Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
ING106	Mathematics I	1	4	2	0	5	7

Prerequisites	
Admission Requirements	

Language of Instruction	French
Course Type	Compulsory
Course Level	Bachelor Degree
Objective	Introduction to mathematical reasoning and real analysis.
Content	Logic Sets and applications Limits of functions and continuous functions Derivation of a real functions Studies of usual real functions Limited developments and applications to function studies
References	Jean-Marie Monier-Les méthodes et exercices de Mathématiques MPSI-Dunod,(2008) ISBN: 2100516760,9782100516766,9782100539734 https://hal.science/hal-05312583

Theory Topics

Week	Weekly Contents
1	Functions and mappings. Properties of mappings
2	Functions and mappings. Properties of mappings
3	Limits of functions
4	Continuous functions, properties of continuous functions
5	Differentiable functions
6	Differentiable functions
7	midterms
8	Elementary functions
9	Taylor expansions (local expansions)
10	Taylor expansions (local expansions)
11	Study of functions
12	Integrals and antiderivative
13	Integrals and antiderivative
14	final exam