

# COURSE SYLLABUS

<b>LAST REVIEW</b>	Fall 2021
<b>COURSE TITLE</b>	DC Circuits
<b>COURSE NUMBER</b>	ELEC-0120
<b>DIVISION</b>	Math, Science, Business & Technology
<b>DEPARTMENT</b>	Electronics Engineering Technology
<b>CIP CODE</b>	15.0303
<b>CREDIT HOURS</b>	4
<b>CONTACT HOURS/WEEK</b>	Class: 3                      Lab: 2
<b>PREREQUISITES</b>	ENGR-0108 Circuit Fundamentals
<b>COREQUISITES</b>	None
<b>COURSE PLACEMENT</b>	Students must meet the correct placement measure for this course. Information may be found at: <a href="https://www.kckcc.edu/admissions/information/mandatory-evaluation-placement.html">https://www.kckcc.edu/admissions/information/mandatory-evaluation-placement.html</a>

## COURSE DESCRIPTION

This course covers the fundamentals of direct current (DC) as applied to resistive circuits. Emphasis is placed on the study and application of network theorems interrelating voltage, current, and resistance. Laboratory work will emphasize practical application of the mathematical principles developed in class. Pre-requisites: ENGR-0108 Electronic Circuit Fundamentals.

## 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. Review of Basic Electronic Principles
- II. Voltage, Current, Resistance
- III. Ohm's Law
- IV. Power and Energy
- V. Series Resistive Circuits
- VI. Parallel Resistive Circuits
- VII. Series-Parallel Resistive Circuits
- VIII. Circuit Theorem's and Conversions

## **COURSE LEARNING OUTCOMES AND COMPETENCIES**

Upon successful completion of this course, the student will:

- A. Solve electrical problems using metric prefixes and scientific notation.
- B. Define the electrical concepts of voltage, current, and resistance.
- C. Utilize Ohm's law in the analysis of electrical circuits.
- D. Compute the power and energy used in electrical circuits.
- E. Compute current, voltage and resistance in series circuits.
- F. Compute current, voltage and resistance in parallel circuits.
- G. Compute current, voltage and resistance in a series-parallel circuit.
- H. Use circuit network theorems to solve electrical 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>.