

# EN PHYS 131 - EZ01

Eric Koch  
ekoch@ualberta.ca  
CCIS 2-098  
e-koch.github.io

- See lab schedule on Dept. of Physics website
  - Undergraduate Laboratories -> Schedules
  - Lab dates: Feb. 5, Feb. 26, March 11. **Final lab period date yet to be set.**
- Labs due following Monday - dropbox on L2 (same hallway as before)
- A lab template is posted to my website
- Lab supervisor is Wlodek Rudzinski ([wjr@ualberta.ca](mailto:wjr@ualberta.ca); CCIS L1-183)

# EN PHYS 131 - EZ01

## Lab 6

Eric Koch  
ekoch@ualberta.ca  
CCIS 2-098  
e-koch.github.io

### Procedure:

1. Take video of one partner dropping a ball, while holding a metre stick
2. Download LoggerPro - send video to laptop and load into LoggerPro
3. Record information from video (see lab manual)
4. Fit one of the curves (see equations on right). Find  $g$  from the fit values and the error. Error propagation equations are in the yellow pages.
5. Save both plots. One should clearly show the values from your fit.

$$y = y_0 + v_0 t - \frac{1}{2} g t^2$$

$$v = v_0 - g t$$

$$g = 9.81 \text{ m/s}^2$$

### In report:

- 2 plots - position & velocity
- Value for  $g$  and its error
- Briefly explain the other variables in your fit (ex. what value do you expect for  $v_0$ ?)