



**Course Title : Industrial Instrumentation and Process Control Training Course
Course for Instrument Technician**

Sector: Service Sector

Course Type: NTR

Name of School: I&E Instrumentation Training Center

Address: I&E Compound, 788 Takad, Libjo Batangas City

Tel. No. : 043-7230238/520-6160/520-6183 local 108

Module Description:

Module 1 - Basic Instrumentation & Measurement Fundamentals (114 hrs)

Module 2 - Process Variable Control & Automation Fundamentals (116 hrs)

Module 3 - Instrumentation & Automation Maintenance (180 hrs)

Module No.	Qualification/ Title	Competencies
Module 1 (114 hrs)	Pre-requisite of Module 2	Basic Competencies: Participate in workplace communication Practice career professionalism
		Common Competencies: Demonstrate knowledge of basic instrumentation fundamentals Demonstrate knowledge of process variable measurement fundamentals Demonstrate knowledge of personal health & work safety [HSE] Perform computer operations (RPL is applied)
		Core Competencies: Use/identify instrumentation terminologies, symbols and tag numbers Prepare and interpret basic instrumentation loop and P&ID drawings
Module 2 (116 hrs)	Pre-requisite of Module 3	Basic Competencies: Solve problems related to work activities Use mathematical concepts and techniques Use relevant instrumentation technologies
		Common Competencies: Demonstrate knowledge of process variable control and automation fundamentals Demonstrate knowledge of process control systems Demonstrate knowledge of safety instrumented system [SIS] Demonstrate knowledge of electrical test instruments and take measurements
		Core Competencies: Terminate and connect electrical wiring and electronic circuits Set-up/configure/operate process control loops Measure instruments' analog input/output signals (i.e. voltage, current, & resistance) Configure/Tune process controllers Hydrotest & leak test control valves/instruments' impulse lines
Module 3 (180 hrs)	Instrument Technician	Basic Competencies: Work in a team environment Lead small teams Collect, analyze and organize information Plan and organize work
		Common Competencies: Demonstrate knowledge of instrument maintenance fundamentals Demonstrate knowledge of instrument calibration fundamentals Demonstrate knowledge of electrical safety Demonstrate knowledge of plant and process safety Use of hand and power tools appropriate for the job Apply work quality standards
		Core Competencies: Bench test instruments Calibrate/validate instruments Install, terminate and loopcheck instrumentation & process control system Start-up/commission instrumentation & process control system Diagnose, troubleshoot, repair and maintain instruments Prepare and interpret service reports

Note:

The term "INSTRUMENTS" mentioned in any competency listed above refers to industry generic term for "INSTRUMENTATION and PROCESS CONTROL DEVICES".