	UNIVERSITY OF EAST SARAJEVO Faculty of Philosophy ***Study programs: Mathematics and informatics, Mathematics and Physics*** Bechelor | I - year of studies	

Full course title	**Analysis 2**
Chair	Department of Mathematics - Faculty of Philosophy

Course code	**Status**	**Semester**	**ECTS**
MP2-1	O	II	9

Lecturer/s	Assoc. Prof. Vladimir Vladicic, PhD
Teaching assistant/s	Jelena Radovic

Number of classes / teaching workload (weakly)			**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. Applications of the derivative real functions. 2. Introduction to Riemann integral. 3. Determination of the Riemann integral of the Elementary functions. 4. Introduction to Series of the real numbers.
Requirements	No
Teaching methodology	lecture, exercise and application
Course content (by week)	1. Basic theorems for Differentiation. 2. Taylor formula. 3. Graphs of the Elementary functions. 4. Indefinite integrals. Linearity. Integration by Parts. Substitution. 5. Indefinite integral of the Rational functions. 6. Indefinite integral of the Irrational functions. 7. Indefinite integral of the Trigonometric functions. 8. Riemann integral. Definition and properties. 9. Newton-Leibniz formula 10. Basic theorems of the Riemann integral. 11. Applications of the Riemann integral in geometry. 12. Applications of the Riemann integral in geometry. 13. Improper integral. 14. Series of the positive real numbers. 15. Series of the real numbers.

Compulsory reading list

Author	**Title, publisher**	**Year**	**Pages (from-to)**
W.Rudin.	Principles of Mathematical Analysis	1976	103--200

Complementary reading list

Author/s	**Title, publisher**	**Year**	**Pages (from-to)**

Obligations, forms of assessment	**Types of student work evaluation**	**Points**	**Percentage**
	Pre-exam obligations		

and grading	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			