KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS

Electrical Engineering Department

(TERM 041)

EE303: Electronics II

INSTRUCTOR	OFFICE	PHONE	OFFICE HOURS	E-MAIL
Dr. Hussain Alzaher	14-272	1434	9:20-9:50AM+12:30-1PM	alzaherh@kfupm.edu.sa

W		Topics	Text	Lab./PSpice
1	Sep 11 – 15	Poles, Zeros, Bode plot, Transfer function, S/C & O/C Time constants, (STC Circuit)	7.1, 7.2, (App F)	**NO LAB**
2	Sep 18 – 22	Low Frequency Response of CS and CE amplifiers, High freq. response of amps.	7.3, 7.4	**(1) PSpice**: Circuit Analysis using Spice
3	Sep 25– 29	Miller's Theorem, CB, CG and Cascode amplifiers, Emitter follower (CC) amp.	7.5, 7.6	**(2) PSpice**:Transistor Modelling using Spice
4	Oct 2 – 6	Source follower (CD) Amplifiers, CC-CE Cascade Amplifier.	7.6 (cont), 7.7	**NO LAB**
5	Oct 9-13	Frequency response of Differential Amp. Review of Ideal Operaion Amplifiers.	7.7(cont), 7.8. 2.1-2.2	**(3) Expt**: Gain-Frequency Characteristics of Single Transistor Amplifiers
Major Exam # 1		***Sat. Oct. 16 (Class time)***		
6	Oct 16-20	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.
Tue. Oct 26 Last day for dropping courses with grade 'W'				
7	Oct 23 – 27	Open-loop Gain & bandwidth effect, Slew Rate, Offset Voltage, Input Bias Current	**2.7**, 2.8, 2.9	**NO LAB**
8	Oct 30-Nov 3	Fiter Transmission, Types, Transfer function, 1st Order filter functions	11.1, 11.2, 11.4	**(5) Expt**: Linear Application of operational Amplifier.
9	Nov 20 – 24	2nd order Filter functions, Biquadratic active filters	11.4 (cont), 11.8	(6) Expt**: Determination of Operational Amplifier Characteristics.**
10	Nov 27– Dec 1	Negative Feedback, Feedback topologies, Series-Shunt feedback Amplifier	8.1, 8.2, 8.3, 8.4	**(7) Expt**: Active Amplifiers
11	Dec 4– 8	Series-Series, Shunt-Shunt, Shunt-Series	8.5, 8.6, 8.7	**NO LAB**
12	Dec 11 – 15	Stability Problem. Sinusoidal Oscillators (feedback loop, nonlinear amplitude …)	8.8. 12.1, 12.2	**(8) Expt**:Feedback and Nonlinear Distortion
Major Exam #2		***Mon., Dec 13 Exam II (7-9PM)***		
13	Dec 18 – 22	Op.amp-RC (Wien-Bridge, Phase shift ..)	12.2 (Cont)	**(9) Expt**: Feedback Amplifiers
14	Dec 25–29	Crystal Oscilators, Multivibrators ….	12.3, 12.4	**(10) Expt**: Sinusoidal Oscillators
15	Jan 1– 3	Project work and Review		**Lab Final**

***Grade Distribution*:**

Quizzes + Participation + Home works + Class Project	**10% + 5% + 5%+5%**
2 Major Exams (Major 1 + Major 2)	**15% + 15%**
Laboratory	**20%**
Final Exam	**25%**

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

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