

Each year Bluegrass Educational Technologies hosts Professional Development and CEU workshops in conjunction with the KYDOE and the Kentucky Association for Career and Technical Education (KACTE) Summer Conference. This year our Summer Conference workshops have gone virtual, and Bluegrass Educational Technologies is offering them to all of our BluegrassET territories, which includes Florida.

Being that the FACTE Annual Conference & Trade Show is postponed, we would like to extend this invitation for teachers to register and attend any or all of the six CTE workshops scheduled for the last week of July. Attendees will receive certificates from [BluegrassET](#), [Festo](#), [FutureTek](#), and [NC3](#), plus there is no cost to attend.

If you have any questions, please contact Steve Cercone directly at 813-413-7836 or Steve@BluegrassET.com.

Summer Virtual Workshops:

Monday July 27, 2020

**9:30 – 11:00 am EST PLC 1, Professional Development, Certificate from BluegrassET/
FutureTek.**

Beginning/Intermediate PLC workshop. Topics include software, Studio 5000 & RSLogix 5000; point to point communications and networking (Ethernet); Tags, ladder logic with Q&A.

Course Outcomes:

- Studio 5000 & RSLogix 5000
- Set up communications point to point and ethernet
- Using tag based instructions and non-tag based instructions
- Using series and parallel instructions and outputs
- Using internal bits for programming

[Register Here for PLC 1](#)

**1:00 – 2:30 pm EST Electricity 1 & 2, Professional Development, Certificate from
Festo.**

Beginning/Intermediate Electrical workshop. Topics include basic electrical terminology, resistor coding, simple series circuits, parallel series circuits and series-parallel circuits with Q&A.

Course Outcomes:

- Explain the concept of conductor, insulator, and semi-conductor
- Understand various electrical terms including voltage, current, and resistance
- Understand how to use a resistor color code
- Identify a series-parallel circuit
- Understand how to analyze a series-parallel circuit to determine total resistance, total current, and voltage drops

[Register Here for Electricity 1 & 2](#)

Tuesday July 28, 2020

9:00 – 11:00 am EST

Introduction to Industry 4.0 Certification Training, Professional Development, Certificate from BluegrassET and NC3.

Training allows attendees to earn NC3, Industry Certification in I4.0 after workshop completion and successful final exam score. Q&A session. Instructors can then offer this certification to their students at no cost. Further instructions provided following registration.

Course Outcomes:

- Explain what Industry 4.0 is
- Discuss how these changes impact the industry, current and future employees, and other members of the manufacturing value chain
- Give examples of the benefits and value of Industry 4.0
- Explain the 'interconnected world'
- Define important terms, theories, and ideas behind Industry 4.0

[Register Here for Introduction to Industry 4.0 Certification Training](#)

1:00 – 2:30 pm EST

Collaborative Robotics and HMI, Professional Development, Certificate from Festo.

Robotics/HMI workshop. Topics include industrial and collaborative robots in I4.0 manufacturing, the evolution of HMI, HMI visibility and MES, FESTO tooling and grippers with Q&A.

Course Outcomes:

- Understand Industrial Robotics, Historical and Industry Uses
- Safety Concerns and Risk Analysis
- Collaborative Robotics, New Applications
- End of Arm Tooling
- Mobile Robotics
- Human Machine Interfaces, Shop Floor Displays
- Examples of Holistic, Systems Approach for Factory Automation Training and Education

[Register Here for Collaborative Robotics and HMI](#)

Thursday July 30, 2020

9:30 – 11:00 am EST

PLC 2, Professional Development, Certificate from BluegrassET/FutureTek.

Intermediate/Advanced PLC workshop. Topics include Beginning/Intermediate review, new Tags, ladder logic basic and advanced instructions, external devices with Q&A.

Course Outcomes:

- Using latch and unlatch instructions
- Using timers and counters and bits
- How to use compare instructions
- How to use math instructions
- How to use analog and move instructions
- External Devices

[Register Here for PLC 2](#)

1:00 – 2:30 am EST

Hydraulics and Pneumatics 1, Professional Development, Certificate from Festo.

Beginning hydraulic/pneumatic workshop. Topics include design, construction, operation, analysis of diagrams and symbols, construction of control systems with Q&A.

Course Outcomes:

- Explain the advantages and disadvantages of hydraulic systems compared to pneumatic and electrical systems
- Understand the concepts of Hydro-mechanics
- Recognize the relationship between Force, Pressure and Area
- Explain various ways pressure is developed
- Understand causes and prevention of Cavitation in Hydraulic systems
- Identify common Hydraulic Pump types and components
- Identify various cylinder configurations
- Understand various unconventional pneumatic circuits
- Identify various ISO symbols for the components discussed

[Register Here for Hydraulics and Pneumatics 1](#)