6.915 Class Schedule

Date		Topic	Subtopic	Reading
5-Sep	Thurs	Intro to DSE		Ch 1
10-Sep	Tues	Building Blocks	Packaging of digital systems, Electrical properties of wires, Modeling of simple wires	2.1-2.3
12-Sep	Thurs		Modeling of lossy wires, RC and LRC. TDR/TDT demonstration.	2.4-2.5
17-Sep	Tues		Modern VLSI circuits. Characteristics and simple models of NFETs and PFETs. Basic circuit forms. Gates and flip-flops.	3.1-3.3
19-Sep	Thurs		Circuit building blocks, differential circuits, circuit examples.	
24-Sep	Tues	Noise	Overview of noise in digital systems. Proportional and fixed noise. Noise budgets	
26-Sep	Thurs		Crosstalk. Inter-symbol interference.	
1-Oct	Tues		Stochastic noise sources. Example noise budgets. Calculating bit-error rate.	
3-Oct	Thurs	Signalling	Introduction to signalling: The signalling problem. What's wrong with most signalling methods. Considerations in signalling - output impedance, termination, levels, references.	
8-Oct	Tues		Output impedance and terminations: Current vs. voltage-mode signalling. Source termination and undertermination. Unipolar vs. bipolar signalling.	
10-Oct	Thurs		References: what are references? Isolating supply noise from references. Transmitter generated references. Current vs. voltage-mode references. Differential signalling.	
15-Oct	Tues			
17-Oct	Thurs			
22-Oct	Tues			
24-Oct	Thurs			
29-Oct	Tues			
31-Oct	Thurs			
5-Nov	Tues	Timing		
7-Nov	Thurs			
12-Nov	Tues			
14-Nov	Thurs			
19-Nov	Tues	Synchronization		
21-Nov	Thurs			
26-Nov	Tues			
28-Nov	Thurs			
3-Dec	Tues	Power Distribution		
5-Dec	Thurs			
10-Dec	Tues			

Assigned	Due	Note
		Oct 4 is Add date