

2.00 credits

30.0 h

Q2

Teacher(s)	Guay Alexandre ;
Language :	English
Place of the course	Louvain-la-Neuve
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <p>The aim of the course is to invite Master students in science to reflect on some of the current central themes in the philosophy of science, which are related to their interests and the scientific discipline in which they have specialised. They will have to analyze, alone or in a group, a specific philosophical issue that they will choose in relation to the themes addressed in the classroom lectures. Students will have to convey the results and conclusions of their investigations in a written essay as well as through an oral presentation.</p>
Evaluation methods	<p>Assessment will consist of two written assignments (each accounting for 20% of the final grade) and an in-class oral presentation, done in teams (60%).</p> <p>In the second exam session, the assessment will be based on the same components. If the presentation grade is missing or has already been counted during the June session, it will be replaced by an individual research paper. Note that it is possible to give the presentation during the semester, request a participation grade in June, and consequently carry over the presentation grade to the September session.</p>
Teaching methods	<p>The first part of the course consists in lectures on the three themes. In the meantime, students will register on the course's website and form teams of maximum three members. Each team will choose a presentation subject in relation with one of the themes. The subject, the related list of references and the oral presentation plan will have to be approved by the professor. He shall be available to help students develop their presentation. The second part of the class will be devoted to the oral presentations.</p>
Content	<p>The three themes for 2025–26 are:</p> <ol style="list-style-type: none"> 1. Philosophical Approaches to Causality: What is causality? How can a causal link be identified? What role does causality play in scientific explanation? 2. Philosophical Approaches to Modeling: What is a model? What is the relationship between a model and a theory? What is the relationship between a model and a simulation? 3. Philosophical Approaches to the Concept of Individual in Physical and Biological Sciences: What is an individual? How can individuals be identified? Is an organism, a species, or a particle an individual?
Inline resources	See course Moodle site.
Bibliography	Voir site Moodle du cours.
Faculty or entity in charge	SC

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Data Science : Statistic	DATS2M	2		
Master [120] in Geography : Climatology	CLIM2M	2		
Master [120] in Biology of Organisms and Ecology	BOE2M	2		
Master [60] in Physics	PHYS2M1	2		
Master [60] in Geography : General	GEOG2M1	2		
Master [120] in Biochemistry and Molecular and Cell Biology	BBMC2M	2		
Master [120] in Statistics: Biostatistics	BSTA2M	2		
Master [60] in Biology	BIOL2M1	2		
Master [120] in Mathematics	MATH2M	2		
Master [60] in Mathematics	MATH2M1	2		
Interdisciplinary Advanced Master in Science and Management of the Environment and Sustainable Development	ENVI2MC	2		
Master [120] in Chemistry	CHIM2M	2		
Master [120] in Statistics: General	STAT2M	2		
Master [120] in Philosophy	FILO2M	2		
Master [120] in Physics	PHYS2M	2		
Master [60] in Chemistry	CHIM2M1	2		
Master [120] in Geography : General	GEOG2M	2		
Master [120] in Medical Physics	PHMD2M	2		