
Linear Systems I - Fall 2019

ENGRMAE 270A

INSTRUCTOR	Tryphon T. Georgiou EG 4203, tryphon@uci.edu, 824-9966	
OFFICE HOURS	MoWe 10:30am-12noon @ EG 4203	
LECTURES	(code 18990) MW 3:30-4:50pm First lecture: Mo Sept 30 Holiday: Nov 11 (Veterans) Last lecture: We Dec 4	DBH 1431
MIDTERM	We Oct 30: 3:30-4:50p	DBH 1431
FINAL	Mo Dec 9: 4:00-6:00pm	DBH 1431
TA/READER	–	
PREREQUISITE	MAE 170 and EECS 160A, or equivalent. Familiarity with Matlab	
TEXT	C. T. Chen. Linear System Theory and Design http://app.knovel.com/web/toc.v/cid:kpLSTDE003	
REFERENCES	i) Modern Control Theory, Brogan ii) Control System Design, B. Friedland, iii) Dynamical Systems and Control, Skelton iv) Feedback Systems, Åström/Murray v) Linear Systems, Hespanha	

TOPICS

Dynamical systems/models	input-output & state-space representations
Linear algebra	snippets/review
Dynamical response	state transition matrices integral representation transfer functions
Stability/performance	io stability, internal stability
Controllability/observability	minimal realizations canonical forms
Controller Design	state feedback and observers separation theorem time permitting: rudiments of optimal control

EVALUATION

Homework (10%):

assignments will be posted on Canvas
selected problems will be graded

Midterm (40%) & Final (50%):

these will take place in classroom
the final will be comprehensive

total points will be curved to assign letter grade
(the Canvas figure as we go, on letter grade, will be only an estimate)

Academic honesty

No form of academic dishonesty will be tolerated. For the definition of academic dishonesty and its consequences, please refer to the UCI Academic Senate Manual