MAT1161 Mathematical methods in classical mathematics 1

[22.5h+30h exercises] 5 credits

This course is taught in the 2nd semester

Teacher(s): Jean Bricmont, Luc Haine
Language: French
Level: First cycle

Aims

The course is a natural follow up of the courses Mathematical Analysis 1, Linear Agebra and General Physics 1. It completes the skills acquired in those courses, by combining several notions which have been studied previously.
More specifically, the course of Mathematical Methods of Classical Mechanics 1 aims at developing the mathematical modeling of various situations, and establishing a dialogue between the physical problems and the mathematical techniques of resolution.

Main themes

Review of the background of the course of general physics.
Systems with one degree of freedom.
Motion in a central field.
Lagrange's equations.
Linearised systems.

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

Prerequisites: course of mathematical analysis I, linear algebra and general physics I.

Other credits in programs

MAFY11BA	Première année polyvalente en sciences mathématiques et physiques	(5 credits)	Mandatory