# Scope

This micro-credential describes the minimum criteria for an individual to demonstrate competency when using an Oscilloscope.

# MICRO-CREDENTIAL Oscilloscope Use

### Did the candidate properly inspect the Oscilloscope?

#### Candidate SHALL

1. Inspect the leads for damage
2. Verify correct rating for the anticipated voltage/amperage levels
3. Verify the battery is not low (if applicable)
4. Verify the unit is not damaged in any way that impedes the ability to read the display or operate the function switches and dials

### Did the candidate correctly identify the expected electrical values before connecting the Oscilloscope leads to the circuit?

#### Candidate SHALL

1. Correctly identify the type of voltage (AC or DC) to the evaluator
2. Correctly identify the level of voltage/amperage to the evaluator

#### ****Evaluator SHALL****

1. Verify that the lead set is of the correct scaling factor to protect the Oscilloscope from damage

### Did the candidate identify and inspect the required PPE for the anticipated electrical source?

#### Candidate SHALL

1. Identify required PPE for the anticipated voltage/amperage source
2. Properly inspect the required PPE and determine if it is safe to use

### Did the candidate correctly connect the Oscilloscope leads to the circuit being tested?

#### Candidate SHALL

1. Make the connections correctly to the circuit being tested
   1. This includes voltage probes and inductive style amperage devices

### Did the candidate correctly set up the display functions of the Oscilloscope to obtain useful information on the display?

#### Candidate SHALL

1. Correctly set amplitude and time base to obtain meaningful information on the display
2. Demonstrate the trigger function to the evaluator

#### Evaluator is encouraged

1. To ask the candidate to adjust the time base and amplitude to demonstrate knowledge of the Oscilloscope functions and the ability to zoom in or out on a waveform

### Did the candidate demonstrate a voltage and an amperage measurement to the evaluator?

#### Candidate SHALL

1. Demonstrate a voltage measurement and an amperage measurement to the evaluator
   1. These can be done on the same circuit and can be done using more than one channel of the Oscilloscope at the same time

### Did the candidate perform all tasks in a safe manner?

#### Candidate SHALL

1. Use all PPE
2. Follow equipment manufacturer safety precautions