Level: bachelor	
Course title: Selected topics in applied algebra (code: I352)	
Status: elective	
ECTS: 6	
Requirements: none	

Learning objectives

Acquiring knowledge of the various techniques of the applied algebra and training in solving practical problems by using these techniques.

Learning outcomes

Knowledge of various techniques of the applied algebra and the ability to solve certain types of practical problems. Students should be able to independently choose the applied algebra techniques that are best suited to solve certain problems.

Syllabus

Theoretical instruction

After the systematization of the classical algebra used in applications, basis of one or more of the following areas will be presented: theory and application of fuzzy sets, coding theory, cryptography and cryptanalysis, theory of clones, formal concept analysis, mathematical genetics, pattern recognition with applications in biology.

Practical instruction

Suitable problems will be solved by methods in applied algebra, preferably by using Matlab or a similar program.

Weekly teaching load				Other: 0
Lectures: 3	Exercises: 1	Other forms of teaching: 0	Student research: 0	