

Spring Semester 2012

Introduction to Complex Analysis (M 472)

(4 credits, UG, CRN 30114)

THE SUBJECT: Complex analysis is one of the basic areas in Mathematics with broad applications to many mathematical, physical, engineering etc. problems. It generates important notions and tools needed for mathematical analysis, applied mathematics, differential equations, approximation theory, algebra, topology etc. Students with the complex analysis taken are in much better position in their study of differential equations, control theory, optimization, function theory, topology. The ideas and techniques of complex analysis are a must for students with serious interests in pure and applied mathematics.

THE COURSE: Complex numbers, introduction to analytic functions, complex integration, contour integration, harmonic functions, complex power series, singularities of functions, residues, spaces of analytic functions.

PREREQUISITES: Undergraduate courses of Multivariate Calculus (M 273) and Intro to Abstract Math (M 307), or an equivalent course work.

TIME: MTWF, 11:10 -- 12:00, in Math 311

TEXT: R. Boas, Invitation to Complex Variables, 2d Edition, MAA, 2010

If you have a slightest interest in the subject, any questions, or if you feel you need more details, do not hesitate to stop by at my office in Math 207.

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Get Complex!