

5.0 credits	45.0 h + 15.0 h	2q
-------------	-----------------	----

Teacher(s) :	Caprace Pierre-Emmanuel ; Tignol Jean-Pierre ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	Galois theory: field extensions and their automorphisms; translation of field extensions properties in terms of the associated groups and applications to some classical problems (solubility by radicals, ruler and compass constructions). Group representations: character of a linear representation; group algebras and induced representations.
Aims :	<p>After this course, students should be able to use the methods of abstract algebra to analyse situations with a high degree of symmetry and those where the rationality domain plays an important role, such as questions of solubility by radicals, and ruler and compass constructions. A special emphasis will be laid on techniques which use the representation of symmetry groups as groups of vector space transformations.</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 :	<p>Precursory courses A first course in linear algebra</p> <p>Support J. Rotman : Galois theory (2d edition), Springer 1998 J-P. Serre : Représentations linéaires des groupes finis, Hermann 1971</p>
Cycle and year of study :	<p><a href="#">&gt; Master [60] in Mathematics</a></p> <p><a href="#">&gt; Master [120] in Mathematics</a></p>
Faculty or entity in charge:	MATH