Study: Mathematics (doctoral study)	
Subject Fields and Galois Theory (AL-05)	
Teacher: Siniša Crvenković, Andreja Tepavčević	
Type (core or optional subject): optional	
Credit: **ECTS** 10	
Prerequisite: none	

Aim of course: To became acquainted with basic concepts, results and techniques of Fields and Galois Theory.

Results of subject: Learning basic methods and notions which enable research activities in algebra.

Subject contents

Basic theory of field extensions. Algebraic extensions. Classical straithedge and compass constructions. Splitting fields and algebraic closures. Separable and inseparable extensions. Cyclotomic polynomials and extensions. Finite fields. Composite extensions and simple extensions. Cyclotomic extensions and Abelian extensions over Q. The fundamental theorem of Galois theory. Galois groups of polynomials. Solvable and radical extensions. Insolvability of the Quintic.

References:
1. S.Crvenković, I.Dolinka, R.S.Madaras, *Odabrane teme opšte algebre*, Univerzitet u Novom Sadu, 1998.
2. H. Edwards, Galois theory, Springer Verlag, 1984.
3. J. Rotman, Galois theory, Springer, 1990.
4. J-P. Tignol, Galois theory of algebraic equations, World Scientific, 2001.

number of active hours	theoretical lessons : 2	practical lessons:6

Methods of teaching

  Theoretical presentation with interactive communication with students

Subject Assessment			
pre-examination obligations	points	**Exam**	points
colloquia	**50**	oral exam	**50**