PY 482: Homework 1 : Due January 31st

- A pion at rest decays into a muon and a neutrino (assume the neutrino to be massless). What is the speed of the muon in the rest frame of the pion?

- Install ROOT locally on your laptop (if you have one) or find access to a computer which has one. If you cannot please let me know.

- Write a root macro which shows the graph of the two-dimensional function $\frac{\sin(x)\sin(y)}{xy}$ turn in both the root code and print out the results.

- Write a root macro that fills a one dimensional histogram with 20 bins from 0 to 2π following a cosine distribution in both root code and printing out the results.

- Explain briefly in a paragraph or two what topics on the syllabus (or not!) that you are interested in learning about during this course.