MATH 992 - Topics in Complex Dynamics
Professor Pietro Poggi-Corradini, Spring of 2008

No required text, but these will be relevant texts:

1. Dynamics in One Complex Variable: Third Edition. (Annals of Mathematics Studies) by John Milnor. http://www.amazon.com/Dynamics-One-Complex-Variable-Mathematics/dp/0691124884/ref=sr_1_4/105-9725855-9633267?ie=UTF8&s=books&qid=1192683047&sr=1-4

2. Complex Dynamics (Universitext), by Lennart Carleson, Theodore W. Gamelin. http://www.amazon.com/Complex-Dynamics-Universitext-Tracts-Mathematics/dp/0387979425/ref=pd_sim_b_shvl_title_2/105-9725855-9633267

3. Iteration Of Rational Functions (Graduate Texts in Mathematics), by A. F. Beardon. http://www.amazon.com/Iteration-Rational-Functions-Graduate-Mathematics/dp/0387951512/ref=pd_sim_b_shvl_title_1/105-9725855-9633267

Description:

In complex analysis there are three fundamental domains: the disk, the plane and the sphere. Analytic self-maps of these domains can naturally be iterated giving rise to a fascinating field with many connections to other parts of mathematics. This course will be an introduction to the techniques encountered in complex dynamics. It is preferable to have had one semester of Real Analysis, one semester of Complex Analysis.

For more details about the course, please see Professor Poggi-Corradini.