UCL Faculté des sciences

SC

MATH2180	Analyse numérique II

[45h] 4.5 credits

This course is taught in the 1st and 2nd semester

Teacher(s):	Alphonse Magnus
Language:	french
Level:	2nd cycle course

Aims

Analysing the fundamental mathematics of the main modern methods (finished elements and differences) of numerical resolution of equations to partial derivatives.

Main themes

Methods of finished elements to elliptic problems: variational formulations of limit problems, construction of spaces of finished element type, Sobolev spaces and generalized solutions, error estimations and convergence properties. Methods of finished differences to evolution problems: problems of initial conditions to constant coefficients and variable coefficients with two and three levels, relations between stability and convergence, applications to the energy method.

Other credits in programs

MAP22	Deuxième année du programme conduisant au grade d'ingénieur civil en mathématiques appliquées	(4.5 credits)
MATH22/E	Deuxième licence en sciences mathématiques (Economie mathématique)	(4.5 credits)
MATH22/G	Deuxième licence en sciences mathématiques	(4.5 credits)
MATH22/S	Deuxième licence en sciences mathématiques (Statistique)	(4.5 credits)