

# ECE 3510

A. Stolp

Very Tentative

01/08/06

## Spring 2006 COURSE SCHEDULE

Week	Date	lect	Topics	Textbook
1	M 01/09	1	Introduction to Feedback Systems, 3 chimps	1.1
	W 01/11	2	The Laplace transform	2.1
	H 01/12	3	The Laplace transform	2.1
	F 01/13	4	Relationship between pole locations and signal shapes	2.1
2	M 01/16	Martin Luther King Day		
	W 01/18	5	Inverse of Laplace transforms using partial fraction expansions	2.2
	H 01/19	6	Inverse of Laplace transforms using partial fraction expansions	2.2
	F 01/20	7	Properties of signals	2.3
3	M 01/23	8	Transfer functions and interconnected systems	3.1
	W 01/25	9	Feedback system	3.1
	H 01/26	10	Stability	3.2
	F 01/27	11	Responses to step inputs	3.3
4	M 01/30	12	Responses to step inputs	3.3
	W 02/01	13	Responses to sinusoidal inputs	3.4
	H 02/02	14	Responses to sinusoidal inputs	3.4
	F 02/03	Exam 1		
5	M 02/06	15	Effect of initial conditions	3.5
	W 02/08	16	State-space representations	3.6
	H 02/09	17	State-space representations	3.6
	F 02/10	18	State-space representations	3.6
6	M 02/13	19	Stability and Performance of Control Systems	4.1
	W 02/15	20	Control system characteristics	4.1
	H 02/16	21	Steady-state error and integral control	4.2
	F 02/17	22	Steady-state error and integral control	4.2
7	M 02/20	Presidents Day		
	W 02/22	23	Routh-Hurwitz stability test	4.3
	H 02/23	24	Routh-Hurwitz stability test	4.3
	F 02/24	25	Root-locus method	4.4
8	M 02/27	26	Root-locus method	4.4
	W 03/01	27	Root-locus method	4.4
	H 03/02	28	Feedback design for phase-locked loops	4.5
	F 03/03	Exam 2		
9	M 03/06	29	Feedback design for phase-locked loops	4.5
	W 03/08	30	Feedback design for phase-locked loops	4.5
	H 03/09	31	Frequency-Domain Analysis of Control Systems	5.1
	F 03/10	32	Bode Plots	5.1
	M 03/13	Spring Break		
	T 03/15			
	H 03/16			
	F 03/17			
10	M 03/20	33	Bode Plots	5.1
	W 03/22	34	Bode Plots	5.1
	H 03/23	35	Nyquist criterion of stability	5.2
	F 03/24	36	Nyquist criterion of stability	5.2

11	M	03/27	37	Nyquist criterion of stability	5.2
	T	03/29	38	Gain and phase margins	5.3
	H	03/30	39	Gain and phase margins	5.3
	F	03/31	40	Gain and phase margins	5.3
12	M	04/03	41	Discrete-time Signals and Systems	6.1
	W	04/05	42	The z-transform	6.1
	H	04/06	43	Properties of the z-transform	6.2
	F	04/07		Exam 3	
13	M	04/10	44	Inversion of z-transforms	6.3
	W	04/12	45	Inversion of z-transforms	6.3
	H	04/13	46	Discrete-time systems	6.4
	F	04/14	47	Discrete-time systems	6.4
14	M	04/17	48	Sampled-data systems	7.1
	W	04/19	49	Continuous to discrete conversion	7.1
	H	04/20	50	Continuous to discrete conversion	7.1
	F	04/21	51	Discrete to continuous conversion	7.2
15	M	04/24	52	Discrete to continuous conversion	7.3
	T	04/25		Mechanical Engineering Design Day in the Union Ballroom	6.3
	W	04/26	53	Equivalent system	7.4
	H	04/27	54	Reading Day	
16	W	05/03		Final Exam, 10:30 -12:30	

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