Carnegie Mellon University
Department of Electrical and Computer Engineering

18-550 **Fundamentals of Communication Systems** **Fall 1999**

Prof. Vijayakumar Bhagavatula

COURSE CALENDAR

The numbers in parentheses refer to sections from the text book by B. Sklar. Please read them before the class.

08/23 (M):	Introduction, Overview (1.1)
08/25 (W):	Spectral Density, Autocorrelation, Random Signals (1.2-1.5), HW#1 given
08/30 (M):	Signals through linear systems, Bandwidth (1.6, 1.7)
09/01 (W):	Converting analog signals into bit sequences (2.1-2.7); HW#1 due; HW#2 given
09/06 (M):	LABOR DAY (NO CLASS)
09/08 (W):	Baseband transmission (2.8)
09/13 (M):	Detection of binary signals (2.9); HW#2 due; HW#3 given
09/15 (W):	Multiple levels, Intersymbol interference, partial response (2.10-2.12)
09/20 (M):	Digital bandpass modulation methods (3.1-3.3); HW#3 due
09/22 (W):	Mid-term Test #1 (chapters 1 and 2)
09/27 (M):	Coherent detection (3.4-3.5); HW#4 given
09/29 (W):	Non-coherent detection (3.6)
10/04 (M):	Error probability for binary systems (3.7); HW#4 due; HW#5 given
10/06 (W):	M-ary signaling (3.8, 3.9)
10/11 (M):	MID-SEMESTER BREAK (NO CLASS)
10/13 (W):	Waveform coding (5.1); HW#5 due; HW#6 given
10/18 (M):	Linear block codes (5.2-5.5)
10/20 (W):	Cyclic codes, Reed-Solomon codes, BCH codes (5.6-5.8)
10/25 (M):	Convolutional encoding (6.1-6.2); HW#6 due
10/27 (W):	Mid-term Test #2 (Chapters 3 and 5)
11/01 (M):	Maximum likelihood decoding, Viterbi algorithms (6.3-6.5); HW#7 given
11/03 (W):	Interleaving, Turbo codes (6.6, 6.7)
11/08 (M):	ECC in CD and DVD (notes); HW#8 given; HW#7 due
11/10 (W):	Shannon capacity (7.1-7.4)
11/15 (M):	Bandwidth-efficient modulation schemes (7.5-7.9); HW#8 due; HW#9 given
11/17 (W):	Higher-dimensional signal constellations (7.10)
11/22 (M):	Synchronization overview (8.2); HW#9 due
11/24 (W):	THANKSGIVING HOLIDAY (NO CLASS)
11/29 (M):	Multiplexing and multiaccess overview (chapter 9)
12/01 (W):	Mid-term Test #3 (chapters 6, 7, 8, 9)