

KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS

Electrical Engineering Department

(TERM 052)

EE303: Electronics II

INSTRUCTOR	OFFICE	PHONE	OFFICE HOURS	E-MAIL
Dr. Muhammad al-Gahtani	14-216-1	3695	1:00-1:50 (SMW)	gahtani@kfupm.edu.sa

W		Topics	Text	Lab./PSpice
1	Feb 12 – 16	Poles, Zeros, Bode plot, Transfer function, S/C & O/C Time constants, (STC Circuit)	App D, E 1.6, 6.4	NO LAB (1st week)
2	Feb 18 – 22	Low Frequency Response of CS and CE amplifiers, High freq. response of amps.	4.9, 5.9, 6.6	(1) PSpice: Circuit Analysis using Spice
3	Feb 25 – Mar 1	Miller's Theorem, CB, CG and Cascode amplifiers, Emitter follower (CC) amp.	6.4.4, 6.7, 6.10	(2) PSpice: Transistor Modelling using Spice
4	March 4 - 8	Source follower (CD) Amplifiers, CC-CE Cascade Amplifier. Frequency response of Differential Amp.	6.10 6.11.1 7.6.1, 6.11.3	(3) Expt: Gain-Frequency Characteristics of Single Transistor Amplifiers
5	March 11 - 15	Review of Ideal Operation Amplifiers. Inverting Amplifiers, Integrators, Differentiators, Summer, Non-inverting Configurations. Difference Amp.	2.1, 2.2, 2.8	(4) Expt: Gain-Freq. Chrac. of Multistage Trans. Amp.
6	March 18 - 22	Open-loop Gain & bandwidth effect, Slew Rate, Offset Voltage, Input Bias Current	2.5, 2.6, 2.7	(5) Expt: Linear Application of operational Amplifier.
Sunday, March 19, Exam I (6:30PM – 8:00PM) [Room 14-108]				
Wed. March 29, Last Day for dropping courses with grade 'W'				
7	March 25 - 29	Filter Transmission, Types, Transfer function, 1 st Order filter functions	12.1, 12.2, 12.4	NO LAB (exam 1)
Sat. April 1 – Sun. April 2 (Midterm Vacation)				
8	Apr 3 - 5	2 nd order Filter functions, Biquadratic active filters	12.4 (cont), 12.8	NO LAB (Break)
9	Apr 8 - 12	Negative Feedback, Feedback topologies,	8.1, 8.2, 8.3	(6) Expt: Determination of Operational Amplifier Characteristics.
Wed. April 19, Last Day for withdrawal from all courses with grade 'W'				
10	Apr 15 - 19	Series-Shunt feedback Amplifier, Series-Series	8.4, 8.5	(7) Expt: Active Filters
11	Apr 22 - 26	Shunt-Shunt, Shunt-Series	8.6, 8.7	(8) Expt: Feedback and Nonlinear Distortion
Sunday, April 30, Exam II (7:30PM – 9:00PM) [Room 14-108]				
12	Apr 29 – May 3	Stability Problem. Sinusoidal Oscillators (feedback loop, nonlinear amplitude ...)	8.8. 13.1, 13.2	NO LAB (exam 2)
13	May 6 - 10	Op.amp-RC (Wien-Bridge, Phase shift ..)	13.2 (Cont)	(9) Expt: Feedback Amplifiers
14	May 13 - 17	Crystal Oscillators, Multivibrators	13.3, 13.4	(10) Expt: Sinusoidal Oscillators
15	May 20 - 24	Multivibrators (cont.), Project work	13.4	Lab Final
16	May 27 - 28	Review		

Grade Distribution:

Quizzes + Participation + Home works + Class Project	20%
2 Major Exams	30%
Laboratory	20%
Final Exam	30%

Absences: University Rule: 6 unexcused absence → Warning; 9 unexcused absences → DN

Text Book : Microelectronic Circuits (5th edition) by Sedra and Smith.