

**Course Name : Qualified Automation Professional (QAP) Course Code : IA-05**

**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 Outcomes:**

PLC programming in Rockwell, Siemens and Mitsubishi/Schneider make hardwares and softwares

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 softwares 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 softwares through various applications

Concept of analog PID applications

Introduction to SCADA softwares

Creating projects on SCADA Graphic displays, Screen generation,

Tags and Run mode of application with PLC communication Data logs, Alarms, Trending and Report generation

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 verses PLC's, DCS system elements

Integrated architecture of hardwares 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

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

Various types of Transducers and Transmitters

Control Valve characteristics and sizing

Calibration Techniques of few instruments

System engineering of three complete process plant

#### **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 hardwares and softwares and wiring of the components shall 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.Authorities of International Society of Automation (ISA)-Kolkata section and successful candidates shall only be issued certificates by them

2. Authorities of Mitsubishi Electric (I) Pvt Ltd and successful candidates shall only be issued certificates by them

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

#### **Course Fees:**

For candidates of India, Bhutan and Nepal – Rs 35000/-

For other International candidates - US\$ 750/-

Course fees are subject to all taxes @ actuals if applicable and payable 100% in advance

All payments either in cheques or DD should be in favour of “**Joyjeet Das Memorial Foundation and Educational Trust** “

**Duration:** 400 hrs or 100 modules (each module is of 4 Hrs)

**Maximum duration :** 5 Months

**Institute operating Time:** 10:00 am - 08:00 pm (Mon to Sat) and 10:00 am – 04:00 pm (Sun)