

University of Arkansas - Fort Smith
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General Syllabus

EETE 34503 Microprocessor Applications

Credit Hours: 3

Lecture Hours: 2

Laboratory: 2

Prerequisite or corequisite: ELTE 12433 Introduction to Programming or CSCE 13704 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