Course title: Selected topics in algebra with metodology analysis				
Lecturers: Rozalia Madarasz, Siniša Crvenković				
Status: elective				
ECTS: 15				
Requirements: none				
Learning objectives To become acquainted with fundamentals of methodology of algebra teaching				

Learning outcomes

 By the end of the course, it is expected that the successful student demonstrates ability to understand relationship between algebra and the general aims of mathematical education.

Syllabus

Theoretical instruction:

Fundamental theorems of Number theory, The ring of Gauss integers, Euclidean rings, Principal ideal domains and domains of unique factorization. Polynomials. Theorem of Kronecker Equations. Geometric constructions. Quotient fields. Algebraic and transcendental numbers. Symmetric polynomials.

Students research- Application of theoretical knowledge for solving algebraic problems. Interactive presentations of students.

Literature

1) Derek Holton,The Teaching and Learning of Mathematics at University Level: An Icmi Study Springer,2001

2) William Flannery , Calculus Without Tears: Lesson Sheets for Learning Calculus for Students from the 4th Grade Up Publisher: Berkeley Science Books 2002

3) John P. D'Angelo Douglas B. WestMathematical Thinking: Problem-Solving and Proofs by , Prentice Hall; December 17, 1999

Weekly teaching load				Other:
Lectures: 5	Exercises:	Other forms of teaching:	Student research: 5	

Teaching methodology

Teaching theoretical ccontents with permanent interaction with students.

Grading (maximal number of points 100)			
Pre-exam requirements	points	**Final exam**	points
Colloquia	**60**	Oral exam	**40**