

Program	Level		First cycle				
	Name of the program		Mathematics Education, Mathematics and Informatics Education				
COURSE							
Course title	Methods of Teaching Mathematics I						
Course code	Semester	Course status	ECTS	Contact hours (L+AE+LE)			
EDU 370	VI	Mandatory	6	3+2+0			
Lecturer							
Course Goals	<ul style="list-style-type: none"> - Learning the principles, methods and forms of mathematics teaching. - Deepening of the acquired knowledge and activities with the goal of improving its clarity and durability through the methods of teaching mathematics. - Clarity of terms: axiom, definition, theorem, proof, premise, claim, necessary and sufficient condition. - Learning how to organize the lessons, evaluate and assess the students' works. - Learning the methods of teaching algebra and geometry 						
Learning Outcomes	<ul style="list-style-type: none"> - Training students, pre-service mathematics teachers, to transfer knowledge, skills, habits and experiences on pupils, using the advantages of modern methods of teaching mathematics. 						
COURSE CONTENT							
<ul style="list-style-type: none"> - Goals and tasks of mathematics teaching. - Bloom taxonomy. Learning outcomes. - Principles of mathematics teaching. Principles of: individualization; scientificity; appropriateness; awareness and activity. - Principles of: systematicity and gradualness; visibility and abstraction; difficulty. - Principles of: historicity and modernity; economy and rationalization; durability of knowledge and habits. - Methods of teaching mathematics. Methods of lectures, presentation, and explaining (monologic method); conversation method (dialogic method). - Problem and heuristic methods. - Project teaching and programmed teaching. Work with text and other media. - Differentiated instruction. Example of differentiated instruction in geometry (van Hiele levels of geometric reasoning). - Forms of mathematics teaching: Frontal form of teaching. Work in groups. Homogeneous and heterogeneous groups. Individual and individualized work. - Planning and preparation of a lesson. - The teacher. - Teaching means and tools. - Assessment of students' knowledge. - Inclusion in mathematics teaching. 							
LITERATURE							
<p>[1] S. Varošaneć, Metodika nastave matematike II – dio, za internu upotrebu, Zagreb, 2004. [2] M. Dejić, Metodika nastave matematike, Univerzitet u Kragujevcu, Jagodina, 2000. [3] M. Slatina, Nastavni metodi, Filozofski fakultet Univerziteta u Sarajevu, Sarajevo, 1998. [4] M. Pavleković, Metodika nastave matematike s informatikom 1, Element, Zagreb, 1996. [5] Textbooks and workbooks from elementary mathematics</p>							
STUDENT WORKLOAD (hours in a semester)							
Lectures	45	Tutorial	30	Individual work	75	T o t a l	150
GRADING				REMARKS			
Criterion		Maximum points	Minimum points				

Midterm exams	60	30	
Final exam	40	25	
T o t a l	100	55	