

## Master Syllabus

### EET 1131 - Digital Electronics

**Division:** Science, Mathematics and Engineering

**Department:** Electronics Engineering Technology

**Credit Hour Total:** 5.0

**Lecture Hrs:** 4.0 **Lab Hrs:** 3.0

**Prerequisite(s):** EET 1116

**Date Revised:** June 2014

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### Course Description:

Number systems, operations and codes, logic gates, Boolean algebra, DeMorgan's theorem and logic simplification, combination logic circuits, encoders/decoders, multiplexers/demultiplexers, adders, subtractors and ALUs, flip-flops and related devices, counters, shift registers, memory and storage, integrated circuit technologies. Four classroom, three lab hours per week.

### General Education Outcomes:

- ▣ Critical Thinking/Problem Solving Competency
- ▣ Information Literacy Competency

### Course Outcomes:

#### Digital circuits

Apply knowledge of digital devices, operations and basic systems in dealing with circuits.

**Assessment Method:** Locally developed exams

**Performance Criteria:** 70% or better

**Assessment Method:** Performance appraisals

**Performance Criteria:** Score "15" or higher on a five by five rubric

#### Circuit documentation

Document relationship between logic schematic diagram, truth table, Boolean expression and actual circuit.

**Assessment Method:** Locally developed exams

**Performance Criteria:** 70% or better

**Assessment Method:** Performance appraisals

**Performance Criteria:** Score "15" or higher on a five by five rubric

#### Technical skill

Apply technical skills when dealing with digital systems.

**Assessment Method:** Locally developed exams

**Performance Criteria:** 70% or better

**Assessment Method:** Performance appraisals

**Performance Criteria:** Score "15" or higher on a five by five rubric

### Outline:

Combinational logic  
Number systems  
Logic gates  
Memory and storage  
Boolean algebra  
DeMorgan's theorem and logic simplification  
Timing diagrams  
Encoders/decoders  
Multiplexers/demultiplexers  
Adders, subtractors, ALUs  
Flip-flops and related devices  
Counters  
Shift registers