Syllabus

**Theory of Science**

**Swedish title**
Vetenskapsteori

**Decision approval and date**

**Code**
Mah0213

**Credits**
6 credits

**Education cycle**
Third cycle

**Grading scale**
Pass and fail

**Knowledge prerequisites**
Admission to a doctoral research training programme

**Specialisation in relation to degree specifications**

**Intended learning outcomes**
On completion of the course the doctoral student should be able to:

- understand and describe the development and main themes in theory of science during the twentieth century,
- identify, analyze, and critically discuss conceptual, ontological, epistemological, and methodological dilemmas in contemporary theory of science,
- demonstrate an insight into how evaluative and social judgements come into play in the scientific process, and
- put her/his own research and scientific discipline in contemporary theory-of-science context, and be able to participate in philosophical discussions about the issues raised in the course.
**Course description**
The purpose of the course is for the doctoral student to broaden and deepen her/his critical understanding of scientific research, and of how research disciplines are affected by various conceptual, epistemological, ontological, and evaluative assumptions.

**Contents**
The starting point is how logical positivism’s original an objective empirical basis for scientific theories has shifted to an insight into how the empirical is dependent on context (paradigm, research program, etc.). The hermeneutic and critical perspectives of the social and human sciences have more or less eliminated the distinction between the empirical and the theoretical. These developments have led to a number of theoretical and evaluative dilemmas.

In the light of this development, the course is thematic, in that it picks out several key questions in theory of science that have been discussed during the twentieth century, for example, the justification of theoretical claims, the context dependency of empirical claims, the (ir)rationality of science, the place of values in science, the varieties of explanations in the natural and the social sciences, the social constructions of scientific facts, and feminist epistemology. These discussions also point to possible solutions of some of the dilemmas of contemporary science.

**Work formats**
The course is taught through interactive lectures complemented with discussion seminars. In order to promote discussion, the student is required to study the literature prior to each lecture/seminar. The course also includes a seminar where the student’s final assignment will be presented and discussed. This assignment will primarily concern the relation of the themes of the course to the student’s doctoral thesis and to her/his own discipline.

**Formats for the assessment of student performance**
The assessment of the student’s performance will be based on active participation in discussions, submitted assignments, and an individual paper to be presented and discussed in the final seminar.

**Literature: (Preliminary)**


Other scientific text might be added to the list.
**Transitional regulations**

In situations when the course is no longer offered or the course contents have been significantly changed, the doctoral candidate has the right, during a period of one year following the change, to be examined on two different occasions in accordance with the syllabus in force at the date of registration.

**Course evaluation**

At the conclusion of the course, each student shall submit a written course evaluation based on the course’s stated learning outcomes. The result of each course evaluation will be published on the course’s online learning platform together with information on what measures have been taken to address issues that were highlighted in the course evaluation.