UCLouvain

lfilo1250a

2026

Logic (partim)

4.00 credits	45.0 h	Q2

This learning unit is not open to incoming exchange students!

Teacher(s)	Verdée Peter ;
Language :	French > English-friendly
Place of the course	Louvain-la-Neuve
Main themes	• 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	**At the end of this learning unit, the student is able to :** 1 Understanding of fundamental concepts in logic 2 Ability to apply these concepts to concrete reasoning (in formal and informal language) 3 Ability to place these concepts in their philosophical and historical context 4 Ability to develop a critical attitude to the techniques of logic
Evaluation methods	The final evaluation in June encompasses • 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. In the September examination period, the written open book exam counts for 100%.
Teaching methods	• Ex cathedra course with some exercises in small groups • Practical exercices with the assistant
Content	The following topics will be addressed: • 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	• 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		🔍