EE379B Lectures – Spring 2026

M-W 10:30-11:50, Location TBD

Lecture #	Date	Topic	Reading	Hmwrk (out/in)
Multi-User Communication				
Dimensionality Fundamentals (Sections 1.3, 2.4, 4.1-4.7)				
1	3/30	Introduction and Dimensionality	1.3.4-7, 2.1-5, 4.1-3	1/-
2	4/1	Channel Partitioning: Vector Coding & DMT	2.5, 4.4-4.7	-/-
Information Measures				
3	4/6	MMSE Estimation, Information ,& Capacity	1.5, D.1-2, 2.3,5, 4.1	2/1
4	4/8	Separation Thm, & C-OFDM	4.4	-/-
5	4/13	Adaptive Modulation Coding Schemes	1.6,2.5, 4.4	-/-
Multi-User Fundamentals				
6	4/14	Multi-User Channels and the Capacity Region	2.6	3/2
7	4/20	Multiple Access Channels	2.7	-/-
8	4/22	Broadcast Channels	2.8	4/3
9	4/27	Broadcast Channels continued	2.8	-/-
--	4/29	**Midterm Exam** (open bk) hmwk, 9 **am Tues**		-/4
10	5/4	Interference and Other MU Channels	2.9-11	5/-
GDFE Foundation				
11	5/6	GDFE Basics	5.1-3	-/-
12	5/11	GDFE Input Optimization and Forms	5.3	6/5
Canonical Multiuser Design				
13	5/13	MAC GDFEs and Design Measures	5.4	-/-
14	5/18	MAC optimal design by weighted sums	5.4	7/5
15	5/20	BC Duality and MAC-dual Basis	5.5	-/-
16	5/29	Optimal IC Design	5.6	-/-
17	6/1	Distributed IC Design Methods	5.6	-/7
18	6/3	Channel identification and prediction	5.7	-/7opt
	6/4 ?	**FINAL exam TBD**		

Grading: midterm 30%, final project 30%, homework (PS1-6 are 4% each; PS7 is 16%) 40% Final exam.
please see https://oae.stanford.edu/faculty-staff/syllabus-statement .