



## Electronics for Telecommunications Technology (Accelerated TKT II Prep Course)

- **School:** Stanly Community College
  - **Address :**141 College Dr., Albemarle, NC 28001
  - **Federal ID:** 011194
  - **Cost:** Tuition \$600 – No other fees
  - **Course Number:** ELC 301411 - **Units: 3**
  - **Start Date:** May 25, 2022 – End: July 13, 2022
  - **Advisor Contact:** Lydia Miller
  - **Email:** [lmiller5930@stanly.edu](mailto:lmiller5930@stanly.edu)
  - **Phone:** 704-991-0345
  - **8 week LIVE ZOOM Instructed course**
- Complete your HORIZONS Application with this information. Once you submit your LOC/Voucher to the college, you will then select the days of the week you want to attend the Zoom sessions.*

### Course Description

This course introduces DC and AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include DC and AC principles, circuit analysis laws and theorems, components, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret circuit schematics; design, construct, verify, and analyze DC/AC circuits; and properly use test equipment.

### Course Objectives

You'll gain a workable understanding of the following concepts associated with electronics and telecommunications:

- Alternating Current (AC) and Direct Current (DC) Signal Noise and Distortion
- Basic Electrical Circuits, including open/closed, shorts, grounds, wiring, etc.
- Potential Differences, Batteries, Float Voltage, Grounding, & Conductance
- Basic Electrical Transmission and Waveforms Electrical Safety Practices
- Electrical Conductors Basic and Intermediate Computer Functions, including using: Start Menu, Task Bar, Accessories/System Tools, My Computer, Control Panel, Device Manager, Network Neighborhood/My Network Places, windows, saving files, etc.
- Electrical Flow, Power, Resistance, and Current Basic Computer Software functions
- Electrostatic Discharge Digital Transmission, including advantages and disadvantages, Digital/Analog Conversion, Bit Frame, Bit Stream, T-carriers – hierarchy, overhead, framing, and data rates
- Electrical Fuses Units of Measurement, including Binary System
- Identify and use various electrical units such as Voltage, Current, Resistance, and Power
- Read and interpret technical instructions, schematic diagrams, flowcharts, etc.
- Impedance Basic Math (Addition, subtraction, multiplication, and division), positive and negative numbers

**Textbook and Materials you will need:** Reliable internet access, webcam, email, calculator.

**Prerequisite:** Basic math and familiarity with email and the internet. You will be using Zoom web-conferencing for this class.

**How this class is delivered:** This is an instructor led course with most of the content being delivered in an asynchronous method. That means all of the content is delivered via online using video lectures to view at your own time.