

	UNIVERSITY OF EAST SARAJEVO Faculty of Philosophy					
	Study program: Mathematics and informatics					
	Bachelor		III - year of studies			
Full course title	Complex Analysis					
Chair	Department of Mathematics - Faculty of Philosophy					
Course code		Status		Semester	ECTS	
MP5-3		O		V	6	
Lecturer/s	Assoc. Prof. Vladimir Vladicic, PhD					
Teaching assistant/s	Ognjen Papaz					
Number of classes / teaching workload (weekly)			Individual workload (number of hours per semester)			Individual workload coefficient S_0^1
L	AE	LE	L	AE	LE	S_0
3	2	0	63	42	0	1.4
total teaching workload (number of hours per semester)			total individual workload (number of hours per semester)			
75			105			
Total course workload (teaching + individual): 75+105=180 hours per semester						
Learning outcomes	<ol style="list-style-type: none"> 1. Introduction to Analytic functions. 2. Introduction to functional series of complex functions. 3. Integration of the complex functions. 4. Integration of the real functions. 					
Requirements	No					
Teaching methodology	lecture, exercise and application					
Course content (by week)	<ol style="list-style-type: none"> 1. Set of Complex numbers. Basic Algebraic. Vector and Moduli. 2. Sequences of the complex numbers, convergence and divergence. 3. Analytic Functions. Cauchy-Riemann Equations. Harmonic Functions 4. Elementary Functions. Exponential Functions. Logarithm Functions. Trigonometric Functions. 5. Elementary Functions. Hyperbolic Functions. Root Functions. Bilinear Functions. 6. Complex Integration. Cauchy-Goursat Theorem. Cauchy Integral Formula. 7. Primitive Function. 8. Series of Complex Numbers. 9. Taylor Series. 10. Laurent Series. 11. Classification of Singularities 12. Residues and Poles. 13. Cauchy's Residue Theorem and applications. 14. Integration of Real Functions. Jordan's Theorems. 15. Uniqueness Properties of Analytic Functions, The Argument Principle. 					
Compulsory reading list						
Author	Title, publisher			Year	Pages (from-to)	
J.B.Conway	Functions of the One Complex Variable			1978	1--138	
W. Rudin	W. Rudin Real and Complex Analysis			1987	196-298	
Complementary reading list						
Author/s	Title, publisher			Year	Pages (from-to)	

	Types of student work evaluation	Points	Percentage
Obligations, forms of assessment and grading	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			