

Study programme(s): Mathematics (M), Applied Mathematics (MAP)			
Course title: COMPLEX ANALYSIS (M114)			
Lecturer(s): Dušanka Perišić			
Course status: elective (M), compulsory on module: Techno-mathematics (MAP)			
ECTS points: 5			
Requirements: Analysis 1 (on M), Differential and Integral Calculus (on MAP)			
Learning Objectives Introducing students to fundamental theories of complex functions, methods and techniques of complex function theory that are applied in other areas of mathematics and engineering disciplines.			
Learning Outcomes A successful student will be able to apply basic methods and understand the basics of complex function theory.			
Syllabus <ul style="list-style-type: none"> • Analytic functions, power series, conformal mappings • Complex integration, singularities, residues • Series of analytic functions, Taylor and Laurent series • Application of Cauchy's residue theorem for calculating integrals 			
Literature <ol style="list-style-type: none"> 1. Mateljević, Kompleksne funkcije, Društvo matematičara Srbije, Beograd, 2006 2. Ahlfors, Complex analysis, 3rd edition, Addison-Wesley, 1979 3. Stein, Shakarchi, Complex Analysis, Princeton University Press, 2003 			
Number of active classes	Lectures: 2	Exercises: 2	
Teaching methods Classical teaching methods are used in lectures. Typical problems and examples are solved and analyzed during exercises. Students' capability to apply the gained knowledge is tested on two colloquia. The final oral exam serves to test the students' general comprehension of the theoretical material.			
Grading (maximum number of points 100)			
Pre-exam obligations	Points	Final exam	Points
activities during lectures	10	oral exam	50
colloquia	40		