MECH 4310 Systems and Controls (3 semester credit hours) Lecture course. Introduction to linear control theory. General structure of control systems. Mathematical models including differential equations, transfer functions, and state space. Transient response and steady-state error. Performance, stability, root-locus method, Bode diagram, and Nyquist plot. Compensation design using PID, phase-lead, and phase-lag controllers. Prerequisites: ENGR 2300 and MATH 2420 and MECH 2330. Prerequisite or Corequisite: MECH 3315. (3-0) S