


5.00 credits

30.0 h + 15.0 h

Q2

Teacher(s)	Bieliavsky Pierre ;Caprace Pierre-Emmanuel ;Gran Marino ;Van Schaftingen Jean ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	Using elements from the history of mathematics and in relation to the practice of learning, teaching and research in mathematics, we will identify and analyze the construction and foundations of mathematical knowledge.
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <ul style="list-style-type: none"> • Describe the historical construction of certain mathematical concepts and theories. • Analyze how mathematics is developed and established in situations in the history of mathematics, teaching and research. • Identify the specific features of mathematics in relation to other disciplines. • Identify epistemological issues in teaching and research situations.
Evaluation methods	The assessment includes the students' productions completed during the term, counting for 25% of the final grade, and a written exam in session, counting for 75% of the final grade. The grade for the students' productions completed during the term is acquired once and for all, and will be taken into account according to the same ratio in the third session (September session). The written exam includes open-ended questions that aim to test both the understanding of the subject and the ability to analyze and reflect by combining the study of documents and the content of the course.
Teaching methods	The learning activities consist of lectures and practical work sessions. The lectures aim to introduce the fundamental concepts and their historical and epistemological perspective. The practical work sessions put these concepts into practice; they will be partially dedicated to the completion of productions and presentations by the students, that will be taken into account in the final assessment.
Content	<p>The following themes will be presented:</p> <ul style="list-style-type: none"> - The mathematical notion of a number, from Antiquity till today, - Pythagora's theorem and its history, - The axiomatic approach and Euclid's Elements, - Epistemic links between mathematics and physics.
Inline resources	Moodle course page.
Faculty or entity in charge	MATH

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Additionnal module in Mathematics	APPMATH	5		
Master [120] in Mathematics	MATH2M	5		