

**Course code** VA-BTI 07

**Course title** Digitalization with industry 4.0 in coordination with Siemens

Target Group :

Duration: 32 hours

Prerequisites: Participants should have the knowledge of programming a PLC with the use of basic instructions of various communication protocols

Course Objectives: Students will

1. be aware of Industrial revolutions and its implementation.
2. Understand communication protocols and their use during configuring, interfacing etc.

Course Outcomes: students will be able to

1. Configure PLCs
2. Implement basic programming via tasks / mechatronic system

#### Course Contents

<b>Module</b>	<b>Details</b>
1	<b>General introduction to Industry4.0 :</b> Introduction to Industrial revolutions –1.0, 2.0, 3.0 and 4.0, Introduction to general concepts of Cloud and IOT Gateways Various Siemens solutions to cloud connectivity, Siemens PLC's and SCADA Portfolio with Information Regarding Licensing of Software with TIA Portal V15.X
2	<b>Brief discussions on communication protocols for connecting devices:</b> Profinet, Demonstration of communication b/w PLC & Connectivity hardware.
3	<b>Identification of Data points and configuring Data availability on PLC and SIMATICIoT2040 :</b> TIA portal programming interface and hands-on ( Configuring PLCs, FC, FB, DB concepts, Implementing basic programming via tasks / mechatronic system, Setting up Data points) , Setting up the SIMATIC/ Mind Connect IOT 2040, Establish internet connection on device –wireless /LAN
4	<b>Connection with Automation system and Data visualization:</b> Connectivity with Automation System, Setting up Mind Sphere account and aspects, Data Visualization on Mind Sphere
5	Hands on Practice