162 Oral Pres Coding Presentation Rubric

General

- Within time limits (6-8 minutes unless told otherwise)
- Tell a good story
- Clear speaking, audible in back of the room
- Each student speaks approx. equal time
- **Slide numbers on slides**
- Consistent color coding
- Citations used as needed
- Large, clear images with sparse wording
- Good color schemes (avoid dark blue on black or yellow on white)
- Look at everyone, not just the instructor
- Font size 18-point or larger everywhere
- Obviously practiced multiple times
- Slides have lots of images (not endless text)!

Explain the task you were given

- Include a title slide (with names & date) and then a goal slide. Include large, relevant images on both!
- Briefly explain the simulation you are supposed to make
- It may help to run your sim once or twice early in the talk to help people understand

Explain Theory

- Derive a theoretical result somewhere in presentation (gotta do *some* physics for this class)
- Perhaps use your code visuals to produce the FBD (with *labeled* arrows) to save time?
- Write sum of torques, derive I, show result in form $-stuff \cdot \theta = \ddot{\theta}$, then skip to final result for $\mathbb{T}$

Code is easy to read and well-explained

- Clear variable names
- Consistent use of spacing & occasional line breaks to reduce headaches
- In presentation, code snippets are 18-point font or larger.
- Line numbers included on code snippets in presentation.
- When appropriate, include a shot of visuals next to code snippets to make it easy for us to follow along
- TIP: It may help to make a second copy of your code used solely for making nice snippets of code for your slides. Then you can move stuff around however you want.
- While discussing variables, emphasize which parameters are vectors versus scalars to add clarity
- Clarify what conditions you placed on the while loop and how that helped you determine period

Explanation of Euler-Cromer Method for animation

- Include comparison of ECM pseudo code (or normal math equations) to your actual code
- Use animations or some system to present ECM without overwhelming us (one step of method at a time)

Simulation produces clear visuals

- Simulation has *labeled* force arrows.
- In print statements, use digits to reduce sig figs (see [documentation on print statements](#)).
- Ideally, numerical values are included in the labels. For dialing in sig figs in a label, see [this code I wrote](#).

Compare simulation results to theory and real life

- Output period from sim <u>and</u> from theory (e.g., $\mathbb{T}_{th} = some\ formula$) with % difference!
- Show % difference increasing as small angle approximation fails past 10°
- Compare to real life experiment for multiple angles with % difference

Wrap it up

- Remind us of the goals you had when making your simulation and that you achieved them