Applying tools of differential equations and knowledge of calculus, nonlinear dynamical systems can be used to qualitatively interpret models, graphs, and mathematical problems. From a macroscopic perspective, this study focused on one-dimensional flows and two-dimensional flows. Based on the book *Nonlinear Dynamics and Chaos: With Applications to Physics, Biology, Chemistry, and Engineering* and building from the basics of graph interpretation, fixed points and stability were the basic foundations for the beginning of this study. To finish studying on applying one-dimensional flows, types of bifurcations and oscillations were the central part of transitioning into two-dimensional flows. This study is still currently being held but linear systems and phase planes are the current focuses as of right now. The future of this study will focus on the Poincaré-Bendixson theorem and topics explored through the lens of chaos theory. Some of these topics include Lorenz equations, fractals, and strange attractors.

Although the applications of chaos theory have not been used heavily since the late 20^{th} century, there are still major applications such as weather prediction, biological inequalities, population growth, and more.