

# DIFFERENTIAL EQUATIONS: A MODELING APPROACH

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## Corrections for the First Printing

### Corrections to the Exercise Statements

- p. 356, Exercise 6.2.25 The inequality in part  $b$  should be  $4b^3d < 27c^2e^2$  and the condition to be explained in part  $d$  should be  $d(b + ce) > 1$ .
- p. 386, Exercise 6.5.5 The initial conditions should be  $(0, 1)$  rather than  $(1, -2)$ .
- p. 396, Exercise 6.6.11c The form of the third solution should have  $(c_1\mathbf{u} + c_2\mathbf{v})$  instead of  $\mathbf{v}$ .
- p. 408, Exercises 6.7.7 and 6.7.8 Change “the system  $\mathbf{x}' = \mathbf{Ax}$ ” to “the corresponding non-linear system  $\mathbf{x}' = \mathbf{f}(\mathbf{x})$ ”; elsewhere, change  $\mathbf{A}$  to  $\mathbf{J}(0, 0)$ .
- p. 409, Exercise 6.7.10 Replace  $\epsilon = e/(qr)$  with  $R = qr/e$ , assume  $H = 0.5$  for parts  $b$  and  $c$ , eliminate the phrase “in the limit  $\epsilon \rightarrow 0$ ”, change  $\epsilon = 0.2$  to  $R = 5$ .
- p. 467, Exercises 7.5.1 through 7.5.4 The references to Section 4.6 should be for Exercises 5-8, not Exercises 1-4

### Wrong Answers

The answers provided for Exercises 3.6.9, 4.4.11f, 4.5.33, 6.1.15, 7.5.3 are incorrect.