

Program		Type of studies (cycle)	Third cycle		
		Name of the program	SEE Doctoral Studies in Mathematical Science		
Course					
Course title		Harmonic function theory			
Course code	Semester	Course status	ECTS credits	Contact hours	
	I		10	30	
Teaching staff	Teacher	Prof. Dr. David Kalaj			
	Other staff				
Course goals	A main goal of this subject is to teach a student a basic tool from the theory of harmonic functions which is needed to understand research papers in this area.				
Course content/topics					
<ul style="list-style-type: none"> • A basic properties of harmonic functions • Bounded harmonic functions • Positive harmonic functions • Kelvin transformation • Harmonic polynomials • Harmonic Hardy spaces • Harmonic functions on the upper half space • Harmonic Bergman spaces • The decomposition theorem for harmonic functions • Annular regions • A Dirichlet problem and boundary behavior 					
LITERATURE		Grading			
S. Axler, P. Bourdon, W. Ramey, <i>Harmonic function theory</i>, Springer-Verlag, New York, 2001.			Criterion	Points	Cut-off points
		1.	Written assignment		
		2.	Project		
		3.	Final exam		
		Total			100