EEO 218: Digital Logic Design

Catalog Description: The course covers binary numbers, Boolean algebra, arithmetic circuits, flip-flops, analysis and design of sequential circuits, memory and programmable logic. The circuits are designed and simulated with CAD tools, assembled on a breadboard and verified with a logic analyzer.

Learning Objectives:

Upon completion of this course, students will (1) gain knowledge of the switching theory, standard building blocks, principles of digital circuit design; (2) gain experience reading and analyzing logic diagrams; (3) be able to design digital circuits utilizing both traditional methods with tabular data presentation and modern CAD tools; (4) gain experience testing hardware

PROGRAM OUTCOMES AND ASSESSMENT

On the following "3 a-k" list, please check those topics which are covered within the course:

- (a) ability to apply knowledge of math, engineering, and science 20%
- (b1) ability to design and conduct experiments 10%
- (b2) ability to analyze and interpret data 10%
- (c) ability to design system, component or process to meet needs 20%
- (d) ability to function on multi-disciplinary teams 20%
- (e) ability to identify, formulate, and solve engineering problems 20%
- (f) understanding of professional and ethical responsibility 20%
- (g) ability to communicate effectively 20%
- (h) broad education 20%
- (i) recognition of need an ability to engage in life-long learning 20%
- (j) knowledge of contemporary issues 20%
- (k) ability to use techniques, skills, and tools in engineering practice 20%
- Any other outcomes and assessments?