

## EE610/CPE690 Model-Based Design

### Project Part 1: I/Q Processing

For the first part of the project, the I/Q Processor will be modeled in Simulink. The model must be able to generate the digital sine and cosine signals necessary to demodulate the input signal and filter the outputs.

Below are the radar system parameters:

Sampling Frequency: 26 MHz  
Intermediate Frequency: 4 MHz

I/Q Processor Filter Requirements:  
Cutoff Frequency ( $F_c$ ): 6.5 MHz  
Minimum attenuation 80dB

Once the model is created, add the sine/cosine generator and I/Q processor to your library of parts. Be sure to document the models to include description (what they should do) and the interface description.