

2.0 credits	30.0 h	2q
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Teacher(s) :	Guay Alexandre ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	1) The concept of symmetry. What is a symmetry? What are symmetry arguments? What is the role of symmetry in contemporary science? 2) The concept of an individual in physics and biology. What is an individual? How do we identify an individual? Are organisms, species or particles individuals? 3) 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?
Aims :	<i>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".</i>
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.
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.
Bibliography :	A list of references and reading material will be available via the course's website.
Cycle and year of study :	> Master [60] in Biology > Master [120] in Chemistry > Master [60] in Chemistry > Master [120] in Biochemistry and Molecular and Cell Biology > Master [120] in Biology of Organisms and Ecology > Master [120] in Geography : Climatology > Master [60] in Mathematics > Master [120] in Mathematics > Master [60] in Physics > Master [120] in Physics > Master [120] in Geography : General > Master [120] in Environmental Science and Management > Master [120] in Philosophy > Teacher Training Certificate (upper secondary education) - Philosophy > Master [60] in Geography : General > Master [60] in Philosophy
Faculty or entity in charge:	SC