lmat1161

2019

In view of the health context linked to the spread of the coronavirus, the methods of organisation and evaluation of the learning units could be adapted in different situations; these possible new methods have been - or will be - communicated by the teachers to the students.

5 credits	30.0 h + 30.0 h	Q2

Teacher(s)	Haine Luc ;
Language :	French
Place of the course	Louvain-la-Neuve
Aims	*The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".*
Evaluation methods	**Due to the COVID-19 crisis, the information in this section is particularly likely to change.** Assessment is made on the basis of a written exam at the end of the class on both the theory and the exercises. A test is organized during one of the problem sessions which can improve the result of the final exam by at most 2 points on 20.
Teaching methods	**Due to the COVID-19 crisis, the information in this section is particularly likely to change.** The aim of the class is to explain the material by illustrating it with lots of examples, and making conections with the courses of calculus and linear algebra taught during the first semester. Problem sessions consist in solving assigned exercises.
Content	The following topics will be discussed: 1. Linear and forced oscillators. 2. Chain of linear oscillators, introduction to the wave and the heat equations. 3. Newton's laws, conservation laws, Laplace and Poisson equations, galilean relativity and non inertial frames. 4. Systems with one degree of freedom, analytic solution, diagram of potential and phase plane, motion in a central field.
Inline resources	Moodle website of LMAT1161.
Bibliography	Le syllabus du cours LMAT1161 est disponible à la DUC, et contient des pistes bibliographiques.
Faculty or entity in charge	SC

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Bachelor in Mathematics	MATH1BA	5		🔍