Pensum of the course MAT214, Complex Analysis, for the fall semester 2017

1. Complex functions and mappings
    a. continuous, differentiable, and rational functions
    b. power series, uniform convergence
    c. exponential and trigonometric functions

2. Analytic functions as mappings
    a. differentiable and analytic functions
    b. conformal maps
    c. linear maps and Moebius transformations

3. Complex integration
    a. rectifiability and line integral
    b. Cauchy theorem,
    c. residues

4. Harmonic functions and the Dirichlet problem.

5. Riemann surface, geometric and analytic aspects.

The recommended literature

1. Jerry R. Muir, Jr, Complex Analysis, a modern first course in function theory, John Weley and songs.

2. Lars V.Ahlfors. Complex Analysis, an introduction to the theory of analytic functions of one variable, McGraw Hill, Inc

Professor
Irina Markina