

**MATH2420 Complex analytic functions**

[30h] 3 credits

This course is taught in the 1st semester

**Teacher(s):** Pierre Van Moerbeke  
**Language:** French  
**Level:** Second cycle

**Aims**

The main objective is the study of the main theorems concerning complex analytic functions of one complex variable

**Main themes**

The lectures will focus on the study of analytic functions in the complex plane, and on their singularities. After some preliminaries on the Cauchy theorems and on the residue theorem, we study the meromorphic functions on the complex projective space and on the complex tori (elliptic functions). Geometric considerations and classification of 1 dimensional representations of tori will lead to various results on elliptic functions and to algebraic geometry. The course will end with a study of the space of modules of complex tori and the construction of modular functions.

**Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)**

Prerequisites: analyse (candidature level).

**Other credits in programs**

**MATH22/G** Deuxième licence en sciences mathématiques (3 credits)