

5.0 credits	30.0 h + 30.0 h	1q
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Teacher(s) :	Ponce Augusto ; Van Schaftingen Jean ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	The main topics are : fundamental solutions and Green functions, harmonic and subharmonic functions, the Dirichlet principle, decomposition of $L^2$ in eigenfunctions of the Laplace operator, Hilbert space methods, maximum principle, regularity of weak solutions and removable singularities.
Aims :	The student will have to master elementary facts about the Laplace and Poisson equations, in particular explicit construction of solutions as well as qualitative properties in connection with the maximum principle. <i>The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".</i>
Other infos :	Precursory courses Functional Analysis/Complex Analysis/ Analysis III Evaluation Examination Support Dautray-Lions, "L'opérateur de Laplace", is a thorough treatment of the subject Teaching team Exercises
Cycle and year of study :	<a href="#">&gt; Master [120] in Mathematics</a> <a href="#">&gt; Master [120] in Physics</a> <a href="#">&gt; Master [60] in Mathematics</a> <a href="#">&gt; Master [120] in Mathematical Engineering</a> <a href="#">&gt; Master [120] in Statistics: General</a>
Faculty or entity in charge:	MATH