Process Instrumentation
Midstream Liquid

General Information
Course Code: PIA-PROGLC1A
Length: 3 Days

Audience
Service personnel, operators and end-users responsible for process instruments in midstream hydrocarbon Liquid applications.

Prerequisites
- Familiarity with the midstream process and an instrumentation background.

Profile
This course will provide students with knowledge to enable specification, application, and installation of Siemens process instruments utilized in midstream Liquid applications. With a combination of Theory, detailed description, and hands on labs the students will gain a working understanding of flow, pressure temperature, level and valve positioner technologies and how they apply to their applications. The course will review the processes and challenges faced in midstream applications and the solutions Siemens process instrumentation provide to meet these challenges. Subjects include basic theory of operation, detailed application review, installation and commissioning considerations for Siemens flow, level, pressure, temperature, and valve positioner technologies. The training will be reinforced with comprehensive hands-on lab exercises on all products.

Objectives
Upon completion of this course, the student shall be able to:
- Perform basic installation and commissioning of a range of Siemens process instruments
- Understand the capabilities of each product variant and where to apply which model for optimum performance
- Identify applications that may benefit from utilization of Siemens process instrumentation

Topics
1. Midstream Oil process overview
   a. Stages
   b. Industry requirements
   c. Challenges
   d. Siemens applicable Instruments

2. Detailed Review of Midstream Stages
   a. Pump / Booster Stations
   b. Metering Stations
   c. Valve Stations
   d. Leak Detection
   e. Interface Detection
   f. Pig Launcher / Receiver
   g. Pumpline Sump
   h. Pipeline Terminals

3. Product-Specific Tutorials & Hands-On Labs
   a. P500, DSIII Pressure sensors / transmitters
   b. TH300, TH500 Temperature Sensors
   c. SiPart PS2 Valve Positioner
   d. CLS200, CLS300 cap. level
   e. LG250, LR250 Radar Level
   f. FC430 Coriolis Flowmeter
   g. FUH/FUT1010 Clamp-on flowmeter