UCLouvain

lmat1101

2023

Mathematics 1

4.00 credits	30.0 h + 20.0 h	Q1

Teacher(s)	Dos Santos Santana Forte Vaz Pedro ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	• Recall of elementary functions (rational functions, roots, exponential and logarithm, trigonometric functions). • Functions of one real variable (continuity and limits, derivatives and extrema, integrals and primitives). • Vector calculus (vectors in R^2 and R^3 and their components, norm, scalar product and link with orthogonal projection, vector product, parallelism and orthogonality). • Complex numbers. • Introduction to differential equations (first order equations with separable variables, first and second order linear equations with constant coefficients).
Learning outcomes	
Evaluation methods	Written examination. The evaluation method may be adapted if the health situation changes.
Teaching methods	Lecture and practice sessions
Content	• Vector calculus (vectors in R^2 and R^3 and their components, norm, scalar product and link with orthogonal projection, vector product, parallelism and orthogonality). • Recall of elementary functions (rational functions, roots, exponential and logarithm, trigonometric functions). • Functions of one real variable (continuity and limits, derivatives and extrema, integrals and primitives). • Introduction to differential equations (first order equations with separable variables, linear equations with constant coefficients of order one and two).
Inline resources	Course moodle page
Bibliography	Briggs, Cochran & Gillett, *Calculus: Early Transcendentals*, Global Edition, 2/e, ©2016 | Pearson | Paper; 1320 pp
Faculty or entity in charge	SC

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Chemistry	CHIM1BA	4		
Bachelor in Veterinary Medicine	VETE1BA	4		
Master [120] in Data Science : Statistic	DATS2M	4		
Minor in Scientific Culture	MINCULTS	4		
Bachelor in Biology	BIOL1BA	4		
Bachelor in Geography : General	GEOG1BA	4		
Minor in Statistics, Actuarial Sciences and Data Sciences	MINSTAT	4		