

ECE-157A SCHEDULE

APRIL, SPRING 2025

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY					
		Lecture-1 3:30-4:50 PM Introduction	1	2	Lecture-2 3:30-4:50 PM Analog vs Digital Communications	3	4	<i>Pre-Lab 1 Released</i>	5		
6	7	Lecture-3 3:30-4:50 PM Birds-eye view of Digital Communications, Starting with signal spaces and I-Q Modulation Lab 1 released	8	TA Office Hours 3:00 - 4:00 PM Zoom Link Pre-Lab1 discussion	9	Lecture-4 3:30-4:50PM Introduction to Software-Defined Radios (SDRs), preparing/setting up systems for Lab-1	10	Lab-1 2:00-5:00 PM Introduction to BPSK and QPSK Modulation, Observing FM/Wi-Fi transmissions with Pluto SDR Pre-Lab 1 Due (Midnight)	11	<i>Mini-Project-1 Released</i>	12
13	14	Lecture-5 3:30-4:50PM Brief Review of DSP specific to wireless communications	15	TA Office Hours 3:00-4:00 PM Zoom Link Lab-1, Mini-Project discussion	16	Lecture-6 3:30-4:50PM Introduction to Pulse shaping and DSP filtering	17	TA Office Hours 2:00-5:00 PM Zoom Link Lab-1 discussion, Mini-Project-1 hands-on Lab-1 Report Due (Midnight)	18	<i>Pre-Lab 2 Released</i>	19
20	21	Lecture-7 3:30-4:50PM Countering ISI and Nyquist Sampling Lab 2 released	22	TA Office Hours 3:00-4:00 PM Zoom Link Pre-Lab2, Mini-Project 1 discussion	23	Lecture-8 3:30-4:50 PM Receiving and estimating bits: Estimation Theory meets Wireless Communications	24	Lab-2 2:00-5:00 PM Sampling, Filtering, and Data/Noise Generation, Lab perspective on DSP+Wireless Pre-lab 2 Due (Midnight)	25	<i>Mini-Project-2 Released</i>	26
27	<i>Mini-Project-1 Due (Midnight)</i>	28	Lecture-9 3:30-4:50 PM Estimation theory for timing recovery	29	TA Office Hours 3:00 - 4:00 PM Zoom Link Lab-2, Mini project-2 discussion	30					

ECE-157A SCHEDULE

MAY, SPRING 2025

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				<i>Lecture-10</i> 1 3:30-4:50 PM Control systems meets wireless communications: Phase Locked Loops	<i>TA Office Hours</i> 2 2:00-5:00 PM Zoom Link Lab-2 discussion, Mini-Project-2 hands-on Lab-2 Report Due (Midnight)	<i>Pre-Lab 3 Released</i> 3
4	5	<i>Lecture-11</i> 6 3:30-4:50 PM Phase Locked Loops contd. (Costas Loop) Lab 3 released	<i>TA Office Hours</i> 7 3:00 - 4:00 PM Zoom Link Pre-Lab3, Mini-project-2 discussion	<i>Lecture-12</i> 8 3:30-4:50 PM Optimal detection and Timing Recovery	<i>Lab-3</i> 9 2:00-5:00 PM Bit error rate and parameter estimation Pre-lab 3 Due (Midnight)	<i>Mini-Project 3 Released</i> 10
11	<i>Mini-Project-2 Due (Midnight)</i> 12	<i>Lecture-13</i> 13 3:30-4:50 PM Optimal Detection matched filtering	<i>TA Office Hours</i> 14 3:00 - 4:00 PM Zoom Link Lab3, Mini-project-3 discussion	<i>Lecture-14</i> 15 3:30-4:50 PM A lookback at Digital Communications with all the blocks discussed so far	<i>TA Office Hours</i> 16 2:00-5:00 PM Zoom Link Lab-3 discussion, Mini-Project-3 hands-on Lab-3 Report Due (Midnight)	<i>Pre-Lab 4 Released</i> 17
18	19	<i>Lecture-15</i> 20 3:30-4:50 PM Bit error rate calculations Lab 4 released	<i>TA Office Hours</i> 21 3:00 - 4:00 PM Zoom Link Pre-Lab4, Mini-project-3 discussion	<i>Lecture-16</i> 22 3:30-4:50 PM Decision thresholds for constellations, Shannon's theorem	<i>Lab-4</i> 23 2:00-5:00 PM Signal Impairments and Channel Estimation Pre-lab 4 Due (Midnight)	24
25	26	<i>Lecture-17</i> 27 3:30-4:50 PM Multipath and wireless channel equalization	<i>TA Office Hours</i> 28 3:00 - 4:00 PM Zoom Link Lab4, Mini-project-3 discussion	<i>Lecture-18</i> 29 3:30-4:50 PM Orthogonal Frequency Division Multiplexing (OFDM) Part I	<i>TA Office Hours</i> 30 2:00-5:00 PM Zoom Link Lab-4 discussion, Mini-Project-3 hands-on Lab-4 Report Due (Midnight)	31

ECE-157A SCHEDULE

JUNE, SPRING 2025

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY				
1	2	Lecture-19 3:30-4:50 PM OFDM Part II	3	TA Office Hours 3:00 - 4:00 PM Zoom Link Mini-project-3 discussion	4	Backup slot/TA Office Hours 3:30-4:50 PM Mini-Project-3 hands-on End of Spring Quarter Instruction	5	TA Office Hours 2:00-5:00 PM Zoom Link Mini-Project-3 hands-on	6	7
8	9	<i>Mini-Project 3 due (tentative)</i>	10	11	12	13	14			
15	16	17	18	19	20	21				
22	23	24	25	26	27	28				
29	30									