

KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS
Electrical Engineering Department
(TERM 032)

EE303: Electronics II

INSTRUCTOR	OFFICE	PHONE	OFFICE HOURS	E-MAIL
Dr. Saad M. Al-Shahrani	14-258-4	1508	SMW 12:20–1:30 PM	saadms@kfupm.edu.sa

W		Topics	Text	Lab./PSpice
1	Feb 14 – 18	Poles, Zeros, Bode plot, Transfer function, S/C & O/C Time constants, (STC Circuit)	7.1, 7.2, (App F)	NO LAB
2	Feb 21 – 25	Low Frequency Response of CS and CE amplifiers, High freq. response of amps.	7.3, 7.4	(1) PSpice: Circuit Analysis using Spice
3	Feb 28– Mar 3	Miller's Theorem, CB, CG and Cascode amplifiers, Emitter follower (CC) amp.	7.5, 7.6	(2) PSpice: Transistor Modelling using Spice
4	Mar 6 – 10	Source follower (CD) Amplifiers, CC-CE Cascade Amplifier.	7.6 (cont), 7.7	NO LAB
5	Mar 13 – 17	Frequency response of Differential Amp. Review of Ideal Operation Amplifiers.	7.7(cont), 7.8, 2.1-2.2	(3) Expt: Gain-Frequency Characteristics of Single Transistor Amplifiers
6	Mar 20 – 24	Inverting Amplifiers, Integrators, Differentiators, Summer, Non-inverting Configurations. Difference Amp.	2.3, 2.4, 2.5, 2.6,	(4) Expt: Gain-Freq. Chrac. of Multistage Trans. Amp.
Major Exam # 1		Sunday, 28th March		
7	Mar 26 – 31	Open-loop Gain & bandwidth effect, Slew Rate, Offset Voltage, Input Bias Current	2.7, 2.8, 2.9	NO LAB
Mar 30 Last day for dropping courses with grade 'W'				
8	Apr 3– 7	Filter Transmission, Types, Transfer function, 1 st Order filter functions	11.1, 11.2, 11.4	(5) Expt: Linear Application of operational Amplifier.
9	Apr 10 – 14	2 nd order Filter functions, Biquadratic active filters	11.4 (cont), 11.8	(6) Expt: Determination of Operational Amplifier Characteristics.
10	Apr 17 – 21	Negative Feedback, Feedback topologies, Series-Shunt feedback Amplifier	8.1, 8.2, 8.3, 8.4	(7) Expt: Active Amplifiers
11	Apr 24– 28	Series-Series, Shunt-Shunt, Shunt-Series	8.5, 8.6, 8.7	NO LAB
12	May 1 – 5	Stability Problem. Sinusoidal Oscillators (feedback loop, nonlinear amplitude ...)	8.8, 12.1, 12.2	(8) Expt: Feedback and Nonlinear Distortion
Major Exam #2		Saturday, 8th May		
13	May 8 – 12	Op.amp-RC (Wien-Bridge, Phase shift ..)	12.2 (Cont)	(9) Expt: Feedback Amplifiers
14	May 15–19	Crystal Oscillators, Multivibrators	12.3, 12.4	(10) Expt: Sinusoidal Oscillators
15	May 22 – 26	Project work and Review		Lab Final

Grading: Attendance 3 %, HW 3%, Quizzes 9 %, Design project 5%, Two Major Exams 30%, Final 30 %, Lab. 20%.

Absence: University Rule: 6 unexcused absences → Warning; 9 unexcused absences → DN

Text Book : Microelectronic Circuits (4th edition) by Sedra and Smith.