Level 3: Industry 4.0

HMI

FESTO

Level 3

With automation technology becoming increasingly prevalent throughout the production life-cycle, a strong understanding and mastery of the interfaces that connect the human operator to the controller of an industrial system has become an integral part of a successful, modern production landscape. This course expands on the Level II PLC/HMI training and prepares students for the dynamics of a modern human-machine facility focusing on HMI topics such as procedures, processes, controls, risks, and picture identification. The advent and increasing utility of the IoT (Internet of Things) or IIoT (Industrial Internet of Things) has made these connections more sophisticated. This course serves as an integral connection to other Industry 4.0 topics such as PLC and Cyber Security.

Course Topics

- Procedure to create a HMI
- Components of a HMI
- Designing and simulating hardware
- Designing basic objects, elements, system functions, and controls
- Preparing menu navigation
- Preparing HMI pictures system
- Preparing HMI pictures operation panel
- Preparing HMI pictures setup
- Preparing HMI picture identification

Core Competencies

- Ability to analyze boundary conditions for usage of a HMI
- Ability to plan the usage of a HMI
- Ability to design, simulate, and test a HMI related to the TIA portal and according to defined specifications

Equipment

Learning Factories and Labs Solutions

The Human Machine Interface (HMI) is used to display information and control the automation process that it is connected to and usually works in conjunction with a PLC or other controller. With our CP Lab and CP Factory, stu7dents will use the HMI to do a variety of things, including:

- Control the process on the station
- Read and write information to RFID tags
- View diagnostics on the station
- Manually control the station.