

Study programmes: PhD STUDIES - Mathematics				
Course name: CODE 3M104 – Complex Analysis 2				
Lecturers: Miodrag Mateljević, Vladimir Božin, Miljan Knežević				
Status: Optional				
ECTS: 9				
Attendance prerequisites: No prerequisites.				
Course aims: Mastering the concepts and methods of complex analysis.				
Course outcome: At the end of the course students will be expected to have - learned advanced notions and techniques of complex analysis - acquired the ability to apply advanced notions and techniques of complex analysis				
Course content: Real harmonic functions. Complex harmonic functions. The Poisson formula. The Dirichlet problem. Subharmonic functions. The argument principle. Rouché's theorem. The maximum and the minimum principles. Schwarz lemma and applications. Geometric property of holomorphic functions. Symmetry principle. The Riemann mapping theorem. The Cauchy integral theorem (advanced approach) . Conformal invariants. Quasiconformal mappings. Uniformization theorem. Functions of several complex variables.				
Literature: 1. W. Rudin: <i>Real and Complex Analysis</i> .				
Number of hours: 10	Lectures: 4	Tutorials: -	Laboratory: -	Research: 6
Teaching and learning methods: Frontal, tutorial and practical				
Assessment (maximal 100 points)				
Course assignments	points	Final exam		points
Lectures	-	Written exam		-
Exercises / Tutorials	50	Oral exam		50
Colloquia	-	Written-oral exam		-
Essay / Project	-			