

ACHARYA  
INSTITUTES



Inspire-Innovate-Integrate

An ISO 9001 - 2008 Certified

# Industrial Automation Learning Centre



b.premnath reddy Initiative

In association with

**Vasundara** Automation  
& Engineering Services Pvt. Ltd.

# Domains



Breweries



Distilleries



Pharma



Chemical



Food &  
Beverages



Cement



Steel

## About Acharya Institutes

Today's world is a paradigm shift from what it was just a decade ago. Competence today means being in a state of readiness all the time. Success is redefined as the ability to constantly keep moving ahead. From the very beginning, Acharya Institutes have taken learning beyond the classrooms. It has replaced conventional one-way teaching to experiential learning. Acharya Institutes emphatically encourages the quest in the students' minds and has put up extensive academic and physical infrastructure for research and project works.

Today, the corporate world demands more than just academics. Competency enhancement in the most recent technical trends during the student life itself will lead towards dream careers.

Completing its two-decade tenure, today Acharya Polytechnic, the flagship Institute boasts as the largest private polytechnic offering technician education in various streams for students from diversified backgrounds.

Acharya's Industrial Automation Learning Centre (IALC) is an initiative to facilitate such learning.

## About VAES – Vasundara Automation and Engineering Services Pvt. Ltd. (VAES)

is a leading system integrator and EPC contractor in the field of Industrial Automation and continuous process manufacturing providing solutions in various industry verticals. VAES provides Products, Services, Technical expertise, Application Expertise, Consultancy and Training in all Industrial Segments to meet the above requirements.

VAES operates in various industry verticals of Process Automation, Production, Manufacturing, Energy Distribution and Industrial IT. VAES help clients assess their needs, and then choose and implement the right technology from today's industry leading providers of hardware, software, tools, and other enabling technologies. This assures a custom-tailored solution that not only integrates with existing multi-vendor environments, but also provides a growth path to the future.

VAES has completed major projects resulting in the implementation of Automation, SCADA and Distributed control systems involving thousands of I/O and a variety of manufacturer's hardware and software. VAES scope of supply typically includes – The conceptual design, Detailed engineering,

Procurement, Panel building and Field Wiring, PLC and HMI programming and development, Data management, Reconciliation and Reporting, Networking, Drawings and Documentation, and Installation supervision and training of the workforce.

## Objective of IALC

In order to meet the market specifications without compromising the quality, industry feel for the greater requirement of highly skilled and knowledgeable manpower.

By providing extended, rigorous industry oriented training after formal education, the students can be made **Industry ready** which increases the productivity of the industry and thus of the country as well.

## Automation

It is the use of control systems in concert with other applications of information technology, to control industrial machinery and processes and reducing the need for human intervention. In the scope of industrialization, automation is a step beyond mechanization. Automation plays an increasingly important role in the world economy and in daily experience. Engineers strive to combine automated devices with





Automobile



Machines



Power  
Generation &  
Distribution



Aeronautical



Airport



Water  
Treatment



Press



Material  
Handling

mathematical and organizational tools to create complex systems for a rapidly expanding range of applications and human activities.

Human-machine interfaces (HMI) are usually employed to communicate with PLCs and other computers, such as entering and monitoring temperatures or pressures for further automated control or emergency response.

### PLC

A Programmable Logic Controller (PLC) is a digital computer used for automation of electromechanical processes, such as control of machinery on factory assembly lines, amusement rides, or lighting fixtures. PLCs are used in many industries and machines. Unlike general-purpose computers, a PLC is designed for multiple inputs and output arrangements, extended temperature ranges, immunity to electrical noise, and resistance to vibration and impact. Programs to control machine operation are typically stored in battery-backed or non-volatile memory. A PLC is an example of a real-time system since output results must be produced in response to input conditions within a bounded time.

### The Course

**Module 1** – PLC-Hardware Configuration & Programming

**Module 2** – Human Machine Interface

**Module 3** – Drives

### Course Highlights

- Interpret software requirement specifications
- Interpret P & ID diagram for implementation of the project
- List the inputs and outputs from the P & ID diagram
- Classify different functional blocks for programming
- Program simulation, download and debug
- Draw the P & ID diagram on the HMI
- Tag the input and output on to the HMI
- Configure the communication between two PLC's
- Configure drives through PLC
- Testing PLC programs with HMI

### Certification

On successful completion of 120 hours of the programme, the students will be awarded a Certificate jointly by Acharya Institutes & VAES.

### Eligibility

- **Diploma** (E&C, E&E, Mechanical, Mechatronics, Instrumentation)
- **B.E./B.Tech** (E&C, E&E, Mechanical, Mechatronics, Instrumentation)
- **B.Sc.** (Electronics, Instrumentation)

### Prospective Employers

#### Engineering Companies

- Siemens, ABB, Rockwell, Schneider, L&T, Saipem, GE, Fanuc etc.

#### Automotive Companies

- Bosch, Ashok Leyland, TVS, Tata Motors, Honda Motorcycles etc.

#### Consumer durables

- Tata, Saint Gobain, India Gypsum, Murugappa, IFB etc.

#### FMCG

- UB, ITC, P&G, Unilever, Cadbury's, Nestle, GlaxoSmithKline, Mother Dairy

#### Metals and Minerals

- Jindal, SAIL, NALCO, Bhushan, Tata Steel etc.

#### Petro & Chemical

- Reliance, Birla, etc.

#### Machine Tool

- Kennametal, BFW, LMW, ACE etc.

#### Public Sector

- BEML, BHEL, BEL, HAL, ISRO etc.

#### Pharma

- Biocon, Jubilant, Dr. Reddy's, Ranbaxy, Millipore, Sartorius etc.





## ACHARYA INSTITUTES

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