UNIVERSITY OF UTAH
ELECTRICAL ENGINEERING DEPARTMENT

EE 1000

UNIT 2
LEARNING OBJECTIVES*

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

2.1 Calculate power furnished or absorbed by circuit elements.

2.2 Use the node-voltage method in analyzing and designing circuits.

2.3 Use the method of mesh currents in analyzing and designing circuits.

2.4 Transform current sources to voltage sources and vice versa and take advantage of these transformations in analyzing and designing circuits.

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.

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

UNIT 2
STUDY GUIDE

References: Sections 1.6, 4.1-4.11 in the textbook.

2.1 Work Problems 1.10 and 1.13.

2.2 a. Work drill exercises 4.1-4.4 carefully to be sure that you can identify the number of branches and nodes in circuits and from those determine how many equations are needed to describe a circuit.

b. Study Sections 4.2-4.4 carefully, working the examples and drill exercises.

c. Work as many of Probs. 4.1-4.26 in the text as you need to. Note that answers to some of these are given.

2.3 a. Study Sections 4.5-4.8 and work the examples and drill exercises.

b. Work as many of Probs. 4.27-4.42 in the text as you need to.

2.4 a. Study Section 4.9.

b. Work Probs. 4.51-4.54 in the text.

2.5 a. Study Sections 4.10 and 4.11.

b. Work Probs. 4.56, 4.58-4.61, and 4.66.