<u>Engr228</u>

<u>Circuit</u> Analysis

Spring 2020

TEXT: zyBooks, Online interactive text book with subscription code: WALLAWALLAENGR228Spring2020

Notes:

- This is a live document and will be updated frequently.
- **Participation, Challenge,** and **Supplemental** exercises will all be due at the start of class on the date listed below.
- Supplemental exercises need to be scanned or photographed and submitted to the appropriate D2L Dropbox. Remember to refer to the <u>School of Engineering Homework Standards</u> for proper formatting of your work.

Date		Topics	Reading	Participation	Challenge	Name
		LAB0: Optional Meeting at Scheduled Time				
М	Mar 30	Course Introduction				
W	Apr 1	Circuit Representation	1.4			
		Electric Charge and Current	1.5	All	All	P1, C1
F	3	Voltage and Power	1.6	All	None	P2
		Circuit Elements	1.8	All	None	
		Ohm's Law	2.1	None	None	
		Lab1: Introduction and DC Measurements				L1
М	6	Ohms Law, Kirchhoff's Laws	2.1,3	2.1.3-9	All	P3, C3
W	8	Equivalent Circuits – Voltage and Current Dividers	2.4	2.3.1-5	2.3.1-2, Ex 2.3.11	P4, C4
F	10	Analysis Techniques – Node Voltage Method	3.2	2.4.1-6	2.4.1-3	hw5
		Lab2: Node and Mesh Analysis				
М	13	Analysis Techniques – Mesh Current Method	3.3	3.2.1-3	3.2.1-2	hw6
W	15	Super-Node and Super-Mesh Analysis	3.2-3	3.3.1-4	None	hw7
F	17	Source Transformations. Thévenin and Norton Equivalent Circuits	2.4,3.8	3.2.4, 3.3.5	3.3.1	hw8
		Lab3: Thevenin and Norton Circuits				
М	20	Thévenin and Norton	3.8	2.4.7,3.8.1-2	3.8.1	hw9
W	22	Maximum Power Transfer	3.10	3.8.3-4	3.8.2	hw10
F	24	Mid-term Review, Problem Session		All	All	hw11
		Lab4: Attenuator Analysis				
Μ	27	Mid-Term Test #1	Chap 1-3			
W	29	Capacitors, Inductors	5.2,4			

Date		Topics	Reading	Participation	Challenge	Name
F	May 1	Response of the RC Circuit	5.5	All from 5.2	All from 5.2	hw12
		Lab5: First-Order Circuits				
М	4	Response of the RC Circuit	5.5			
W	6	Response of the RL Circuit	5.6	All from 5.5	All from 5.5	hw13
F	8	Parallel RLC Circuits	6.8	All from 5.6	All from 5.6	hw14
		Lab6: Second-Order Circuits - Part I				
М	11	Parallel and Series RLC Circuits	6.2,4-8	All from 6.1	All from 6.1	hw15
W	13	Parallel and Series RLC Circuit Examples	6.2,4-8	All from 6.8	None	hw16
F	15	AC Analysis – Sinusoids and Complex Numbers	7.1-2	All from 6.4	None	hw17
		Lab7: Second-Order Circuits – Part II				
М	18	AC Analysis – Phasor Domain (Guest Lecture)	7.4-5	All from 7.1-2	All from 7.1-2	hw18
W	20	AC Analysis	7.10	All from 7.4-5	None	hw19
F	22	AC Analysis, Mid-term Review	7.10	Additional	Prob. 7.10-2,8,15	hw20
		No Lab This Week				
Μ	25	Memorial Day: No Class				
W	27	Mid-Term Test #2				
F	29	AC Power – Periodic Waveforms and Average Power	8.1,2			
		Lab8: Power Measurements				
М	Jun 1	AC Power – Average and Complex Power	8.2,4	All from 8.1	None	hw21
W	3	AC Power – Complex Power and Power Factor	8.4,5			
F	5	Results, Conclusions, Final Quiz		All from 8.2,4	All from 8.4	hw22
W	10	No Final Exam (2:00 – 4:00pm)				