King Fahd University Of Petroleum & Minerals Department of Electrical Engineering

EE 550 Linear Control Systems

Spring 2006 – 2007

Course Information

Instructor:	Dr. Samir A. Al Baiyat	
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GRADING:	Homework	15%
	Project	20%
	Major Exam	25%
	Final Exam	40%
INFORMATION:	http://webcourses.kfupm.edu.sa.	
TEXTBOOK	Linear System Theory and Design, 3 rd Edition, C. T. Chen	
References	 Linear System, Panos Antsaklis and Anthony Michel Linear System, Thomas Kailath Linear System Theory, W. Rugh 	

EXAMINATIONS: Major Exam: Monday April 9, 2007 Final Exam: Wednesday June 6, 2007 **Objective:** This course provides a basic understanding of linear multivariable systems through their modeling and analysis. Both continuous-time and discrete-time systems will be discussed in the course. After taking this course, the student will be in a position to move on to more advanced courses and topics in systems, control, communications and signal processing.

TENTATIVE COURSE OUTLINE

- Overview
- Mathematical Description of Systems
 - Input-Output Description
 - State-Variable Description
- State Space Solutions and Realization
- Stability of Linear Systems
- Controllability and Observability
- Canonical Decompositon
- Minimal Realizations
- State Feedback and State Estimators
- Other Topics as Time Allows