

Name of the Course : Industrial Automation  
 Course Code : IA101  
 Duration : 4 weeks

**Preamble:**

Stiff competition, higher quality standards and growing concerns of safety & environmental damage have pushed the Industrial sector to adapt state-of-the-art Automation Techniques for effective utilization of resources and optimized performance of the process plants. Recent trend of merging control systems associated with both factory and process automation demands knowledge from diverse fields. The industrial automation applications include automation of time critical systems that demand precise real-time readings and control.

**Objective of the Course:** This course is aimed at equipping an Engineer /Diploma holder / M.Sc holder (in specific streams) with appropriate knowledge and skills of sensors, DAQ measurement hardware, and programmable hardware and software and PLC.

**Outcome of the Course:**

On completion of the Course, the Participants shall meet the requirements of interfacing , configuring, programming, installing and operating of Data Acquisition Systems and PLCs in industrial automation .

**Course Structure:**

| <i>Code</i> | <i>Module</i>  | <i>Duration</i> |
|-------------|--|-----------------|
| IA101       | PLC (both simulation and hands on practice on S7-1200 PLC trainer kit)   | 4 weeks         |
|             | PLC based PID control system (DC motor speed control), Electro- Pneumatic Trainer kit, Level measurement and control using PLC, Pick-N-Place robot |                 |
|             | Introduction to Labview (Graphical Programming) & Interfacing of Data Acquisition Cards with PC using Labview                                      |                 |
|             | MiniProject  |                 |

## Other Contents

Course Fees: 10000 + service tax @ actual

### Eligibility:

BE/B.Tech /Diploma passed in the following discipline. Electrical/ Electronics/  
Instrumentation/ Industrial electronics/ Applied Electronics and Instrumentation/  
Instrumentation & Control/ Electronics & Communication/ Mechatronics / Computer  
Science. M.Sc in Electronics/ Instrumentation/ Industrial electronics.

- Candidates who have appeared in the qualifying examination and awaiting results may also apply
  - On the date of counseling/admission, the candidate must produce the original mark lists up to the last semester/year of examination.
- a. **Number of Seats** : 20
- b. **Selection of candidates:** The candidates passed in the qualifying examination will be based on their marks obtained, subject to eligibility and availability of seats.
- c. **Admission Procedure** :
- Students who have been selected for test/interview/counseling/admission are required to report to the Institute on the prescribed day by 9:30 hrs along with the following
1. Attested Copies of Proof of Age, Qualifications, etc
  2. Original Certificate of the above
  3. Two copies of photograph and one stamp size photograph for identity card.
  4. SC/ST Certificate (if applicable)
  5. Income Certificate (if applicable)
- The students on reaching the Institute are required to meet the Front Office Councilor (FOC). The FOC then directs the student to the Course Coordinator. The student gets the enrollment form verified by the Course Coordinator and then meets the FOC who shall direct the student to the Accounts for payment of fees. A student is thus admitted.
- d. **Discontinuing the course:** No fees under any circumstances shall be refunded in the event of a student discontinuing the course. A student can however, be eligible for module certificates (applicable only for courses which provide for modular admission) which he has successfully completed provided he has paid the entire course fees.
- e. **Course Timings** : 9:30 AM to 5:00 PM

f. **Course enquiries :**

Students can enquire about the various courses either on telephone or by personal contact between 9:30 A.M. to 5.00 P.M. (Lunch time 1.00 pm to 1.30 pm).

g. **Placement:** Support shall be provided

h. **Hostel facilities:**

*Limited Hostel accommodation is available for boys and girls on daily or monthly chargeable basis.*

i. **Canteen facilities :**

The Centre has a canteen functioning at the main campus and food at reasonable rates is available for breakfast, lunch, and dinner

j. **Lab Facilities:**

Lab Facilities We have state-of-the-art lab facility in Industrial Automation which include

- LabVIEW Professional Development System version 2015(25 User license)
- Compact RIO with AI, AO, DIO
- NI DAQ Cards/Modules
- Multisim (25 User license)
- PLC and SCADA
  - Siemens STEP-7 Professional V-13 (PLC Software)
  - Siemens WinCC Advance V-13 (SCADA Software)
  
  - Hardware with interface to above software
  
  - S-1240 PLC Trainer
  - Sensor Technology lab (Modular system)
  - Study of P, PI, PD, PID speed controller system.
  - PICK-N-PLACE Robotic ARM TRAINER
  - ELECTRO PNEUMATIC TRAINER
  
- Discrete sensors (RTD,LVDT,Load Cell,etc)

k. **Faculty**

*The centre has a team of enthusiastic and competent engineers with postgraduate qualifications who have undergone specialized training in various International Universities and Industries.*