ECE
1270

UNIT 2
STUDY GUIDE*

THE
UNIVERSITY
OF UTAH

To pass the unit exam, you must be able to do the following (using books and notes):

CO𝝢CEPTUAL TOOLS		Learning Objective	Reading
CIRCUITS BASIC DC QUANTITIES Power	2.1	Calculate power dissipated by circuit elements.	Chap 1: Sec 1.6
CIRCUITS NODE-VOLTAGE METHOD Example 1 (pdf) Example 2 (pdf) Example 3 (pdf) Matlab (txt) Example 4 (pdf)	2.2	Use the node-voltage method in analyzing and designing circuits.	Chap 4: Sec 4.1-4.4
CIRCUITS MESH-CURRENT METHOD Example 1 (pdf) Example 2 (pdf) Example 3 (pdf)	2.3	Use the method of mesh currents in analyzing and designing circuits.	Chap 4: Sec 4.5-4.8
CIRCUITS THEVENIN EQUIVALENT Thevenin<->Norton xform EXAMPLE (PDF)	2.4	Transform current sources to voltage sources and vice versa and take advantage of these transformations in analyzing and designing circuits.	Chap 4: Sec 4.9
CIRCUITS THEVENIN EQUIVALENT Example (pdf)	2.5	Apply Thevenin's theorem and construct a Thevenin's model for a given circuit. Use Thevenin's models to find specified voltages and currents.	Chap 4: Sec 4.10-4.11

---

* The material in this handout is based extensively on concepts developed by C. H. Durney, Professor Emeritus of the University of Utah.