



**AVIDUS ENGINEERING PRIVATE LIMITED (AEPL)**  
Unfolding Technology

## **AEPL-T-004** **INSTRUMENTATION** **AND CONTROL**

**TRAINING PROGRAMME**

**ELIGIBILITY : EIE, ECE, EEE**  
**DURATION : 2 WEEKS**  
**DAILY : 4 HOURS**

### **1. Measurements - Pressure, Vacuum**

- ❖ Gauge /Absolute/Differential Pressure, Vacuum
- ❖ Local Instrument, Transmitter
- ❖ Instrument Installation and Commissioning

### **2. Measurements - Temperature**

- ❖ Temperature Sensors-RTD, TC, Transmitter
- ❖ Thermowell Selection and Sizing
- ❖ Instrument Installation and Commissioning

### **3. Measurements - Level**

- ❖ Level Gauges-Transparent, Reflex
- ❖ Float/Displacer Level Switch/Gauge
- ❖ Level Transmitter-Ultrasonic, Capacitance, GWR
- ❖ Instrument Installation and Commissioning

### **4. Measurements - Analysis**

- ❖ Chromatograph
- ❖ Analyzer Shelter
- ❖ Oxygen Analyzer-Zirconia
- ❖ H2S/LEL Analyzers
- ❖ Instrument Installation and Commissioning

### **5. Measurements - Flow**

- ❖ Flow meter-DP Type
- ❖ Flow meter-Magnetic
- ❖ Flow meter-Ultrasonic
- ❖ Flow Meter-Coriolis
- ❖ Instrument Installation and Commissioning

### **6. Control Theory (understanding concept and application)**

- ❖ Feed Back Control
- ❖ Proportional Control
- ❖ Proportional-Integral (PI) Control
- ❖ Proportional-Integral-Derivative (PID) Control
- ❖ Controller Tuning Methods

### **7. Single Pneumatic/Electronic Controller**

- ❖ DCS Controller- Display
- ❖ Press./Temp./Level/Flow Controls
- ❖ Cascade Control
- ❖ Three Element Control

### **8. Control Laboratory**

- ❖ Study on Simulators
- ❖ Flow Control
- ❖ Level Control
- ❖ Pressure Control
- ❖ Temperature Control

### **9. Logic Development**

- ❖ Basic Philosophy
- ❖ Types of Logic
- ❖ Drawings Notes, Legend, Symbols, References
- ❖ Control Philosophy / Logic Narratives

### **10. Control Laboratory-PLC Trainer**

- ❖ PLC Engineering Study
- ❖ Application Logic Study
- ❖ PLC Programming
- ❖ Simulator with PLC on Batch Process Reactor

### **11. Test and Calibration of instruments**

- ❖ Servicing/Trouble Shooting O & M Planning
- ❖ O & M Manuals

### **12. Control Valves/Relief Valves**

- ❖ Study of Different Types and Applications
- ❖ Selection and Sizing

### **13. Valve Actuators**

- ❖ Pneumatic/Electric/Hydraulic
- ❖ Selection and Sizing

### **14. Test and Feedback**

- ❖ Job Consultancy
- ❖ Advance Training Certificate Distribution
- ❖ CV Development
- ❖ Mock Interview

**Visit website for more details :  
[www.avidus.in](http://www.avidus.in)**



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