

Listado de los diferentes temas a cubrirse durante el curso según el libro “*Basic Engineering Circuit Analysis*,” 11^{ma} edición. El orden a seguir puede variar y los tópicos a discutirse pueden variar.

	Topics	Textbook Reference	Lectures	Recommended Problems
Exam #1	System of Units, Basic Quantities, Circuit Elements	Chapter 1		1.3, 1.4, 1.7, 1.9, 1.11, 1.14, 1.17, 1.20, 1.23, 1.27, 1.31, 1.32, 1.36, 1.43, 1.45
	Ohm’s Law, Kirchhoff’s Laws, Single-Loop Circuits, Single-Node-Pair Circuits, Series and Parallel Resistor Combinations, Wye-Delta Transformations, Circuits with Dependent Sources	Chapter 2	1-6	2.1, 2.3, 2.6, 2.9, 2.12, 2.15, 2.19, 2.24, 2.28, 2.34, 2.40, 2.45, 2.50, 2.54, 2.57, 2.60, 2.66, 2.71, 2.77, 2.85, 2.89, 2.93, 2.98, 2.104, 2.114, 2.118, 2.125, 2.130
	Nodal Analysis, Loop Analysis	Chapter 3	7-9	3.2, 3.5, 3.7, 3.8, 3.11, 3.16, 3.22, 3.29, 3.31, 3.39, 3.44, 3.47, 3.52, 3.60, 3.65, 3.69, 3.74, 3.78, 3.82, 3.87, 3.92, 3.94, 3.100, 3.103, 3.108, 3.115, 3.118, 3.124
Exam #2	Source Transformations, Superposition, Thévenin’s and Norton’s Theorems, Maximum Power Transfer	Chapter 5	10-14	5.1, 5.5, 5.9, 5.12, 5.18, 5.22, 5.26, 5.31, 5.36, 5.42, 5.48, 5.53, 5.57, 5.62, 5.67, 5.71, 5.77, 5.83, 5.88, 5.93, 5.101, 5.107, 5.108, 5.112, 5.114, 5.119, 5.124
	Op-Amp Models, Fundamental Op-Amp Circuits	Chapter 4		4.1, 4.3, 4.8, 4.9, 4.11, 4.13, 4.14, 4.16, 4.18, 4.20, 4.23, 4.26, 4.28, 4.30, 4.33, 4.35, 4.37, 4.39, 4.41
	Capacitors, Inductors, Capacitor and Inductor Combinations	Chapter 6	15-18	6.3, 6.7, 6.13, 6.15, 6.17, 6.21, 6.25, 6.28, 6.36, 6.38, 6.44, 6.46, 6.49, 6.51, 6.57, 6.62, 6.65, 6.68, 6.71, 6.74, 6.78, 6.82
Exam #3	Sinusoids, Sinusoidal and Complex Forcing Functions, Phasors, Phasor Relationships for Circuit Elements, Impedance and Admittance, Phasor Diagrams, Basic Analysis Using Kirchhoff’s Laws, Analysis Techniques	Chapter 8	19-22	8.1, 8.3, 8.6, 8.9, 8.11, 8.14, 8.19, 8.20, 8.21, 8.24, 8.27, 8.31, 8.33, 8.38, 8.41, 8.44, 8.50, 8.53, 8.55, 8.62, 8.65, 8.71, 8.75, 8.79, 8.83, 8.89, 8.94, 8.99, 8.102, 8.106, 8.111, 8.118, 8.127, 8.134, 8.144
	Mutual Inductance, Energy Analysis, The Ideal Transformer	Chapter 10		10.1, 10.3, 10.6, 10.8, 10.11, 10.15, 10.20, 10.26, 10.32, 10.38, 10.43, 10.50, 10.56, 10.63, 10.69, 10.72
	Instantaneous Power, Average Power, Maximum Average Power Transfer, Effective or RMS Values, Power Factor, Complex Power, Power Factor Correction	Chapter 9	23-28	9.1, 9.4, 9.6, 9.9, 9.11, 9.15, 9.20, 9.26, 9.30, 9.32, 9.38, 9.43, 9.47, 9.48, 9.53, 9.59, 9.63, 9.66, 9.68, 9.70, 9.73, 9.77, 9.78, 9.81, 9.83, 9.85, 9.91, 9.93, 9.95, 9.99, 9.103, 9.108, 9.110
	Two-Port Networks: Impedance Parameters, Admittance Parameters, Hybrid Parameters, Transmission Parameters, Parameter Conversions, Interconnection of Networks	Chapter 16	29-30	16.4, 16.5, 16.8, 16.9, 16.15, 16.18, 16.21, 16.22, 16.26, 16.28, 16.29, 16.31, 16.37, 16.43, 16.47, 16.53, 16.55