

LESSON PLAN

Period	Date (Tentative)	Topic	Unit No.	Teaching Methodology	Remarks	Corrective Ac- tions (Upon Revi-
1	5/10/17	BASIC OP-AMP DESIGN & COMPENSATION (GAIN)	I	BB		
"		Considerations on single stage op-amp				
2	6/10/17	TWO STAGE CMOS OP-AMP, OP-AMP GAIN, FREQUENCY RESPONSE	II	BB		
3	6/10/17	response, slew rate, Symmetric offset voltage.	II	BB		
4	8/10/17	F/B & OP-AMP Compensation - Linear settling time.	IV	BB		
5	11/10/17	OP-AMP Compensation	II	BB		
6	13/10/17	Compensating 2 stage op-amp	II	BB		
7	16/10/17	Lead Compensation	II	BB		
8	17/10/17	Compensation independent of process & temperature	II	BB		
9	20/10/17	Current mirrors & Single Stage Amp.	II	BB		
10	23/10/17	Simple, CMOS, BJT Current mirror	IV	BB		
11	24/10/17	Cascade Wilson, Widlar current mirrors	IV	BB		
12	25/10/17	Feedback - Defn, Advantages & Disadvantages				

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12	26/10	Common Source	4	PPT		
	27/10	Amplifier, Source follower	4			
13	28/10	Common gate	4	B&B		
	29/10	Amplifier	4			
14	30/10	Noise : Types of	11	PPT		
15	31/10	Noise - Thermal Noise	11	B&B		
16	1/11	Flicker noise	11	B&B		
17	2/11	Noise in op-Amp S	11	PPT		
18	3/11	Noise in Common	11	B&B		
19	4/11	Source Stage noise Bandwidth	11	B&B		
20	5/11	Advanced current mirrors & cascode	11	PPT		
	5/11	Advanced Current				
21	6/11	mirrors,	11	B&B		
22	7/11	Cascade operational	11	B&B		
23	8/11	Amplifiers	11	B&B		

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24	15/11	Current mirror OP-Amp, Linear	III	BB		
		Settling time revisited				
25	16/11	Fully differential OP-Amp	IV	PPT		
26	23/11	Common mode A/I/A ckt	IV	PPT		
27	24/11		V			
28	25/11	Current FB OP-Amp	VI	BB		
		I mvo \leftarrow 2nd order $-2f/(\omega_0^2)$ \rightarrow				
29	26/11	PLL: PLL concepts	VII	BB		
30	27/11	The PLL in the	VII	PPT		
31	28/11	Locked Condition	VII	PPT		
32	29/11	Integrated ckt PLL's	VII	BB		
33	30/11	Phase detect	VII	BB		
34	1/12	voltage Controlled	VII	PPT		
35	2/12	oscillators	VII	PPT		

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36	8/12	Case Study : Analysis	IV	PP		W/F B
37	15/12	of the 560 B	"	PP		
		Monolithic PLL	"	PP		1st p. 1e
38	19/12	Switched Capacitor Circuits: basic	V	PP		
	19/12	Building Blocks: op-amp's, capacitors	"			1st p. 1e
39	21/12	Switches, non-overlapping clocks.	"	PP		
						1st p. 1e
40	23/12	Basic operation & analysis - registers	"	PP		W/F B
41	25/12	Equivalence of Switched Capacitor	"	PP		
						1st p. 1e
42	26/12	Parametric Sensitive integrator	"	PP		1st p. 1e
						1st p. 1e
43	29/12	Parametric insensitive integrator	"	PP		1st p. 1e
						1st p. 1e
44	29/12	Signal Flow graph Analysis - 14 min	"	PP		1st p. 1e
45	29/12	Filters - Switched Sampling Fully differential	"	PP		
		filters, charged injection SC gain	"			1st p. 1e
46	2/01	Parallel Reg-Cap Circ, presetable gain dep	"	PP		
		Other Switched capacitor Circs	"			
47	4/01	FWR - peak detector, Sinusoidal oscillator	"	PP		

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48	5/10/14	Comparators : using an op-Amp for Comparators	M	PPT		
49	9/10/14	charge-injection errors - E	u	PPT		
50	11/10/14	Latched Comparators	"	PPT		
		Magnitude D/A converter				
51	12/10/14	Decoder Based Converter, resistor	v	PPT		
52	12/10/14	String Converters, Added register String Converter	1	PPT		
53	19/10/14	Binary Scale Converters, Binary	"	BD		
54	19/10/14	Weighted resistor Converters, Reduced resistance ratio ladders.	"	AA		
55	23/10/14	E-2R Based Converters Gray code	"	PPT		
		current mode A/D converters				
56	25/10/14	Magnitude A/D converter Integrating Converters	"	PPT		
		SAR converters				
57	26/10/14	DAC based SAR, Flash converter	"	PPT		
58	26/10/14	Time Interleaved A/D Converters	"	PPT		