

5.0 credits	30.0 h + 30.0 h	2q
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Teacher(s) :	Ponce Augusto ; Van Schaffingen Jean ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	Limits and continuity; partial and directional derivatives; open, closed and bounded subset of the real line; uniform continuity; classical theorems (Cauchy, Rolle); accumulation points and Cauchy convergence lemma; Lagrange theorem; contraction mapping theorem; implicit functions; extrema and constrained optimization problems; Taylor polynomials
Aims :	<p>This course aims at developing the following skills: mastery of the language, rigor in the analysis of a proposition, search for relevant examples, precision in the expression and understanding of the various methods of proofs.</p> <p>More precisely, it deals with the mathematical aspects of the notions of continuity, convergence, derivative and integral. It aims at developing the basic methods of explicit resolution of differential equations and it offers an outlook towards fields of applications. This course constitute the second part of an introduction to differential and integral calculus for students in mathematics and physics.</p> <p><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></p>
Cycle and year of study :	> Bachelor in Mathematics > Bachelor in Physics
Faculty or entity in charge:	MATH