

CUMBERLAND COUNTY COLLEGE

Course: EG 121 Digital Electronics for Engineers

Credits: 3 (3:2:2)

Prerequisites: MA120 or MA121

Description: EG-121 is an introductory course in digital Electronics in which the basic concepts in digital electronics will be covered to include binary systems, Boolean algebra, binary arithmetic, basic logic gates, combinational logic circuits analysis and design, flip-flops, sequential circuits analysis and design, digital to analog and analog to digital conversions. Completion of a term project will be required.

Learning Outcomes:

At the completion of this course, students will be able to:

- Perform binary arithmetic
- Manipulate Boolean equations
- Construct truth table for combinational logic circuits
- Construct operation table for sequential circuits
- Analyze and design a basic digital circuit.

Topical Outline:

- binary arithmetic
- Boolean algebra
- Logic Gates
- combinational logic circuits
- flip-flops
- Sequential circuits
- D-to-A and A-to-D conversion

Text:

Digital Electronics: Principles and Applications, 8th ed, ISBN: 007337377X /9780073373775

Experiments Manual To Accompany Digital Electronics: Principles and Applications, 8th ed.
ISBN: 0077520807 /9780077520809

Student Assessment:

Students' evaluation in the subject will be based on 3 examinations, Laboratory performance and a final projects

Laboratory Performance	20%
Mid semester Exams	40%
Final Exam	20%
Final Project	20%

Academic Integrity:

Plagiarism is cheating. Plagiarism is presenting in written work, in public speaking, and in oral reports the ideas or exact words of someone else without proper documentation.

Whether the act of plagiarism is deliberate or accidental [ignorance of the proper rules for handling material is no excuse], plagiarism is, indeed, a “criminal” offense. As such, a plagiarized paper or report automatically receives a grade of **ZERO** and the student may receive a grade of **F** for the semester at the discretion of the instructor.

Tutoring & Project Assist:

If you are having difficulty with work in this class tutoring is available through the Center for Academic & Student Success. If you think that you might have a learning disability, contact Project Assist at 856.691.8600 x 1282 for information on assistance that can be provided to eligible students.

Before Withdrawing From This Course:

If a student experiences adverse circumstances while enrolled in this course and considers withdrawing, s/he should see an advisor (division or advisement center) BEFORE withdrawing from the class. A withdrawal may cause harmful repercussions to completion rate standards and overall GPA which can limit or eliminate future financial aid in addition to causing academic suspension.