Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
MATH 501		1	3	0	0	3	7

Prerequisites	
Admission Requirements	

Language of Instruction	English
Course Type	Compulsory
Course Level	Masters Degree
Objective	The course aims to offer a new understanding of real analysis seen at undergraduate level, but in a more topological perspective. We try to understand what is the norm in analysis, and what is the exception. We don't prove everything but will try to get a deeper understanding and hope to consolidate your understanding in Real Analysis.
Content	1. Basic facts of real analysis, normed vector spaces, metric topology 2. Banach spaces 3. Banach spaces 2 4. Baire Theory 5. Nowhere continuous/differentiable functions and Darboux functions 6. Baire 1 functions and set of discontinuities of real functions 7. Set of convergence of sequences of functions and power series 8. Mid-term exam 9. Integration of functions in |R^2 10. Parametrized curves and Green Theorem 11. Parametrized surfaces and Stokes Theorem 12. Holomorphic functions and Cauchy theory 13. Laurent series, singularities and residues 14. Conformal applications
References	

Theory Topics

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