University of Arkansas - Fort Smith
5210 Grand Avenue
P. O. Box 3649
Fort Smith, AR 72913-3649
479-788-7000

General Syllabus

EET 4503 Virtual Instrumentation

Credit Hours: 3 Lecture Hours: 3 Laboratory: 0

Prerequisite or corequisite: ELEC 1243 Introduction to Programming or ITC 1374 Programming for Engineers.

Effective Catalog: 2018-2019

I. Course Information

A. Catalog Description

Introduction to virtual instrumentation using LabView. Topics include data acquisition, control, LabView programming, and GUI design.

B. Additional Information - None

II. Student Learning Outcomes

A. Subject Matter

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

1. Write and execute programs in LabView.
2. Design custom GUIs for LabView programs.
3. Read and write data to files.
4. Understand the difference between scalar and array data handling.
5. Use LabView DAQ for data acquisition.
6. Implement simple control systems using DAQ.

B. University Learning Outcomes

This course enhances student abilities in the following areas:

Analytical Skills
Critical Thinking - Students will construct programs using the LabView programming interface to solve problems. Students will debug programs and figure out how to implement written instructions in software.
Quantitative Reasoning - Students will setup an experiment to measure data with LabView. Students will compare this data to expected results.

III. Major Course Topics

A. LabView programming
B. LabView front panel operation
C. LabView DAQ
D. Control
E. Error/Event handling
F. Noise filtering
G. Data I/O