List of known corrections to the PHY 231C online lectures

Lecture#2 Motion in One Dimension
Motion in 1D: acceleration, slide #3 last line of the table, describing the motion is incorrect. Should read:
Traveling with decreasing **INCREASING** speed in the negative direction

Lecture#8 Motion in One Dimension
8.3 Torque and angular acceleration, slide 7 "the rotation axis matters", I is calculated for each situation. For the first case on the left side: \( I = 0.5 \text{ kg}\cdot\text{m}^2 \) is incorrect. The correct value for the moment of inertia, \( I \) is \( 0.25 \text{ kg}\cdot\text{m}^2 \)

Lecture#12 Thermodynamics, Heat Engines
Example: First Law, slide 2: When inserting the change in the volume into the equation: \( W = -p\Delta V \), the value of \( \Delta V \) should be negative – the minus sign is missing. The result however is correct.

Lecture#13 Oscillations, Waves
Example: Mass/spring and pendulum, slide 2, part d solution. When calculating both the velocity and acceleration, the value of the period was used instead of the value of the angular frequency.
Incorrect: \( v(t) = -\omega A \sin(\omega t) = -0.028 \sin(22.4t) \)
**CORRECT** \( v(t) = -\omega A \sin(\omega t) = -2.24 \sin(22.4t) \)
Incorrect: \( a(t) = -\omega^2 A \cos(\omega t) = -0.0078 \cos(22.4t) \)
**CORRECT**: \( a(t) = -\omega^2 A \cos(\omega t) = -50 \cos(22.4t) \)