

University of Arkansas - Fort Smith
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General Syllabus

ELEC 2943 Electronics Capstone

Credit Hours: 3

Lecture Hours: 2

Lab Hours: 2

Prerequisite or Corequisite: ELEC 2753 Communication Systems

Effective Catalog: 2019-2020

I. Course Information

A. Catalog Description

Integrates the fundamental principles and circuits learned in other electronic courses into a complete, electronics capstone project. Must be taken in last semester of program.

B. Additional Information

This course will incorporate all previous electronics concepts and principles as the students practice solving problems in preparation for the Electronics Technology Association, International Certified Electronics Technician Apprenticeship Exam. The students will use their electronics program skills and competencies to solve a specific, proposed project. The report accompanying the project will include a formal presentation to faculty, advisory committee members, and industry partners in both oral and written form for evaluation.

II. Student Learning Outcomes

A. Subject Matter

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

1. Complete computer based and paper based practice exams in preparation for the CET Exam at a minimum 85% pass rate.
2. Prepare a real-world electronics capstone project based on a problem and criteria given by faculty, advisory committee members and industry partners.
3. Present their project solution and defend their findings before a faculty, advisory committee and industry partner evaluation panel.
4. Support their findings both orally and in written form as prescribed by the instructor and present these as part of a formal presentation to the evaluation panel.

B. University Learning Outcomes

This course enhances student abilities in the following areas:

Analytical Skills

Critical Thinking - Students must analyze CET exam practice problems and project problem(s) and apply appropriate solutions.

Quantitative Reasoning - Students must be able to utilize mathematics to solve various electrical/electronic problems

Communication Skills

Students must provide a well-documented research report both orally and in written form per instructor guidelines.

III. Major Course Topics

- A. ETA, CET Exam review and practice
- B. Problem definition, analysis and proposed solution
- C. Research and documented proof
- D. Team capstone project reporting in oral and written form