# Lab 4: Stability Analysis (Nyquist/Bode) - CLO3

Objective:

• Evaluate system stability using frequency response techniques.

Tasks:

1. Generate Bode and Nyquist plots for a given transfer function.  
2. Highlight gain margin (GM) and phase margin (PM).  
3. Use MATLAB to determine margins and conclude stability.  
4. Report findings with screenshots and calculations.

Deliverables:

• MATLAB plots and stability calculations.  
• Commentary on system stability.  
• Structured professional report.