

Course Syllabus

Tentative schedule for 2021

Type	Day	Date	Time	Hall	Instr	Topic
L1.	Mon	1/11	13-15	B3	XH	Introduction (Ch 1)
L2.	Wed	3/11	10-12	U1	XH	Linear systems (Ch 2.1)
L3.	Fri	5/11	8-10	E3	XH	Linear systems (Ch 2.2)
E1.	Mon	8/11	13-15	U31	IH	Linear systems (Ex 1.4, Ex 1.5, an exercise similar to 1.3)
L4.	Wed	10/11	10-12	U1	XH	Reachability (Ch 3.1)
L5.	Thu	11/11	8-10	U21	XH	Reachability cont'd (Ch 3.2)
L6.	Fri	12/11	8-10	U1	XH	Observability (Ch 3.4-3.5)
L7.	Mon	15/11	13-15	U1	XH	Observability and stability (Ch 3.7, Ch 4.1-4.3)
E2.	Wed	17/11	10-12	E3	IH	Reachability and observability (Ex 2.1, Ex 2.3, similar exercises on observability)
L8.	Fri	19/11	8-10	U1	XH	Stability cont'd and Realization theory (Ch 4.3, Ch 5.1)
L9.	Mon	22/11	13-15	U21	XH	Canonical forms and Kalman decomposition (Ch 5.1-5.2)
E3.	Wed	24/11	10-12	U1	IH	Stability and realization theory (Ex 3.2, exercises on input-output stability and Lyapunov equation, Ex 4.6 a&b)
L10.	Fri	26/11	8-10	E3	XH	Minimal realizations (Ch 5.2)
L11.	Mon	29/11	13-15	U31	XH	Minimal realizations, State feedback (Ch 5.3, Ch 6.1)
E4.	Thu	2/12	8-10	U21	IH	Realization theory (Ex 4.6 b-f)
L12.	Wed	1/12	10-12	U1	XH	State feedback (cont'd) and observer based control (Ch 6.1-Ch 6.2)
L13.	Fri	3/12	8-10	U1	XH	Linear quadratic control (Ch 7)
E5.	Mon	6/12	13-15	U1	IH	Pole assignment and observers (Ex 5.1, Ex 5.2)
L14.	Wed	8/12	10-12	U1	XH	LQ and algebraic Riccati equation (Ch 8)
L15.	Thu	9/12	8-10	U31	XH	LQ, Least squares estimation (Ch 9.1.1-Ch 9.1.2)
E6.	Fri	10/12	8-10	U1	IH	Linear quadratic control
L16.	Mon	13/12	13-15	L51	XH	Kalman filtering (Ch 9.1.3-Ch 9.1.4)
L17.	Wed	15/12	10-12	U1	XH	Kalman filtering (Ch 9.2)
E7.	Fri	17/12	8-10	U1	IH	Kalman filtering

