

5.00 credits

30.0 h

Q2



**This biannual learning unit is not being organized in 2026-2027 !**

Language :	English
Place of the course	Louvain-la-Neuve
Prerequisites	Depending on the subject, mathematics skills at the level of the end of the Bachelor in Mathematics or first year Master in Mathematics.
Main themes	The topic considered varies from year to year depending on the research interests of the course instructor.
Learning outcomes	<p><b>At the end of this learning unit, the student is able to :</b></p> <p>Contribution of the course to learning outcomes in the Master in Mathematics programme. By the end of this activity, students will have made progress in:</p> <ul style="list-style-type: none"> <li>• Show evidence of independent learning.</li> <li>• Analyse a mathematical problem and suggest appropriate tools for studying it in depth.</li> <li>• Begin a research project thanks to a deeper knowledge of one or more fields and their problematic issues in current mathematics. He will have made progress in:</li> </ul> <p>1</p> <ul style="list-style-type: none"> <li>• Develop in an independent way his mathematical intuition by anticipating the expected results (formulating conjectures) and by verifying their consistency with already existing results.</li> <li>• Ask relevant and lucid questions on an advanced mathematical topic in an independent manner.</li> </ul> <p>Learning outcomes specific to the course. The course aims to initiate research in the field under consideration. Specific learning outcomes vary depending on the field.</p>
Evaluation methods	Assessment may take different forms, to be established by the teachers at the beginning of the course. It may be based on any possible presentations by students during the course, but it may also be supplemented by a piece of work to be submitted after the end of the course or by a more traditional oral examination. In the case of work to be submitted or of an oral examination, students may choose the language (English or French).
Teaching methods	The course is taught through lectures. During sessions, students are asked to give their contribution in the form of questions or of presentations of parts of the course as previously established by the teacher.
Content	This activity consists in introducing one or more advanced subjects in mathematics. The topic considered varies from year to year depending on the research interests of the course instructor.
Faculty or entity in charge	MATH

<b>Programmes containing this learning unit (UE)</b>				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Mathematics	<a href="#">MATH2M</a>	5		