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Analog Communication Lab

Yi Sun

CUNY City College

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Analog Communication Lab

Course	EE 42200/2TU	Term:	Spring 2020
Time	T. 6:30pm – 9:15pm	Room:	ST 649
Credits	1	Contact hrs:	3 hrs/wk
Prerequisite	EE 22100	Co-requisite:	EE 31200

Course Description Analog communication systems, including frequency translation, AM signal generation and reaction, double and single sideband modulation, FM signal bandwidth, narrow and wide angle modulation, FM signal generation and reception, frequency division multiplexing, and noise in FM.

Outcomes [Code]

1. Acquaint with analog communications systems and equipment via experiments [b] [k].
2. Acquaint with analog communications theory via experiments [a].

Textbook Reference Electronic materials are available and self-contained.
A. B. Carlson, P. B. Crilly, and J. C. Rutledge, *Communications Systems*. McGraw-Hill Book Co. ISBN 978-0-07-338040-7. (Optional)

Instructor	Yi Sun	Phone:	(212)650-6621
Room	ST-622	Office hour:	T. Th. 2:00 – 3:30 pm
E-mail	ysun@ccny.cuny.edu		

Experiments	Week 1	Familiarization with AM equipment I
	Week 2	Familiarization with AM equipment II
	Week 3	Frequency conversion of baseband signals
	Week 4	Reception of AM signals (read); RF stage frequency response
	Week 5	Mixer and IF stage
	Week 6	Envelope detector; Time-domain observation of FM signals
	Week 7	Frequency-domain observation of FM signals
	Week 8	Determination of FM bandwidth
	Week 9	Pseudo random binary sequences
	Week 10	Detection of NRZ signals in noise
	Week 11	Generation and reception of ASK signals
	Week 12	ASK performance in noise

Report In each class meeting, a group of two students submit one report of the experiment carried out in the previous week.

Final grade Reports: 65%; Attendance: 15%; Final exam: 20%

No class