

Computational Physics / PHYS-UA 210 / Problem Set #1
Due September 15, 2017

Submit this homework to the TA as a link to the Jupyter Notebook and (for #4) a PDF file, checked into your GitHub account, in the place specified in the class notes for Lecture #1.

You *must* label all axes of all plots, including giving the *units*!!

1. Familiarize yourself enough with a plotting package in Python (e.g. `matplotlib`) to plot a Gaussian with zero mean and a standard deviation of 3 over the range $[-10, +10]$. Make sure the Gaussian is normalized correctly.
2. Exercise (2) in S2.4.3 of Landau.
3. Perform the exercises described in S2.5.2 of Landau.
4. Create a short LaTeX document. You may use code on your laptop or you may use Overleaf or ShareLatex. For material for this describe your goals for this course, your background in programming and/or numerics, and (to the extent you know them) your plans after your degree is finished (grad school? industry? law school? etc.). If you write more than a page, you have written way too much. You won't be graded on the content of this, just whether you do it!!