

Learning Outcomes for MATH 4400, Ordinary Differential Equations and Dynamical Systems

- The students will be able to solve problems in ordinary differential equations, dynamical systems, stability theory, and a number of applications to scientific and engineering problems.
- The students will demonstrate their ability to write coherent mathematical and scientific arguments needed in solving differential equations and related application problems in science and engineering.
- The students will be able to demonstrate their understanding of how natural laws are described by differential equations and dynamical systems.
- The students will demonstrate their ability to use tools from differential equations in providing exact and qualitative solutions for problems arising in physics and other scientific and engineering applications.
- The students will be able to choose the appropriate techniques from calculus and geometry to generate exact and qualitative solutions of differential equations.