Master the World of Control & Automation

Course Code : **IA 05**
Course Name : **Qualified Automation Professional (QAP)**
Course Duration : **400 Hrs (100 modules, each module is of 4 Hrs)**
Maximum Duration : **5 Months**

Overview of the Course:
IIATCA is conducting 400 Hrs individually cared hands on training on Qualified Automation Professional(QAP) course for fresh budding electrical, Instrumentation and Electronics engineers, start-ups, entrepreneurs and managers of project developers, process industries, factory level operations, system integrators and EPC companies. Course focus is on Industrial Automation projects design and development.

The participants will gain knowledge and will have the opportunity to interact with highly experienced automation project managers and experts on site & resource assessment, system design, project planning, best practice in design and installation, detailed feasibility report/ DPR preparation, bid preparation and evaluation, O&M planning, documentation and knowledge management etc. Course covers both hardware installation and software programming and system engineering for large and medium scale industrial automation projects.

Who should attend:
Electrical/Instrumentation and Electronics engineers who are job seekers, practicing engineers or project managers from industry who need skill up gradation.

Learning Outcome:

PLC programming in *Rockwell*, *Siemens* and *Mitsubishi*/*Schneider* make hardware and software Introduction on Industrial Automation and various components of Automation PLC Hardware fundamentals.

- Introduction on Industrial Automation and various components of Automation PLC Hardware fundamentals,
- Ladder Logic Concepts
- Introduction to real world control components used in industrial process
- Identification and conventional electrical wiring through various applications
- Use of PLC programming software through various applications
- Real world control components like contactors, relays, timers, solenoid valves etc used in industrial process
- Identification and conventional electrical wiring through various applications
- Use of PLC programming software through various applications
- Concept of analog PID applications

SCADA programming in *Rockwell* and *Siemens*

- Introduction to SCADA software
- Creating projects on SCADA Graphic displays, Screen generation
- Tags and Run mode of application with PLC communication Data logs, Alarms, Trending and Report generation

HMI Programming in either *Rockwell* or *Mitsubishi*

- Introduction to HMI programming
- HMI programming in Mitsubishi make HMI
- Creating projects on HMI Graphic displays, Screen generation
- Communication between PLC & HMI

AC Drives program in *Rockwell* and *Schneider* or *Mitsubishi*

- Introduction to AC Drives for AC motor speed control
- Speed torque characteristics of AC motors and also characteristics of mechanical loads/driven equipments
- General philosophy and various types of AC Drives
- Speed control, acceleration and braking of AC Drives
- Selection and application of AC Drives
- Configuration of V/F and vector controlled AC Drives

DCS & Networking:

- DCS verses PLC, DCS system elements
- Integrated architecture of hardware and network topology
- Data Communication in DCS
- Basic DCS Controller configuration
- Programming of DCS system in simulator
- What is Fieldbus and Network Topology
- Brief overview of various common Communication protocols used in Industry

Industrial Electrical:

- Introduction to three phase electrical systems and its measurements
- Testing and checking of single and three phase Induction Motors
- Earthpit, Earthing, use of Megger and AC HIPOT testing
- Standard selection procedures and applications for Motors, Transformers & Switchgears

Basic Instrumentation:

- Various types of Transducers and Transmitters
- Control Valve characteristics and sizing
- Calibration Techniques of few instruments

System engineering: Three complete projects on process plants.

Training Methodology: The course will be conducted as individually cared program with hands on practical training supported by lectures as and when necessary sometimes using Power Point Presentations. Candidates shall have to program the hardware and software and wiring of the components also have to be done by them.

Training Materials:
All the candidates shall be given a CD consisting of

1.Training Documents
2.Freely distributable PLC programming software

Certification:
On completion of training all candidates shall be evaluated by

1.The authorities of Mitsubishi Electric (I) Pvt Ltd and International Institute for Advanced Training on Control and Automation jointly and successful candidates shall only be issued certificates by them.

2. The authorities of Instrumentation, Automation, Surveillance & Communication Sector Skill Council (IASC) of Government of India for L5(Level 5) certification and successful candidates shall only be issued certificates by them.

3. The authorities of International Institute for Advanced Training on Control and Automation and successful candidates shall only be issued certificates by them.

Placement:
On successful completion of training 100% placement assistance is provided for this course.

Master the World of Control & Automation

Institute operating Time: 10:00 am - 08:00 pm (Monday to Saturday)
10:00 am – 04:00 pm (Sunday)

Course Fees & Enrollment: Please Contact us through

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