COURSE SYLLABUS

LAST REVIEW	Fall 2021
COURSE TITLE	Digital Electronics I
COURSE NUMBER	ELEC-0115
DIVISION	Math, Science, Business & Technology
DEPARTMENT	Electronics Engineering Technology
CIP CODE	15.0303
CREDIT HOURS	4
CONTACT HOURS/WEEK	Class: 3 Lab: 2
PREREQUISITES	None
COREQUISITES	ENGR-0108
COURSE PLACEMENT	Students must meet the correct placement measure for this course. Information may be found at: https://www.kckcc.edu/admissions/information/mandatory-evaluation-placement.html

COURSE DESCRIPTION
This course covers the operation, application, and troubleshooting of electronic logic devices, the design and construction of combination and sequential logic circuits, and the interface between digital and analogy devices. Topics include number systems, Boolean logic, digital arithmetic, logic gates, flip-flops, counters, and registers.

TEXTBOOKS
http://kckccbookstore.com/

METHODS OF INSTRUCTION
A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, and panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE
I. Digital Number Systems
II. Logic Gates and Boolean Logic
III. Sequential Logic and Circuits
IV. Combination Logic and Circuits
V. Counters and Registers

COURSE LEARNING OUTCOMES AND COMPETENCIES

Upon successful completion of this course, the student will:

A. Be able to convert between the binary, decimal, twos complement, hexadecimal, and BCD number systems.
B. Be able to perform arithmetic in the binary, hexadecimal, 2's complement and BCD number system.
C. Be able to determine the outputs of gate logic circuits.
D. Be able to create truth tables for Boolean expressions.
E. Be able to determine the Boolean expression for the output of a logic circuit.
F. Be able to determine the outputs of flip-flop circuits.
G. Be able to analyze the operation of counters and registers.
H. Be able to troubleshoot and find faults in gate circuits.

ASSESSMENT OF COURSE LEARNING OUTCOMES AND COMPETENCIES

Assessment methods may include, but are not limited to, the following: Homework, Assignments, Quizzes, Class Participation, Chapter Tests, and Final Exam. The grading scale and the process for calculating the course grades are to be determined by the individual instructors. This information will be included in each instructor's syllabus.

COLLEGE POLICIES AND PROCEDURES

Student Handbook
https://www.kckcc.edu/files/docs/student-resources/student-handbook-and-code-of-conduct.pdf

College Catalog
https://www.kckcc.edu/academics/catalog/index.html

College Policies and Statements
https://www.kckcc.edu/about/policies-statements/index.html

Accessibility and Accommodations
https://www.kckcc.edu/academics/resources/student-accessibility-support-services/index.html.