**ECE 388**

**Automatic Control**

**LAB 9**

 **Bode Plot**

**Objectives:** The Bode Tool's main function is to make it easy to get frequency response data for your system. For frequency response data to be useful, you need to know what it means. The objective of this lab is to understand frequency response plots as used in the Bode Tool.

**List of Equipment/Software**

 MATLAB, Simulink

**TASKS:**

* 1. Sketch the straight-line approximation of the bode plot of the transfer function

$$G(s) = \frac{10s+5}{2s^{2}+4s+2}$$



* 1. Determine the bode plot of G(s) using Matlab. Compare it to your drawings at part 1(a).
	2. Sketch the straight-line approximation of the bode plot of the transfer function

$$G(s) =500 \frac{1-s}{(1+s)(s^{2}+7s+100)}$$



* 1. Determine the bode plot of G(s) using Matlab. Compare it to your drawings at part 2(a).