



MAT1111 General Mathematics

[90h+60h exercises] 13 credits

Teacher(s): Marielle Cherpion, Camille Debiève, Patrick Habets, Enrico Vitale
Language: French
Level: First cycle

Aims

The aim of this teaching is to present basic tools of algebra and analysis in view of their use in natural sciences. It should also initiate the students to mathematical reasoning. Illustrations and direct applications to natural sciences should be particularly stressed.

Main themes

The teaching involves four important parts. The content of the first semester includes a rather quick survey of topics studied at secondary school which are placed in a new view.

I. Differential and integral calculus.

a) Numbers and functions.

b) Functions of one real variable.

c) Complex numbers

d) Integration and primitivation.

II. Basic linear algebra and matrices.

III. Functions of several variables.

IV. Introduction to differential equations.

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

Prerequisites: Mean level in mathematical. Consistent work, logical mind, rigor, accuracy, analyse and initiative in front of problems are needed for succes.

Evaluation: Written examination aiming to verify the assimilation of overall subjects (theory and practical exercises).

Support: Syllabus (available at CIACO)

Staff support: Teacher exposes overall subjects during theoretical classes. Teaching assistants are responsible for practical exercise sessions.