What are the Intro to HVAC/BAS Controls course learning objectives?

- Examine basic electrical theory as it relates to Direct Digital Controls
- Communicate verbally utilizing common DDC controls vocabulary and terminology used in the HVAC industries.
- Identify various equipment and control requirements for HVAC systems.
- Evaluate and compare various DDC Control components, sensors and controlled devices.
- Analyze the strengths and weaknesses of various DDC control network protocols including BACnet, LON, and Modbus, & wireless networks topologies.
- Practice using a Digital Multi-meter and other diagnostic equipment related to DDC Controls.
- Interact with PC software to communicate with web based configurations to test and communicate with DDC field controllers.
- Create a basic DDC program that includes the three fundamental elements of controls including inputs, logic, and outputs.
- Identify and experiment with various point types including DI's/BI's (Digital Inputs/Binary Inputs), DO's/BO's (Digital Outputs/Binary Outputs), AI's/UI's (Analog Inputs/Universal Inputs) and AO's (Analog Outputs).
- Introduce and compare traditional control schemes including two position, floating point, proportional, PI (Proportional Integral) and PID (Proportional Integral Derivative).
- Evaluate PID control loops and related logic to tune loops, as it applies to common HVAC control applications.
- Demonstrate knowledge of Building Management Systems (BMS) software including graphics, alarms, trends, and scheduling functions.
- Compare common similarities between major manufacturers and distributers of DDC Controls.
- Identify skills necessary for HVAC and DDC contractors and employer's for entry level DDC technicians and the attributes to succeed and advance within the industry.