
	UNIVERSITY OF EAST SARAJEVO Faculty of Philosophy					
	Study programs: Mathematics and informatics, Mathematics and physics					
	Bachelor	I - year of studies				
Full course title	Analysis 1					
Chair	Department of Mathematics - Faculty of Philosophy					
Course code	Status		Semester	ECTS		
MP1-1	O		I	9		
Lecturer/s	Assoc. Prof. Vladimir Vlastic, PhD					
Teaching assistant/s	Jelena Radovic					
Number of classes / teaching workload (weekly)			Individual workload (number of hours per semester)			Individual workload coefficient S_o^1
L	AE	LE	L	AE	LE	S_o
4	4	0	84	84	0	1.4
total teaching workload (number of hours per semester) 120			total individual workload (number of hours per semester) 168			
Total course workload (teaching + individual): 120+168=288 hours per semester						
Learning outcomes	1. Introduction to basic concepts of Mathematical Analysis. 2. Introduction to properties of the Field of the Real numbers and real sequences. 3. Introduction to real functions. Limit and continuity. 4. Introduction to real functions. Differentiability.					
Requirements	No					
Teaching methodology	lecture, exercise and application					
Course content (by week)	1. The field of Real numbers. Axioms and consequences. 2. The Axiom of Completeness. 3. Subsets of the Set of Real numbers. The field of Complex numbers. 4. Topological properties of the real numbers. 5. Sequences of real numbers. Limit and Subsequences. 6. Upper and Lower limits. Cauchy sequence. 7. Monotonic sequences. Euler's number. 8. Real functions of real variable. Limit. 9. Elementary functions. 10. Continuity of real functions. 11. Local and global properties of Continuous functions. 12. Uniform continuity. Continuity and monotonic. 13. Derivative of the real function. 14. Derivative of inverse and composition of functions. 15. Derivative of higher order. Leibniz formula.					
Compulsory reading list						
Author	Title, publisher			Year	Pages (from-to)	
W.Rudin.	Principles of Mathematical Analysis			1976	1—114	
Complementary reading list						
Author/s	Title, publisher			Year	Pages (from-to)	

Obligations, forms of assessment and grading	Types of student work evaluation		Points	Percentage
	Pre-exam obligations			
	e.g. attendance of lectures/exercises		10	10
	e.g. test/colloquia 1		20	20
	e.g. test/colloquia 2		20	20
	Final exam			
	e.g. final exam (oral/written)		50	50
	TOTAL		100	100 %
Web page	ffuis.edu.ba			
Date of verification				