

## Process Analyzers

# Maxum Analyzer Networks

### General Information

Course Code: PIA-PAMAXUM5

Length: 4 Days

### Audience

This course is intended for individuals responsible for maintaining the Maxum Process Gas Chromatograph (PGC). Engineers and technicians who will design and maintain the communication network connecting the Maxum PGC, maintenance workstations and the plant Distributive Control Systems (DCS).

### Prerequisites

- Maxum Operation with GCP Level 1

### Profile

2.6 CEUs (Continuing Education Credits)

This course gives the students hands-on experience with the Maxum Gas Chromatograph Network systems. Students will learn skills they can use to design, install, and maintain Maxum Ethernet networks, Modbus tables, and OPC servers.

This course can be taught at the customer's site and customized to meet the customer's needs. With advance notice, customer specific applications can be taught.

### Objectives

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

- Design a Maxum Ethernet network
- Configure a Maxum to communicate on a Maxum Ethernet network.
- Configure a Maxum to communicate via Modbus or OPC with a DCS interface.
- Edit a Maxum Modbus Map.
- Install and configure a typical Maxum OPC server.

### Topics

1. Ethernet
  - a. Design Ethernet Networks for Maxum PGC systems with Switches and Fiber Optic Cables
  - b. Configure Subnets and Gateways
  - c. Setup Maxum Ethernet Network
  - d. Configure Maxum Database for Ethernet
2. Modbus
  - a. Configure Maxum Tables
  - b. Load and Unload Modbus Maps (tables)
  - c. Develop Modbus Maps using Excel
  - d. Troubleshoot communications between Maxum PGC and Modbus Map
  - e. Simulate DCS communications over RS-232/485 serial cables and TCP Ethernet.
3. Maxum OPC Server
  - a. Configure Maxum Tables for OPC
  - b. Setup Maxum OPC Sever
  - c. Setup COM/DCOM to Client software