

4.0 credits	45.0 h	2q
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Teacher(s) :	Tignol Jean-Pierre ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	<p>Introduction to commutative ring theory in the concrete situation of polynomials with several variables : euclidian division, unique factorization, quotient rings, Hilbert basis theorem.</p> <p>Elimination theory and its geometric interpretation.</p> <p>Subgroups in the algebra of affine spaces and ideals of polynomials : Hilbert's nullstellensatz.</p>
Aims :	<p>The course aims to give an introduction to commutative algebra and to elementary algebraic geometry. After this course, students will be able to :</p> <p>Master the arithmetic properties of polynomials and to manipulate these explicitly, including with the help of software of symbolic calculations.</p> <p>Determine the solutions of complex algebraic systems;</p> <p>Interpret in geometric terms the operations on the algebraic systems.</p> <p><i>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".</i></p>
Other infos :	Prerequisite : Linear algebra course
Cycle and year of study :	<p><a href="#">&gt; Bachelor in Mathematics</a></p> <p><a href="#">&gt; Bachelor in Economics and Management</a></p> <p><a href="#">&gt; Bachelor in Engineering</a></p> <p><a href="#">&gt; Bachelor in Physics</a></p>
Faculty or entity in charge:	MATH