

MATH-326. FUNCTIONS OF A COMPLEX VARIABLE.

**Outline:** Complex numbers, their arithmetic and complex exponential. Analytic functions, Cauchy-Riemann equations, harmonic functions. Examples of analytic functions. Integrals, the theorems and formulas by Cauchy. Applications. Series representations; Taylor and Laurent series. Zeroes and poles; the Residue Theorem. Conformal mappings of the complex plane.