




5.00 credits

45.0 h + 15.0 h

Q2

Teacher(s)	Verdée Peter ;
Language :	French > English-friendly
Place of the course	Louvain-la-Neuve
Main themes	<ul style="list-style-type: none"> <li>• Concepts of logical law and valid reasoning</li> <li>• Classical logic: the semantic approach (model theory), the syntactic approach (proof theory) and how the two approaches are equivalent in terms of results</li> <li>• The limits of classical logic</li> <li>• The historical roots of contemporary logic</li> </ul>
Learning outcomes	<p><b>At the end of this learning unit, the student is able to :</b></p> <ul style="list-style-type: none"> <li>• Understanding of fundamental concepts in logic</li> <li>• Ability to apply these concepts to concrete reasoning (in formal and informal language)</li> <li>• Ability to place these concepts in their philosophical and historical context</li> <li>• Ability to develop a critical attitude to the techniques of logic</li> </ul>
Evaluation methods	<p>The final evaluation in June encompasses</p> <ul style="list-style-type: none"> <li>• For 10%: the result obtained by three announced tests during the quadrimester</li> <li>• For 30%: the result obtained by the written exam of the supervised exercises part of the course during the quadrimester (in May).</li> <li>• For 60% the result obtained by the written exam in the June examination period. This exam is an open book exam and mainly evaluates the understanding of the contents of the course.</li> </ul> <p>In the September examination period, the written open book exam counts for 100%.</p>
Teaching methods	<ul style="list-style-type: none"> <li>• Ex cathedra course with some exercises in small groups</li> <li>• Practical exercises with the assistant</li> </ul>
Content	<p>The following topics will be addressed:</p> <ul style="list-style-type: none"> <li>• Possible answers to the question "What is logic?"</li> <li>• The mathematical basis: function, relation, set, tree, recursive definition / recursive proof</li> <li>• Propositional logic: semantics and axioms</li> <li>• Predicate logic: semantics</li> <li>• Problems of classical logic</li> <li>• A relevant logic and its diagrammatic proof theory</li> <li>• History of logic: Aristotle, the Stoics, Frege, Russell, Tarski, Gödel</li> </ul>
Bibliography	<ul style="list-style-type: none"> <li>• Syllabus écrit par l'enseignant</li> </ul>
Faculty or entity in charge	EFIL

<b>Programmes containing this learning unit (UE)</b>				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Certificat universitaire en philosophie (fondements)	<a href="#">FILO9CE</a>	5		
Bachelor in Philosophy, Politics and Economics	<a href="#">PPE1BA</a>	5		
Minor in Philosophy	<a href="#">MINFILO</a>	5		
Bachelor in Philosophy	<a href="#">FILO1BA</a>	5		