UCLouvain

lsc2220

2017

Philosophy of science

2 credits	30.0 h	Q2

Teacher(s)	Guay Alexandre ;
Language :	French
Place of the course	Louvain-la-Neuve
Aims	1 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. - - - - *The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".*
Evaluation methods	The evaluation consists of two elements: a written exam (50% of the final grade) and an oral presentation in small groups (50%). During the second session, the evaluation consists of an exam (50%) plus the presentation grade (50%). If the presentation grade is absent or has already been used, this grade will be replaced by a personal research essay. Note that it is possible to make the presentation during the semester, asked for a presence grade in June and therefore use the presentation grade in the September evaluation.
Teaching methods	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. The final exam will cover all lectures and presentations.
Content	The three themes for 2017-18: 1) Philosophical approaches of emergence in science. What is reduction and emergence? Is reality structured in levels? Is there genuine novelty in the history? 2) Philosophy of scientific models. What is a scientific model? What is the relation between a theory and its models? What is the relation between a simulation and a model? 3) Philosophical approaches to causality. What is causality? How do we identify a causal relation? What role does causality play in scientific explanations?
Bibliography	Une bibliographie et des textes à lire seront fournis aux étudiants via le site web du cours.a
Faculty or entity in charge	SC

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Aims
Master [60] in Philosophy	FILO2M1	2		
Master [60] in Mathematics	MATH2M1	2		
Master [60] in Chemistry	CHIM2M1	2		
Master [60] in Geography : General	GEOG2M1	2		
Master [60] in Biology	BIOL2M1	2		
Master [120] in Biochemistry and Molecular and Cell Biology	BBMC2M	2		
Teacher Training Certificate (upper secondary education) - Philosophy	FILO2A	2		
Master [60] in Physics	PHYS2M1	2		
Master [120] in Chemistry	CHIM2M	2		
Master [120] in Biology of Organisms and Ecology	BOE2M	2		
Master [120] in Mathematics	MATH2M	2		
Master [120] in Environmental Science and Management	ENVI2M	2		
Master [120] in Physics	PHYS2M	2		
Master [120] in Geography : Climatology	CLIM2M	2		
Master [120] in Philosophy	FILO2M	2		
Master [120] in Geography : General	GEOG2M	2		
Master [120] in data Science: Statistic	DATS2M	2		