring 1, 1010 Vienna
<http://studienzulassung.univie.ac.at/>
 Studies Programme Director (SPL) Philosophy:
 Univ.-Doz. Mag. Dr. **Klaus Puhl**
 in cooperation with Studies Programme Director (SPL) History:
 Univ. Prof. Dr. **Thomas Hellmuth**

AT A GLANCE:

Name of the interdisciplinary degree course:
 Wissenschaftsphilosophie und Wissenschaftsgeschichte/History and Philosophy of Science – HPS
 Code: A 066 944
Duration: 4 semesters (120 ECTS)
 This is not a distance learning course.
Admission requirements: Bachelor or equivalent degree (preferably in Philosophy or History). Admission of graduates from other courses by discretion of the relevant university office.
Degree: Master of Arts (MA)
Start: 1st October 2010 (and every subsequent winter semester) **Curriculum new:** 01.10.2013
Information: <http://hps.univie.ac.at>

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 Friedrich Stadler.

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Faculty of
 Philosophy and
 Education



universität
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Faculty of
 Historical and
 Cultural Studies

Faculty of Social Sciences

HPS

Interdisciplinary Master's degree course in
 History and Philosophy of Science

Master of Arts (MA)

**HISTORY AND PHILOSOPHY OF
 SCIENCE – HPS**

**(WISSENSCHAFTSPHILOSOPHIE
 UND
 WISSENSCHAFTSGESCHICHTE)**



Ernst Mach (1838-1916)
 Viennese physicist and philosopher,
 Pioneer of HPS

A collaboration of the courses of
 Philosophy and History and
 Social Sciences

Department
 of
 Philosophy

Department
 of
 Contemporary
 History

Department
 of
 History

Institute
 Vienna
 Circle

Department of
 Science- and
 Technology Studies
 STS