

EE 359 - Wireless Communications – Winter 2020

Syllabus

Lecture #	Date	Topic	Required Reading
Introduction			
1	1/7	Overview of Wireless Communications	Chapter 1
Wireless Channel Models			
2-3	1/9, 1/13	Path Loss and Shadowing Models, Millimeter wave propagation	Chapter 2
4-5	1/14, 1/21	Statistical Fading Models, Narrowband Fading	Section 3.1-3.2.3
6	1/23	Wideband Fading Models	Section 3.3
Impact of Fading and ISI on Wireless Performance			
7	1/28	Capacity of Wireless Channels	Chapter 4
8,9,10	1/30, 2/5, 2/6	Digital Modulation and its Performance	Lec 8: Chapter 5 Lec 9-10: Chapter 6
Flat-Fading Countermeasures			
11	2/11	Diversity	Chapter 7
Midterm (outside class time)			
MT	Week of 2/17	Midterm (outside class time)	Chapters 2 to 7
12-13	2/13-2/18	Adaptive Modulation	Chapter 9.1-9.3
14-15	2/21-2/25	Multiple Input/Output Systems (MIMO)	Chapter 10, Appendix C
ISI Countermeasures			
16-17	2/27, 3/3	Multicarrier Systems, OFDM, and other multicarrier waveforms	Chapter 12
18-19	3/4-3/10	Multiuser and Cellular Systems	Topics in Chapters 13-15
Course Summary			
20	3/12	Course summary/final review (and optional advanced topics lecture over lunch)	
Final	3/17	3:30-6:30pm	<i>Pizza party to follow</i>

***No lectures Thu 1/16, Tue 2/4, Thu 2/20 and Thu 3/5. These lectures are rescheduled as:**

- Lecture on Thu 1/16 is rescheduled to Monday 1/13, 11:30-12:50 in Gates B01
- Lecture on Tue 2/4 is rescheduled to Wed 2/5, 11:30-12:50 in Gates B03
- Lecture on Thu 2/20 is rescheduled to Fri 2/21, 9:00-10:20am in Thornton 102
- Lecture on Thu 3/5 is rescheduled to Wed 3/4, 11:30-12:50 in Gates B03