UCLouvain

lmat2320

2025

Didactics and epistemology of mathematics

The version you're consulting is not final. This course description may change. The final version will be published on 1st June.

6.00 credits	45.0 h + 15.0 h	Q1 and Q2

Language :	French
Place of the course	Louvain-la-Neuve
Prerequisites	Voir Partims
Main themes	Voir Partims
Learning outcomes	**At the end of this learning unit, the student is able to :** Voir Partims
Evaluation methods	In this course, students are evaluated as follows : • continuous assessment during the year (5% of the final grade): preparations, readings, active participation in the course; this part of the grade will be used for each session and may not be represented; • a written exam in the January (and/or September) semester, open-ended and closed-book, on the learning of the first semester (40% of the final grade); • a written examination in the June (and/or September) semester, open-ended and closed-book, on the second quadrennial learning (40% of the final grade); • an assignment, the instructions of which will be given during the year (15% of the final grade). Course attendance is required. From the 3rd unjustified absence over the year or in the event of preparations not being made on time, the mark for the continuous evaluation part will be set to 0. Moreover, in accordance with article 72 of the General Regulations for Studies and Examinations, the course directors may propose to the jury that it refuse to register a student who has not attended at least 80% of the courses or who has not carried out a compulsory activity during the June and/or September session. The use of generative AI as part of the work to be produced in this teaching unit is not authorized.
Teaching methods	The course is largely based on interactions with students. Students will be actively involved, for example, in problem solving and in the research and analysis of teaching sequences. Attendance is therefore essential and mandatory. Readings will be offered to enrich and deepen the interactions between students and teachers. Preparations and assignments may be given, including in collaboration with students from non-French-speaking universities.
Content	This teaching unit consists of "equipping" students to become future teachers of mathematics in upper secondary schools. The aim is not only to present the elements of didactics and epistemology related to mathematics teaching but also to ensure the transfer and appropriation of these tools by future teachers. We will deal with the construction of mathematical knowledge in students through the study of themes from the secondary school program, addressing, for example, questions such as : • How to exploit students' representations and errors to teach mathematical concepts and theories? • How to identify epistemological obstacles to learning? • What types of learning situations can be proposed in a mathematics course? • What is the role of the teacher in the context of a research activity on a problem? • How can we encourage students to develop a real capacity for reasoning and arguing? • What should we look for when evaluating students' learning? • ...
Inline resources	The documents related to the courses are deposited on the online educational platform.
Bibliography	

Other infos	Complementary course to the general didactics course, to be taken preferably in parallel or after the latter. This course is compulsory for students in the Aggregation program who are majoring in mathematics and for students in the Master's program in mathematics, didactics.
Faculty or entity in charge	SC

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Teacher Training Certificate (upper secondary education) - Mathematics	MATH2A	6		