Herman, Russell L. 2017. *A First Course in Differential Equations for Scientists and Engineers*. Text book. 369 pp. http://people.uncw.edu/hermanr/mat361/ODEBook/ODE1.pdf . Accessed 9 March 2023.

This is a self-published text book with excellent coverage and solid mathematics and theory to support applications. Each chapter is rich in applications, described in good detail and fine exercises which involve solution techniques, but many applications and variations. For example there is an exercise in offering up several cooling laws: Newton's, Dulon-Petit, and Newton-Stefan, with the admonition to solve them all and compare their solutions. There is also material on pursuit models.

There are many applications of second order differential equations with complete and thorough discussion of damping, eigenvalues, and characteristic equation. There should be more applications here. Numerical methods are discussed using reasonable graphics and short Maple coding.

A nice problem on falling raindrops drives several sections of the text. Linear Systems are highly motivated with examples and Nonlinear Systems are rich with qualitative applications.

Keywords: text book, text, differential equations, applications, engineering,