

Updates

*Introduction to Computational Science:
Modeling and Simulation for the Sciences, Second Edition*
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We appreciate suggestions made by our readers.

p. 18, Module 2.2, first sentence in last paragraph

The word “odometer” should be “speedometer.”

Courtesy of Alan Ferrenberg

p. 87, Module 3.2, last sentence in Exercise 5

This sentence should read, “The system should model two situations, $length > unweighted_length$ and $length \leq unweighted_length$.”

Courtesy of Naiyf S. Alsaud

p. 88, Module 3.2, “Answers to Quick Review Questions,” 3

3. a. $8 \text{ N} / (100 \text{ N/m}) = 0.08 \text{ m}$
- b. $2 \text{ m} + 0.08 \text{ m} = 2.08 \text{ m}$
- c. $2.08 \text{ m} + 0.5 \text{ m} = 2.58 \text{ m}$

Courtesy of J. Bradford (Brad) Burkman

p. 117, Module 4.1, “Answers to Quick Review Questions,” 2

“B. BTS, because a larger portion of the white tip sharks are dying”

p. 121, Module 4.2, “Historical Note”

“Cultural Revolution” should be “Four Pests Campaign.”

Courtesy of J. Bradford (Brad) Burkman

p. 143, Module 4.3, Projects 1 and 2

The word “immunization” should be “immunity.”

Courtesy of Alan Ferrenberg

p. 154, Module 4.4, Projects 1 and 2

“*flow_to_host*” should be “*infected*.”

Courtesy of Manjistha Lakhota and Sydney Schroedter

p. 165, Module 4.5, reaction

The reaction should be labeled with (1) as the text refers to “Reaction 1.”

Courtesy of Naiyf S. Alsaud

p. 171, Module 4.5, sentence after Quick Review Question 6**p. 172, Module 4.5, first and last sentences in “Modeling Inhibition”**

The letter “a” is missing from “Michaelis-Menten.”

Courtesy of Naiyf S. Alsaud

p. 183, Module 5.2, last line of “Modeling Errors”

Change “is” to “his.”

Courtesy of Naiyf S. Alsaud

p. 189, Module 5.2, next-to-last line of second paragraph

Change “3.71/1.54” to “3.71/9.75.”

Courtesy of Naiyf S. Alsaud

p. 209, Module 6.2, Exercise 4c and Project 3

Change exponent of -0.000121 from “ i ” to “ t .”

Courtesy of Alan Ferrenberg

p. 213, Module 6.3,

Change “((slope of tan at $P(8)$))” to “(slope of tan at $P(8)$)”

Courtesy of Naiyf S. Alsaud

p. 216, Module 6.3, “Error” section, third line

Change “ $(180 - P(8)) / P(8)$ ” to “ $|180 - P(8)| / P(8)$ ”

Courtesy of Naiyf S. Alsaud

p. 235, Module 7.1, Part d, third paragraph, equation

Change b after the minus to e : “Verify that $B = \frac{aA_0}{b-a}(e^{-at} - e^{-bt})$,”

p. 278, Module 7.8, Equation (2)

Change to

$$R_3 \frac{dI_2}{dt} + L_2 \frac{d^2 I_2}{dt^2} + \frac{I_2}{C_2} - \frac{I_3}{C_1} - R_2 \frac{dI_3}{dt} = 0$$

Courtesy of Greg Reese

p. 279, Module 7.8, Answer Quick Review Question 4 c and d

A negative sign should be in front of each first term.

Courtesy of Greg Reese

p. 284, Module 7.9, Figure 7.9.2

Change “depolarization” to “depolarization,” “repolarization” to “repolarization,” and “hyperpolarization” to “hyperpolarization.”

Courtesy of Greg Reese

p. 376, Module 9.2, “Download” section

The “Download” section should be omitted.

Courtesy of Alan Ferrenberg

p. 401, Module 9.3, Exercise 2b

Change “of the negative” to “of twice the negative.”

Courtesy of Greg Reese

p. 422, Module 10.2, caption for Figure 10.2.4

Change “1” to “2.”

Courtesy of Greg Reese

p. 431, Module 10.2, Project 3, line 6

Change “nutrition value” to “temperature.”

Courtesy of Greg Reese

p. 492, Module 11.2, section “Model Environment,” paragraph 1, lines 7 and 10

Remove the blank between the second underscore and the letter “P.”

Courtesy of Greg Reese

p. 492, Module 11.2, section “Model Environment,” last paragraph 1

Change “*cumulativeInfected*” to “*cumulativeInfected*.”

Courtesy of Greg Reese

pp. 492-507, Module 11.2

Change “16” to “13.” Note that in Figure 11.2.1 not all farms have the same width.

Courtesy of Greg Reese

p. 499-501, Module 11.2, blue boxes

Clarifications: Reference to a direction always applies to a neighboring patch in that direction.

Courtesy of Greg Reese

p. 500, Module 11.2, line 4

Change “reaches” to “exceeds.”

Courtesy of Greg Reese

p. 501, Module 11.2, first blue box, next-to-last line

Change line to “move agent at random on stocker.”

Courtesy of Greg Reese

p. 710, Module 14.4, Project 6 a, line 1

Change “dessert” to “desert.”

Courtesy of Greg Reese

p. 718, Module 14.5, Table 14.5.2, line for *MATURING*

Change “Light” to “Medium.”

Courtesy of Greg Reese

p. 727, Module 17.7, Project 1 a

Change “ $probHIV = 0.05$ ” to “ $probHIV = 0.0055$ ”

Courtesy of Tarun Sharma

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