ELEC 312 **Fall 2013-2014**

Tutorial problems set

Chapter#2: 7.49,7.57,8.21,8.49
Chapter#2: 8.24,8.59,8.61
Chapter#3: 9.18,9.57,9.61,9.75,9.94,9.96,9.112
Chapter#4: 10.16,10.31,10.43,10.53,10.83,10.89,10.92
Cahpter#5: 11.9,11.11,11.15, E11.9, D11.19, D11.25
Chapter#6: 17.10,17.13,17.21(b)

(note: Chapters are according to the lecture note pack.
The problem numbers are according to the ref#1, i.e., the book by Sedra and Smith- 6th edn.)

Column1	Column12	Column2	Column22	Column3
Dates	**Lectures & Tutorials**	**Topic**	**Chapter sections from course pack**	Quiz#
03/09/2013	**Lec#1**	Introduction, Review of ELEC 311		
05/09/2013	**Lec#2**	Review (cont.), Current source	2.1.1-2.1.4	
10/09/2013	**Lec#3**	Current mirror, non-idealities, tracking error	2.1.1-2.1.4	
12/09/2013	**Lec#4**	Improved current mirrors, Active loads, Applications	2.1.4, 2.1.5A-D	
			see ref book#1	
17/09/2013	**Lec#5**	Active load in current mirrors, Differential amplifiers (DA)	2.2.1-2.2.3	
19/09/2013	**Tut FA**	7.49,7.57,8.21,8.49	see ref book#1	
19/09/2013	**Lec#6**	DA (cont.), large signal operation, Calculations for small sig.	2.3.1	
24/09/2013	**Lec#7**	DA with active loads, Multistage amplifiers, simple two	2.3.2	
		stage OP-AMP, ac calculations	2.3.3	
26/09/2013	**Tut FA**	8.24,8.59,8.61	see ref book#1	
26/09/2013	**Lec#8**	Frequency response of amplifiers, Bode plot, low freq. model	3.2.1-2	
01/10/2013	**Lec#9**	SCTC method, high freq.model of BJT & MOS, OCTC method	3.3.1-2	

03/10/2013	**Tut FA**	9.18,9.57	see ref book#1	Quiz#1
03/10/2013	**Lec#10**	High-frequency resp. of single-stage ampl., Miller's theorem	3.4, 3.5.1-2	
08/10/2013	**Lec#11**	Analysis with transfer function, dominant pole, gain bandwidt	3.5.3	
10/10/2013	**Tut FA**	9.61,9.75,9.94	see ref book#1	
10/10/2013	**Lec#12**	High-freq. response of single stage amplifiers (BJT,MOS)	3.5.3 & sub-sec	
15/10/2013	**Lec#13**	Wide band multi-stage amplifiers	3.6	
17/10/2013	**Lec#14**	Wide-band DA (cont.), review	3.6 & sub-sec	**MT test**
17/10/2013	**Tut FA**	9.96,9.112	see ref book#1	
22/10/2013	**Lec#15**	Negative feedback, basic configurations of feedback, two-port	4.1, 4.2	
24/10/2013	**Lec#16**	loaded amplifier technique, calculation examples	4.2 (contd)	
24/10/2013	**Tut FA**	10.16,10.31,10.43	see ref book#1	Quiz#2
29/10/2013	**Lec#17**	Calculation examples	4.3 & sub-sec	
31/10/2013	**Lec#18**	Negative feedback & stability, Nyquist plot	4.4	
31/10/2013	**Tut FA**	10.53,10.83	see ref book#1	
05/11/2013	**Lec#19**	Gain margin, Phase margin, frequency compensation	4.4 & sub-sec	
07/11/2013	**Lec#20**	Class A,B,AB stages. Calculations with class A stage	5, 5.1.1	
07/11/2013	**Tut FA**	10.89,10.92,11.9	see ref book#1	Quiz#3
12/11/2013	**Lec#21**	Class B output stage, efficiency, class AB stage	5.1.2-5.1.3	
14/11/2013	**Lec#22**	Calcultaions with class AB stage, Biasing in class AB stage	5.1.3-5.2	
14/11/2013	**Tut FA**	11.11,11.15	see ref book#1	
19/11/2013	**Lec#23**	Other configurations for class AB stage, Thermal consider-	5.2-5.5	
		ations. Heat sink, power BJT devices		

21/11/2013	**Lec#24**	Oscillators, Wien Bridge, Phase shift oscillators	6.8,6.9	
21/11/2013	**Tut FA**	E11.9,D11.19,D11.25	see ref book#1	Quiz#4
26/11/2013	**Lect#25**	LC oscillators; Review -I (chapter by chapter)	6.9, 6.10	
28/11/2013	**Lec#26**	Review class (Students ask Q.)		
28/11/2013	**Tut FA**	17.10,17.13		
Final Exam	**(Syllabus)**	**TBA**		