

University of Arkansas - Fort Smith
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General Syllabus

ELEG 21031 Electric Circuits I Laboratory

Credit Hours: 1

Lecture Hours: 0

Laboratory Hours: 2

Prerequisite or corequisite: ELEG 21043 Electric Circuits I
Effective: 2018-2019

I. Course Information

A. Catalog Description

Experimental investigation of the steady-state behavior of resistive circuits excited by DC sources. Topics include measurement procedures, resistive networks, Thevenin and Norton equivalents, power, and transient responses.

II. Student Learning Outcomes

A. Subject Matter

Upon successful completion of this course, the student will be able to:

1. Demonstrate the content in Electric Circuits I using hands-on lab exercises.
2. Explain electric and DC circuits.
3. Explain voltage and current for inductors and capacitors.
4. Show the natural response of RC, RL, and RLC circuits.

B. University Learning Outcomes

This course enhances student abilities in the following area:

Analytical Skills

Critical Thinking Skills - The student will identify and solve problems through hands-on lab exercises to complement the Electric Circuits I lecture.

III. Major Course Topics

- A. Pspice
- B. Measurement Procedures
- C. Resistive Networks
- D. Thevenin and Norton equivalents
- E. Power
- F. Transient Response