

Course Calendar · MA 34900 · Spring 2025

Dr. Hood

(Subject to change. Last updated 1/9/2025)

Week	Day	Date	Class Activities	Outside of Class Activities
1	MON	1/13	Lesson 1 Syllabus, Define Signals and Systems	
	TUE	1/14		
	WED	1/15	Lesson 2 Unit Step signal and Unit Impulse signal, reiew of complex numbers	
	THU	1/16		Homework: None
	FRI	1/17	Lesson 3 Complex signals	
Week	Day	Date	Class Activities	Outside of Class Activities
2	MON	1/20	MLK Day	
	TUE	1/21		
	WED	1/22	Lesson 4 System properites	
	THU	1/23		Homework: Assignment 1
	FRI	1/24	Lesson 5 LTI Systems, Convolution	

Week	Day	Date	Class Activities	Outside of Class Activities
3	MON	1/27	Lesson 6 Convolution examples in Signal Processing	
	TUE	1/28		
	WED	1/29	Lesson 7 2D Convolution and Image Processing	
	THU	1/30		Homework: Assignment 2
	FRI	1/31	Lesson 8 Unit Impulse Response	
Week	Day	Date	Class Activities	Outside of Class Activities
4	MON	2/3	Lesson 9 Vector Spaces	
	TUE	2/4		
	WED	2/5	Lesson 10 Vector Spaces: Linear Independence, Basis	
	THU	2/6		Homework: Assignment 3
	FRI	2/7	Lesson 11 Finite Dimensional Vector Spaces	

Week	Day	Date	Class Activities	Outside of Class Activities
5	MON	2/10	Lesson 12 Inner Product Spaces, Orthonormal Basis	
	TUE	2/11		
	WED	2/12	Lesson 13 Infinite Dimensional Inner Product Spaces, Hilbert Space	
	THU	2/13		Homework: Assignment 4
	FRI	2/14	Exam 1 Review	
Week	Day	Date	Class Activities	Outside of Class Activities
6	MON	2/17	Exam 1	
	TUE	2/18		
	WED	2/19	Lesson 14 A Basis for Periodic Signals	
	THU	2/20		Homework: Assignment 5
	FRI	2/21	Lesson 15 Fourier Series	

Week	Day	Date	Class Activities	Outside of Class Activities
7	MON	2/24	Lesson 16 Fourier Isometry and Pythagorean Theorem	
	TUE	2/25		
	WED	2/26	Lesson 17 Eigenfunctions and Frequency Repsonse	
	THU	2/27		Homework: Assignment 6
	FRI	2/28	Lesson 18 Frequency Response and ODEs	
Week	Day	Date	Class Activities	Outside of Class Activities
8	MON	3/3	Lesson 20 Low-Pass and High-Pass Filters	
	TUE	3/4		
	WED	3/5	Lesson 21 Discrete Fourier Transform	
	THU	3/6		Homework: Assignment 7
	FRI	3/7	Lesson 22 DFT of common signals	

Week	Day	Date	Class Activities	Outside of Class Activities
9	MON	3/10	Lesson 23 Properties of the DFT	
	TUE	3/11		
	WED	3/12	Lesson 24 Coding Complexity of the DFT	
	THU	3/13		Homework: Assignment 8
	FRI	3/14	Lesson 25 Fast Fourier Transform	
Week	Day	Date	Class Activities	Outside of Class Activities
10	MON	3/17	Spring Break	
	TUE	3/18	Spring Break	
	WED	3/19	Spring Break	
	THU	3/20	Spring Break	
	FRI	3/21	Spring Break	

Week	Day	Date	Class Activities	Outside of Class Activities
11	MON	3/24	Lesson 26 FFT and frequency response, convolution vs. Circular Convolution	
	TUE	3/25		
	WED	3/26	Lesson 27 FFT and Filters	
	THU	3/27		Homework: Assignment 9
	FRI	3/28	Lesson 28 FFT and denoising	
Week	Day	Date	Class Activities	Outside of Class Activities
12	MON	3/31	Exam 2 Review	
	TUE	4/1		
	WED	4/2	Exam 2	
	THU	4/3		Homework: None
	FRI	4/4	Lesson 29 2D FFT and noise floor, image processing	

Week	Day	Date	Class Activities	Outside of Class Activities
13	MON	4/7	Lesson 30 2D FFT	
	TUE	4/8		
	WED	4/9	Lesson 31 2D FFT and noise floor, image processing	
	THU	4/10		Homework: Assignment 10
	FRI	4/11	Lesson 32 2D FFT and thresholding, image processing	
Week	Day	Date	Class Activities	Outside of Class Activities
14	MON	4/14	Lesson 33 Connection between DFT and Fourier Series: Sampling	
	TUE	4/15		
	WED	4/16	Lesson 34 Sampling Theorem	
	THU	4/17		Homework: Assignment 11
	FRI	4/18	Lesson 35 Wavelets and Resolution Spaces, Haar Wavelet	

Week	Day	Date	Class Activities	Outside of Class Activities
15	MON	4/21	Lesson 36 Discrete Wavelet Transform	
	TUE	4/22		
	WED	4/23	Lesson 37 Haar Wavelet and Denoising	
	THU	4/24		Homework: Assignment 12
	FRI	4/25	Lesson 38 2D Haar Wavelet and Image Processing	
Week	Day	Date	Class Activities	Outside of Class Activities
16	MON	4/28	Final Exam Review	Quiet Period The University mandates that there be no homework or quizzes due this week
	TUE	4/29		
	WED	4/30	Final Exam Review	
	THU	5/1		Homework: None
	FRI	5/2	Final Exam Review	

Week	Day	Date	Class Activities	Outside of Class Activities
17	MON	5/5	Exam Week	
	TUE	5/6	The Final Exam will be announced by the Registrar's Office later in the semester	
	WED	5/7		
	THU	5/8		
	FRI	5/9		