

*Lecture 25 -- Feedback Practice and Oscillators*

What are the rules governing how zeros and poles change the slope and phase of Bode plots

Draw the Bode plot and draw a pole-zero plot for a single pole system.

Draw a circuit implementation, a pole zero plot, and write a transfer function for an equalizer.  
Draw the Bode plot.

Draw a circuit implementation, a pole-zero plot, and write a transfer function for a passive 2nd order band pass filter. Draw the Bode plot.

What determines if a single-pole op-amp is unity gain stable?

Draw the open-loop and closed-loop gain of a single pole op-amp in unity gain feedback.

What is the condition for an oscillator to oscillate?

Draw a phase shift oscillator and write a formula for its oscillation frequency

Draw a Colpitts oscillator and write a formula for its oscillation frequency