



Industrial Automation Certification Program

A Superior Learning Experience



A superior learning experience with
our TOTAL REALITY SIMULATOR™

Industry: Cement, Lime, Mining, Steel,
Medical devices, Food & Beverage

Industrial Automation Certification Program

Our Industrial Automation Certification Program provides a superior learning experience with our TOTAL REALITY SIMULATOR™. This means that more than a simulation of a particular situation, it is an immersion in a real process, since each of the variables studied (Level, Pressure, Temperature & Flow) are measured and controlled using real-time data, which allows the student to start from the calibration of the instruments, through the programming of the equipment until reaching the platform integration level in visualization and supervision.

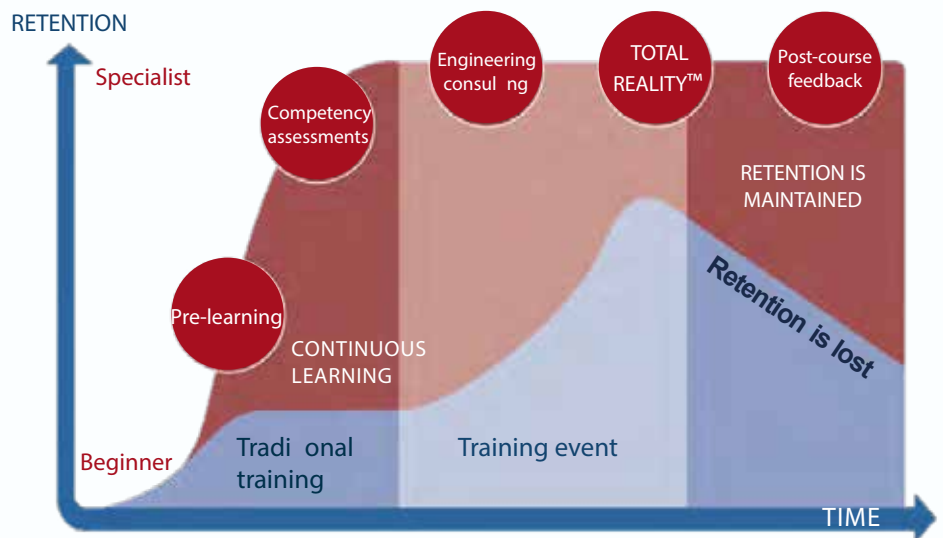


Designed to Maximize Knowledge Retention

Our instructional design simulator uses learning theory and cognitive science combined with our TOTAL REALITY SIMULATOR™ to develop courses that activate memory and improve retention and knowledge application.

We organize information into “fragments” easy-to-digest and test retention using a series of TOTAL REALITY™ tools. Carefully structured and presented, key areas are reviewed through various methods, such as case studies, exercises, and worked examples.

By repeatedly forcing the retrieval process, the learner can retain, retrieve, and apply critical information.





Benefits with the INDUSTRIAL AUTOMATION CERTIFICATION



Developed tailored to the plant's needs, in the sense that the lessons will be linked to the daily situations that the technician must face, guaranteeing the availability of the equipment.

Availability of training modules at the plant facilities beyond the completion of the courses so that the student can carry out additional practices to those developed during the certification process and thus enable the reinforcement of knowledge. Evaluations at the beginning and the end of each module to be able to identify the knowledge acquired during each session.

Our trainers can deal intensively with the questions and desires of the individual participant.

In each case, two participants work together on an equipment place during the training courses. This is developed in line with standard usage and consists of a programming device, automation equipment, and a plant model. Optimal training success is

guaranteed by small number of participants per session and the practical use of equipment. We understand the work nature and environment of our customers.

Being practice-oriented makes it possible to impart theoretical knowledge effectively. And since all theory is known to be grey, the practical exercises occupy up to a third of our course time. In every day working life, you can immediately apply what you have learned.

Scope of the Certification Program

The study plan will cover the following areas:

- a. Instrumentation
- b. Basic PLC
- c. Intermediate PLC
- d. Advanced PLC
- e. Human-Machine Interface (HMI)
- f. Supervisory Control and Data Acquisition (SCADA)
- g. Variable Frequency Drivers (VFDs)
- h. Industrial Communication Protocols



Complete the Industrial Automation Certification in our four weeks program

The Industrial Automation Certification program will cover the following topics during the four weeks of the course:

INSTRUMENTATION, NEUMATICS & VFDs

TRAINING DEVELOPMENT IN INSTRUMENTATION

Includes the following:

- Level measurement
- Pressure measurement
- Flow measurement
- Temperature measurement
- Integration with platform of PLC

TRAINING DEVELOPMENT IN PNEUMATICS.

Includes the following:

- General concepts
- Compressed air theory
- Air compression and distribution
- Air treatment
- Pneumatic actuators
- Directional control valves
- Symbols

TRAINING DEVELOPMENT IN FREQUENCY DRIVERS.

Includes the following:

- Basic theory
- VFD components
- Control & power wiring
- Basic programming
- Advanced programming

TRAINING IN PLC

DEVELOPMENT OF BASIC PLC PROGRAMMING TRAINING.

Includes the following:

- Structure of the PLC
- Programming software: RSLOGIX5000
- Basic instructions: XIC, XIO, OTE, OTL, OUT.
- Structures: timer, counter
- Troubleshooting

DEVELOPMENT OF INTERMEDIATE PLC PROGRAMMING TRAINING.

Includes the following:

- Data file integer
- Program execution instructions
- Comparison instructions
- Logical instructions
- Programming strategies

DEVELOPMENT OF ADVANCED PLC PROGRAMMING TRAINING.

Includes the following:

- Analog variables
- Scaling
- Comparison instructions
- Process control (PID)
- Scan concept
- Indirect & indexed addressing
- File instructions

HMI, SCADA & COMMUNICATION PROTOCOLS

HUMAN MACHINE INTERFACE (HMI) TRAINING

Includes the following:

- General concept
- Software for application development
- Creating applications
- Data source
- Screens & controls: navigation, animations, alarms, etc.

TRAINING DEVELOPMENT IN CONTROL SYSTEMS.

Includes the following:

- General concept
- Software for application development
- Creating applications
- Data source
- Screens & controls:
 - Diagramming and navigation
 - Generation of commands
 - Deployment and data entry
 - Animations, alarms and trends
 - Databases

TRAINING DEVELOPMENT IN COMMUNICATION PROTOCOLS.

Includes the following:

- General concept
- Serial communication
- ETHERNET IP
- MODBUS
- DEVICENET

