

5.0 credits	45.0 h + 15.0 h	2q
-------------	-----------------	----

Teacher(s) :	Crabbé Marcel ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	<p>To define firstly the intuitive concepts of logical law and valid reasoning with the help of the concepts of sentence, model and truth.</p> <p>Then to approach them by proof theory.</p> <p>Finally, to show that these two approaches are equivalent as for the result.</p>
Aims :	<p>The student will have to master some of the basic notions of logic: extension and "intension" of a concept, truth of a judgement, logical law and contradiction, correctness of a reasoning. He will also have to acquire a practice of some techniques which allow to apply these concepts, like those which establish the validity of a reasoning.</p> <p><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></p>
Evaluation methods :	<p>The final mark is awarded on the basis of the results from volume 1 (course) and volume 2 (exercises) in the following way :</p> <p>Where one or both parts have been failed, the global mark is the weaker of the two.</p> <p>Where both parts have been passed, the global mark is calculated according to an 80 (vol.1) / 20 (vol.2) weighting.</p>
Content :	<p>Logic is the part of philosophy which studies the notions of concept, judgement and reasoning, as well as the properties associated with them, such as truth and necessity.</p> <p>The course starts by trying to elucidate the concepts of truth of a judgement and of validity of a reasoning in a semantic way, by reducing them to those of model, sentence and truth.</p> <p>An examination of the Liar's paradox, to which one adopts the so called "orthodox" solution, will compel to distinguish language and metalanguage. With this proviso, the definitions of the basic concepts will be explicitly given within the framework of propositional and predicative languages.</p> <p>It also develops a proof-theoretic approach of the reasoning by studying firstly Gentzen's sequent calculus, again for propositional and predicative languages and, secondly, the concept of axiomatic system. Some of the fundamental results belonging to the folklore of 20th century logic will be stated and explained; e.g. completeness, compactness and Löwenheim-Skolem theorem.</p>
Cycle and year of study :	<p><a href="#">&gt; Bachelor in Philosophy</a></p> <p><a href="#">&gt; Preparatory Year for Master in Philosophy</a></p> <p><a href="#">&gt; Preparatory Year for Master in Ethics</a></p>
Faculty or entity in charge:	EFIL