



## **Modicon Concept Programming Software for IEC Capable Modicon PLCs Module 106**

Concept software conforms to the IEC 61131-3 International Electrotechnical Commission (IEC) for software. This application software allows the user to program, monitor, troubleshoot, and document Modicon Quantum, Momentum and Atrium programmable controller systems. The effective use of Concept software requires a basic understanding of the Quantum hardware system concepts. This course provides an overview of the different programming languages and allows the end-user to select the programming languages for the application controlled. The features, functions, and capabilities of the Concept software are presented in relationship to programming, documentation and troubleshooting your Modicon Quantum, Momentum and Atrium programmable controllers. This is a (4) four-day course.

### **Course Objectives**

- Understand the major functional components of Concept software and how these components integrate to form a programming and troubleshooting software system.
- Learn where the software is loaded on the hard drive, setup software preferences and understand the precautions while working with these locations.
- Create, edit and modify the programmable controllers program Online and Offline.
- Controller configuration for the processor, remote processor, distributed I/O, terminal I/O, Ethernet network and hot standby (Quantum, Momentum and Atrium controllers).
- Understand the Concept project, project file structure, sections of logic and understand the difference between the virtual world and the real world when troubleshooting.
- Install Concept software on a computer and configure it to communicate with your Modicon programmable controllers (Modbus, Ethernet and Modbus Plus communications).
- Open, close and save projects and sections of existing control projects to and from your Modicon controller to a project file.
- Edit your programs using the network editor features (cut, paste, delete, search, etc.).
- Explore the use of Analyze Section and Analyze Project for troubleshooting and monitoring program functionality.
- Learn to use the built-in Concept PLC simulator for programming and diagnostics.
- Document programs, attaching pneumatic descriptors, wire tag numbers and locations, long comments, short comments and maintenance notes to your Modicon programs.
- Attach directly to the controller to monitor and perform on-line programming, diagnostics, documentation, and troubleshooting.
- Explore the six (6) different IEC-61131-3 program editors: Function Block Diagram, (FBD); Sequential Functional Chart, (SFC); 984 Ladder Logic, (984 LL); Ladder Diagram, (LL); Instruction List, (IL) and Structured Text, (ST)