# Process Instrumentation
## Water Industry

### General Information

<table>
<thead>
<tr>
<th>Course Code:</th>
<th>PIA-PRWATC1A</th>
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<tr>
<td>Length:</td>
<td>3 Days</td>
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### Audience

Service personnel and customers using process instruments.

### Profile

This course is designed to provide students with technical knowledge required to specify, apply, install, and maintain process instruments utilized in both drinking water and waste water applications. This course will cover basic theory of operation, applications, installation and commissioning considerations of flow, level, pressure and temperature technologies. This course is highly interactive and includes technical, hands on lab exercises.

### Objectives

**Upon completion of this course, the student shall be able to:**

- Gain an understanding of the various technologies and theories of operation for level, flow, pressure, and temperature products used in the Water and Waste Water Industry
- Learn basic installation and best practices to help ensure trouble-free start-up and long-term operation.

### Topics

1. Overview of conventional WWTP & WTP processes
2. Ultrasonic level measurement
   - Water applications challenges and recommended Siemens products
   - Theory
   - SITRANS Probe LU, MultiRanger / HydroRanger, LUT400, and accessories
   - Applications, programming, and installation basics
3. Electromagnetic Flow meters
   - Water applications challenges and recommended Siemens products
   - Theory
   - SITRANS F M, MAG1100, MAG3100, MAG5100W, MAG5000/6000, and accessories
   - Applications, programming, and installation basics
4. Clamp-On Ultrasonic Flowmeters
   - Water applications challenges and recommended Siemens products
   - Theory
   - SITRANS US, FUS1010, FUE1010, FUP101, and accessories
   - Applications, programming, and installation basics
5. Digital differential pressure transmitters
   - Water applications challenges and recommended Siemens products
   - Theory
   - SITRANS P DSIII for absolute pressure, differential pressure and level. SITRANS P300.
   - Applications, programming, and installation basics
6. Temperature Transmitters and Sensors
   - Water applications challenges and recommended Siemens products
   - Theory
   - SITRANS TH200 and TH300 transmitter.
   - Applications, programming, and installation basics