

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	<p>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.</p> <p>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.</p> <p>To do this, the following will be covered :</p> <p>A/ Pure geometry</p> <ul style="list-style-type: none"> • Thales's and Pythagorus's theorems • Trigonometry • Applications : polygons, polyhedrons, etc. <p>B/ Analytical geometry</p> <ul style="list-style-type: none"> • Vectors in space (definition, operations, properties) • Analytical and parametric equations • Parallelism, perpendicularity, secancy, distances in space
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <p>Specific learning outcomes</p> <p>By the end of the course, students will be able to</p> <ul style="list-style-type: none"> • 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. <p>Contribution to the learning outcome reference framework:</p> <p>1 Express an architectural procedure</p> <ul style="list-style-type: none"> • Be familiar with, understand and use the codes for representing space, in two and three dimensions • Identify the main elements of a hypothesis or a proposal to express and communicate them • Express ideas clearly in oral, graphic and written form <p>Use the technical dimension</p> <ul style="list-style-type: none"> • Be familiar with and describe the main technical principles of building <p>Make use of other subjects</p> <ul style="list-style-type: none"> • Interpret the knowledge of other subjects
Bibliography	<ul style="list-style-type: none"> • 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		