

Hunter College of The City University of New York

MATH 353 Introduction to Complex Variables

3 hrs, 3 cr

Text: *Complex Variables, Introduction and Applications* by Ablowitz and Fokas;
Cambridge University Press, 2nd Edition

Topics:

- Analytic Functions, Cauchy-Riemann Equations
- Multivalued Functions
- Complex Integration
- Cauchy's Theorem
- Cauchy Integral Formula
- Theorems of Liouville and Morera, Maximum Modulus Theorem
- Taylor Series, Laurent Series
- Cauchy Residue Theorem and Applications
- Fourier Transforms, Dirac Delta
- Applications of Fourier Transforms to Differential Equations
- Green's Function
- Applications of Complex Analysis to Fluid Flow