

## MATH 661, SPRING 2010

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TTh 9:30-10:45

Math 660-661 form a one-year sequence covering topics required in the qualifying Analysis exam.

We will be using the texts  
Serge Lang , Complex Analysis ,  
and

Beardon Alan F., Iterations of rational functions , Springer.

Prerequisites: Math 660 or the equivalent.

We continue to discuss topics and solve problems related to the qualifying Analysis exam. In particular the topics include :

Picard's Theorem, elliptic functions, normal families of analytic functions, and topics about iterations of rational transformations of the Riemann sphere, in particular Fatou sets, Julia sets, and dynamics on these sets .

The course will be accessible both for students interested in Dynamics ( with some prerequisites in Complex Analysis) and for students interested in Complex Analysis .

The grade will be based on student presentations of the homework assignments, a midterm, and a final exam .