

# Linear Feedback-Control Systems

MWF, 10:30am–11:20am, Holmes 248

## Class Information

This is an undergraduate-level course on linear dynamical systems and control. It builds on an introductory undergraduate course in signals and systems such as EE 315, and emphasizes frequency domain techniques for the analysis of dynamical systems and the synthesis of control laws meeting given design specifications. To follow the course, a working knowledge of Laplace transformation is required.

Instructor:	Gurdal Arslan, Holmes 440, Phone: 956–3432, E-mail: <a href="mailto:gurdal@hawaii.edu">gurdal@hawaii.edu</a>
Office Hours:	anytime
Text:	Control Systems Engineering by Norman S. Nise, 6th Edition
Webpage:	<a href="http://www2.hawaii.edu/~gurdal/index_files/EE351.htm">http://www2.hawaii.edu/~gurdal/index_files/EE351.htm</a> Site of announcements, handouts, homeworks, etc.
Grading:	Homework 20%; Mid-term I 25%; Mid-term II 25%; Final Exam 30%.
Important Dates:	Final Exam: Friday, May 11, 2012, 9:45am-11:45am, in class.
Policies:	No credit will be given to late homeworks. Exams must be taken at the announced times.

## Topics

- Mathematical Modelling of Dynamic Systems
- Transient and Steady-State Response Analysis
- Control System Design by Root-Locus Method
- Control System Design by Frequency Response
- PID Control
- Introduction to State-Space Techniques