Transcendental dynamics and periodic points

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In this course we will classify the different types of periodic points of a holomorphic map and describe the local dynamics near by. In particular we will cover: parabolic points and the Leau-Fatou flower theorem; attracting and repelling periodic points and the linearizing coordinates; indifferent periodic points and the difference between Cremer and Siegel points. We will finally look at the difference in the number and distribution of fixed and periodic points for polynomials and rational functions versus transcendental maps, and state the Fatou-Shishikura inequality for entire functions with finitely many singular values.