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

General Syllabus

EET 3453 Microprocessor Applications

Credit Hours: 3 Lecture Hours: 2 Laboratory: 2

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

Effective Catalog: 2018-2019

I. Course Information

A. Catalog Description

Application of microprocessors in various environments such as laboratory equipment, controller area networks, and data acquisition.

B. Additional Information

This course will contain a practical element emphasizing selecting, implementing, and troubleshooting hardware. Projects/labs will be used to facilitate this outcome.

II. Student Learning Outcomes

A. Subject Matter

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

1. Convert between number systems.
2. Simplify Boolean logic.
3. Use registers and counters.
4. Design state machine.
5. Apply assembly and C programs for microprocessors.

B. University Learning Outcomes

This course enhances student abilities in the following area:

Analytical Skills
Critical Thinking - Students will create programs in assembly language and learn how to use Boolean logic to solve programming problems.

III. Major Course Topics

A. Boolean algebra
B. Number Systems
C. Registers, counters, state machines
D. Memory
E. Microprocessor design
F. Programming
G. Display technology
H. Key pads
I. Controller area networks