Sinusoid

Sine waves are the backbone for how wireless data is transmitted. Through the manipulation of the sinusoid, we can modulate it in various ways to create RF energy that carries data that we can later decode. For this lab, you will use GNU Radio to generate a sinusoid that carries a simple pattern of data. If you do not have GNU Radio, grab the virtual machine that was provided in class.

Using GNU Radio, create a datafile that has the following properties:

* The carrier wave operates at 101.2 mHz
* Combine the carrier wave with a random noise source
* Ensure your sample rate is at 48,000
* Use a GUI sink to visualize the waveform that you’ve generated
* Do not connect an actual radio, use the file sink to save your data file

Submit your GRC file (don’t send the data file you’ve generated) and a screenshot of your GRC Canvas that successfully encodes the signal to D2L.