Control Systems: Course outline

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This outline is a sample. Replace this PDF with your own course outline.

Week	Topic
1	Introduction: open and closed-loop control, examples
2	Mathematical modelling of physical systems
3	Transfer functions and block diagram reduction
4	Signal flow graphs and Mason's gain formula
5	Time response of first-order systems
6	Time response of second-order systems
7	Steady-state errors
8	Mid-semester examination
9	Stability and the Routh-Hurwitz criterion
10	Root locus
11	Frequency response: Bode plots
12	Nyquist stability criterion
13	PID controllers and tuning
14	Lead and lag compensation
15	Revision

Assessment: assignments 20%, mid-semester exam 30%, final exam 50%.