

# Errata (Fall 2022)

## PHYS 205A-002: UNIVERSITY PHYSICS

*Department of Physics, Southern Illinois University–Carbondale*

Last updated: December 16, 2022

The following is not a complete list. It is being maintained since 2022 Feb 9, and is expected to evolve.

1. 2018 Spring, MT-03 Solutions, Problem 1: In the equation for  $W$ , after the second equality, replace  $(2 - 0) \rightarrow (3 - 0)$ , which changes the evaluations that follow there. That is,

$$\begin{aligned} W &= \frac{1}{2}(6 - 0)(20 - 10) - \frac{1}{2}(3 - 0)(30 - 20) \\ &= 30 - 15 = 15 \text{ J.} \end{aligned} \tag{1}$$

2. 2021 Spring, HW-04A, Problem 3, in the [video](#) for Solutions between 18:00 and 19:15 time stamps: evaluation of  $\Delta t$  leads to 0.52 s, not 0.27 s. This error leads to an error in the evaluation of  $\Delta x$ . It should be

$$\Delta x = v_{ix}\Delta t = (3.50)(0.52) = 1.8 \text{ m/s.} \tag{2}$$

3. 2021 Spring, MT-03 Solutions, Problem 6: In the equation for  $W_f$ , there should be a negative sign after the fifth equality. That is,  $W_f = -2100 \text{ J}$ .
4. 2021 Spring, HW-12, Problem 3d, in the [video](#) for Solutions has errors between time stamps 22:50 and 24:20. The correct solution is available in the [recording](#) of the lecture dated 20210428 on Gravitational Potential between time stamps 41:30 and 45:05.