UCLouvain

lbarc1143

2024

Mathematics - geometry

3.00 credits	15.0 h + 30.0 h	Q1

Teacher(s)	Buysse Martin ;Cherpion Marielle ;
Language :	French
Place of the course	Bruxelles Saint-Gilles
Main themes	This course is designed to provide students with the mathematical methods used in other scientific subjects. It involves both understanding the necessary basic concepts for modelling in science and gaining a certain degree of skill in the application of calculus techniques. This course will also develop skills in the field of generalisation, logical thinking, rigour and lead to a good understanding of the real world, particularly through the perception of geometric objects in space. To do this, the following will be covered : A/ Pure geometry • Thales's and Pythagorus's theorems • Trigonometry • Applications : polygons, polyhedrons, etc. B/ Analytical geometry • Vectors in space (definition, operations, properties) • Analytical and parametric equations • Parallelism, perpendicularity, secancy, distances in space
Learning outcomes	**At the end of this learning unit, the student is able to :** 1 **Specific learning outcomes** By the end of the course, students will be able to • break down a complex geometric figure in the plan and in space to take its measurement by making use of similarities and/or remarkable trigonometric functions. • establish the surface and volume of simple geometric figures with the help of basic vector operations. • determine the coordinates of points and the equations of rights and plans defined by their geometric position in figures inspired by buildings. • identify the essential properties of geometric figures and use them with clarity and rigour when solving problems of a geometric nature.
Bibliography	• Syllabus : Mathématique-Géométrie
Faculty or entity in charge	LOCI

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Architecture (Bruxelles)	ARCB1BA	3		