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## Communication Theory

Yi Sun  
*CUNY City College*

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# Communication Theory

<b>Course</b>	EE 31200/P	<b>Term:</b>	Spring 2020
<b>Time</b>	T. Th. 3:30pm – 4:45pm	<b>Room:</b>	NAC 5/110
<b>Credits</b>	3	<b>Contact hrs:</b>	3 hrs/wk
<b>Prerequisite</b>	EE 20500, EE 31100		

**Course Description** Amplitude modulation, frequency modulation, noise in amplitude modulation systems, analog to digital conversion, digital modulation and detection techniques.

**Outcomes [Code]**

1. Knowledge of communication theory and techniques [a].
2. Ability to analyze performance of communication systems [a] [n].

**Textbook Reference** Electronic materials are available and class notes are 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)

<b>Instructor</b>	Yi Sun	<b>Phone:</b>	(212)650-6621
<b>Room</b>	ST-622	<b>Office hour:</b>	T. Th. 2:00 – 3:30 pm
<b>E-mail</b>	<a href="mailto:ysun@ccny.cuny.edu">ysun@ccny.cuny.edu</a>		

<b>TA</b>	TBD	<b>Phone:</b>	
<b>Room</b>		<b>Office hour:</b>	
<b>E-mail</b>			

**Topics**

1. Spectral analysis
2. Random processes
3. Amplitude-modulated systems
4. Noise in amplitude-modulated systems
5. Frequency-modulated systems
6. Analog-to-digital conversion
7. Digital modulation techniques
8. Data transmission

**Homework** Homework is assigned once after a topic is finished and due one week after assignment. No late HW.

<b>Final grade</b>	HW	15%
	2 midterm exams	50%
	Final	35%

**No class**