Sinclair Community College
444 E. Third St.
Dayton, OH 45402

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

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 logicNumber systemsLogic gatesMemory and storageBoolean algebraDeMorgan's theorem and logic simplificationTiming diagramsEncoders/decodersMultiplexers/demultiplexersAdders, subtractors, ALUsFlip-flops and related devicesCountersShift registers