Common Course Outline
ELEI 215
Communications Electronics
3 Semester Hours

The Community College of Baltimore County

Description

ELEI 215 – 3 Credits - Communications Electronics discusses basic principles of communications and communications circuits including transmission line principles, antennas, and electro-magnetic propagation. Students explore the interrelationship between digital systems and communication systems.

3 Credits: 2 lecture hours per week; 2 lab hours per week
Prerequisite: ELEI 225

Overall Course Objectives

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

1. explain basic electronic communication principles;
2. describe the most common communications circuits;
3. apply communication theory in a laboratory setting as it is applied to a work situation;
4. demonstrate how communications electronics and digital electronics are interrelated; and
5. analyze and troubleshoot communication problems and failures.

Major Topics

I. Amplitude modulation fundamentals
II. Single side-band communications
III. Frequency modulation transmission
IV. Digital communications
V. Transmission lines
VI. Antennas and wave propagation
VII. Hertz and Marconi antennas
VIII. Antenna arrays

Course Requirements

Grading/exams: Grading procedures will be determined by the individual faculty member and will be provided the first day of class.

The following will be required for this course:

1. Homework
2. Midterm and final exams
3. Minimum of four (4) lab assignments

Writing: The individual faculty member will determine specific writing assignments, but will include:

- Lab reports

Other Course Information

This course is a required core course for the Engineering Technology Electronics/Electrical Engineering Option.

Components of this course are taught in a computerized lab environment.

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