

Date	Main topics	Class topic	Suggested reading	Assignments	Tests, comments
8/17 Mon	Signals and systems	Introduction & review; CT & DT signals	OW 1.0–1.1		Recordings: class1a, class1b (Zoom; links on Moodle)
8/19 Wed		Power vs. energy signals; signal types overview	OW 1.2–1.3		Recording: class2 (Zoom; link on Moodle)
8/24 Mon		Exponential signals; introduction to impulse and step functions	OW 1.3–1.4		
8/26 Wed		DT step function; DT impulse function (delta)	OW 1.4		
8/31 Mon		CT step and delta functions; systems overview	OW 1.5		
9/2 Wed		System properties (cont'd): linearity, time-invariance, stability	OW 1.5–1.6	HW1 due Sep 4	
9/7 Mon	Labor Day				No class
9/9 Wed	LTI systems	Impulse response; DT convolution	OW 2.1–2.2	HW2 due Sep 11	
9/14 Mon		DT convolution (cont'd); CT convolution	OW 2.2		
9/16 Wed		CT convolution (cont'd)	OW 2.2		
9/21 Mon		LTI system properties: commutative, distributive, associative; causal, stable, invertible	OW 2.3		
9/23 Wed		More convolution	OW 2.2–2.3	HW3 due Sep 25	End of material for Test 1
9/28 Mon	Fourier analysis	CT Fourier series; sinusoids as eigenfunctions and basis functions	OW 3.0–3.3		
9/30 Wed		CT Fourier transform	OW 4.0–4.1		
10/5 Mon		CT power signals; filtering; review for Test 1	OW 4.2, 3.8–3.9		
10/7 Wed		Test 1		HW4 due Oct 9	In class, paper-based
10/12 Mon		CT Fourier transform properties & tables; Fourier series properties	OW 4.3, 4.6, 3.7, 3.5		
10/14 Wed		CT energy signals & LTI systems; filtering and modulation	OW 4.4–4.5, 4.7		

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10/19 Mon	Fall Break				No class
10/21 Wed	DT Fourier	DT Fourier series & Fourier transform	OW 3.6	HW5 due Oct 23	
10/26 Mon		DT Fourier transform (cont'd); DFT, FFT	OW 5.0–5.1		
10/28 Wed	Sampling	Sampling theorem, aliases	Proakis & Manolakis		
11/2 Mon		Sampling theorem (cont'd)	Proakis & Manolakis		
11/4 Wed	Laplace transform	Bilateral Laplace transform	OW 9.0–9.2	HW6 due Nov 6	End of material for Test 2
11/9 Mon	z-transform	Bilateral z-transform	OW 10.0–10.2		
11/11 Wed	Applications	Communications: 2G cellular system design			
11/16 Mon		Review for Test 2			
11/18 Wed		Test 2		HW7 due Nov 20	In class, paper-based
11/23 Mon	Machine learning	Introduction to machine learning			
11/25 Wed	Thanksgiving break				No class
11/30 Mon	Review	Review for final exam			
12/7 Mon	Final Exam	Final exam			12:00–14:30, in class, paper-based