	Topic Covered	Sections in Razavi Book	Sections in CMOS Book	Reference Papers
1	Review of MOSFETs and Circuit Analysis	2.1-2.3, 16.1-16.2	1.1-1.3, 6.1-6.5	
2	Analog Models (gm, ro, gmb, fT)	2.4	**9.1.1.-9.1.2**	
3	Small Signal Analysis with Examples		**9.1.2**	
4	Temperature dependent behavior, gain-speed tradeoff		**9.1.3**	
5	Short-channel design example		**9.2**	
6	Current mirrors, Current mirror mismatch	**5.1**	20.1	
7	Supply independent biasing, Beta multiplier reference (BMR), Start-up circuit	**11.2**	**20.1**	
8	short-channel BMR design		**20.1.4**	
9	Cascode current mirrors, cascode output resistance	5.2	**20.2**	
10	Regulated drain current mirror, Bias generation schemes, floating current mirror		**20.3**	
11	Common source (CS) amplifier: low-frequency small and large signal behavior.	**3.1-3.2**	21.1,21.2.1	
12	Source follower: low-frequency behavior, input range, applications	**3.3**	21.2.4	
13	Common gate (CG) amplifier, current buffer, Comparison of gain stages.	**3.4**	21.2.3	
14	Cascode amplifier, Lemma for estimating gain in amplifiers $(A_v=-G_mR_{out})$.	**3.5**	21.2.2	
15	Folded cascode amplifier	**3.5**		
16	Miller effect, poles and zeros in a system	**6.1**	21.2.1	
17	CS frequency response, RHP zero.	**6.2**	21.2.1	
18	RHP zero intuition, pole-splitting, Miller compensation.	**10.1-10.4**	21.2.1	
19	Generic two-stage amplifier model	**10.5**	21.2.1	
20	Source follower frequency response	**6.3**	21.2.4	
21	Common-gate amplifier frequency response	**6.4**	21.2.3	
22	Cascode amplifier frequency response.	**6.5**	21.2.2	
23	Differential signaling, basic diff-pair: input-output characteristics, Vin,CM independent biasing.	**4.1**	22.1	
24	Diff-amps – large signal behavior, half circuit analysis.	**4.2-4.4**		
25	Diff-amps – current mirror load, frequency response	**5.3, 6.6**	22.2-22.4	
26	Opamps: Gain and settling errors, non-linear settling (slewing), stability and frequency compensation.	**9.1**	24.1	
27	Telescopic and Folded cascode opamps	**9.2**	24.3	
28	Slewing in Opamps	**9.8, 10.5.1**		
29	Two-stage Single-ended Opamps	**9.3**	**24.2**	
30	Opamp Stability: loop-gain, closed-loop stability, phase margin	**9.3, 10.3-10.5**	24.1	O.1
31	Opamps: Cascode, Indirect and feedforward Compensation	**10.6**	21.2.1, 24.2	O.7-O.8, O.6
32	Gain-boosting Opamps	**9.4**	24.4	
33	Bandgap references	**11.1-11.7**	**23.1-23.2**	
34	Voltage Regulators		24.5	