

ELEI 106
D.C. CIRCUIT ANALYSIS
4 semester hours

The Community College of Baltimore County

Description

D.C. Circuit Analysis

Discusses the theories and applications of direct current (D.C.) electricity beginning with atomic theory; explores how current flows, the concepts and properties of voltage, resistance, work, power, and magnetism will be explained.

Co-requisite: (MATH 082 or LVM 2) or consent of instructor

Overall Course Objectives

Upon completion of this course the student will be able to:

Demonstrate in written and oral presentations, present a basic understanding of the nature of electrical circuitry, magnetic and electrical interactions and their applications.

Demonstrate a working knowledge, through a laboratory setting, of electrical theory as it is applied to a work situation.

Major Topics

Basic concepts polarity negative & positive, electrons & protons, structure of the atom, voltage, current, resistance, the closed circuit, direct current D.C. and alternating current A.C., sources of electricity. Ohms Law, series circuits, parallel circuits, series-parallel circuits, voltage dividers and current dividers, Direct Current Meters, Kirchoffs Laws, Network Theorems, Conductors and Insulators, Batteries, Magnetism and Electromagnetic Induction.

Course Requirements

The instructor will administer tests (60%), laboratory work (30%), and assignments (10%).

Other Course Information

Additional information on this course or other courses in Industrial Electricity/Electronics Degree or Certificate Programs can be obtained by contacting the IEE/Telecommunications Program Director.