


4.00 credits

45.0 h

Q2

Language :	French > English-friendly
Place of the course	Louvain-la-Neuve
Main themes	<ul style="list-style-type: none"> • Concepts of logical law and valid reasoning • Classical logic: the semantic approach (model theory), the syntactic approach (proof theory) and how the two approaches are equivalent in terms of results • The limits of classical logic • The historical roots of contemporary logic
Learning outcomes	
Evaluation methods	<p>The final evaluation in June encompasses</p> <ul style="list-style-type: none"> • For 10%: the result obtained by three announced tests during the quadrimester • For 30%: the result obtained by the written exam of the supervised exercises part of the course during the quadrimester (in May). • 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. <p>In the September examination period, the written open book exam counts for 100%.</p>
Teaching methods	<ul style="list-style-type: none"> • Ex cathedra course with some exercises in small groups • Practical exercises with the assistant
Content	<p>The following topics will be addressed:</p> <ul style="list-style-type: none"> • Possible answers to the question "What is logic?" • The mathematical basis: function, relation, set, tree, recursive definition / recursive proof • Propositional logic: semantics and axioms • Predicate logic: semantics • Problems of classical logic • A relevant logic and its diagrammatic proof theory • History of logic: Aristotle, the Stoics, Frege, Russell, Tarski, Gödel
Bibliography	<ul style="list-style-type: none"> • Syllabus écrit par l'enseignant
Faculty or entity in charge	EFIL

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Chemistry	CHIM1BA	4		
Bachelor in Mathematics	MATH1BA	4		