

# EECS120 Signals and Systems 2014

**Instructor:** [Prof. Ronald Fearing](#)

Office Hours (725 Sutardja Dai Hall) Mon 2-3 pm, Tues 230-330 pm, or email ronf@eecs for appointment.

**Teaching Assistants:**

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**Course web page:** <http://www-inst.eecs.berkeley.edu/~ee120/>

Also, updates, announcements, and clarifications will be posted on Piazza:

<https://piazza.com/class/hoxs8k7giln5v9>

**Text:** Oppenheim, Willsky, *Signals and Systems*, 2<sup>nd</sup> edition

**Grading:** Homework: 15%, Midterm I 20%, Midterm II 20%, Final Exam 45%. The lowest homework grade will be dropped.

**Homework:** Homework is due by noon in the homework box near Cory 140, usually on Wed. No late homework will be accepted. The lowest HW grade will be dropped. Up to 2 people may turn in a single homework write-up with both names listed.

**Recitation Sections:** F 1-2 pm, 2-3 pm, 3-4 pm in 241 Cory Hall.

**Honest and ethical conduct.** All work submitted to the class must be your own or attributed. The penalty for unethical conduct on exams will a grade of F or NP and a letter will be written to the campus Office of Student Conduct. The penalty for unethical conduct on homework will be a -100% grade on that assignment.

## EECS120 Course Schedule (draft 1/21/2014)

Week	Lecture #	Date	Topic	Theme	
1	1	1/22	LTI systems review, convolution, stability from impulse response	Fourier Transforms	
2	2	1/27	LCCDE, FIR vs IIR, block diag, freq response		
2	3	1/29	CT and DT Fourier series		
3	4	2/3	CTFT, FT of periodic, FT properties		
3	5	2/5	FT properties: convolution, AM, freq resp 2nd order		
4	6	2/10	DTFT, properties		
4	7	2/12	DTFT II, convolution		
5	8	2/17	linear phase, 2D FT, separability, convolution, projection slice		
5	9	2/19	DFT		Discrete Time Signal Processing
6	10	2/24	sampling I		
6		2/26	<b>Midterm #1 lectures 1-8, and PS #1-4 (FS, CFT, DTFT)</b>		
7	11	3/3	sampling II, 2D DFT		
7	12	3/5	down sample, upsample		
8	13	3/10	Laplace transform, ILT by PFE	Laplace Transform	
8	14	3/12	LT properties, freq response from LDE, 2nd order response		
9	15	3/17	LT: RoC, freq resp from pole-zero		
9	16	3/19	LT: all pass, minimum phase		
10			SPRING BREAK		
11	17	3/31	Z transform	DT Laplace Transform	
11	18	4/2	ZT properties, pole-zero		
12	19	4/7	ZT freq resp, solving LDE		
		4/9	<b>Midterm #2 Lectures 1-16, and PS #1-8 (DFT, sampling, LT)</b>		
13	20	4/14	control, root locus	Control Systems	
13	21	4/16	2nd order, design by root locus		
14	22	4/21	control design II, disturb rejection		
14	23	4/23	autonomous systems		
15	24	4/28	edge detection		
15	25	4/30	Course summary and review		
16		5/5	RRR Week		
16		5/7	RRR Week		
		5/16	Friday Final Exam 0800-1100		