



Start by explaining that this program is designed NOT as a programming course, but a PLC troubleshooting course, it is designed to help you be a better troubleshooter. This course will help familiarize the student with the basic operation, and principles use by a PLC. As well as help them understand how the field wiring hooks up, and how to troubleshoot around a PLC.

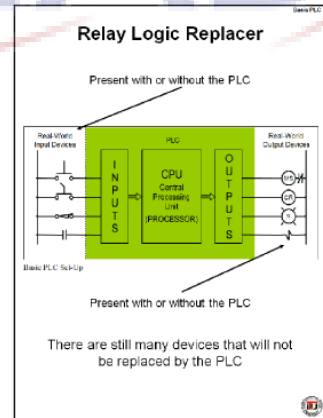
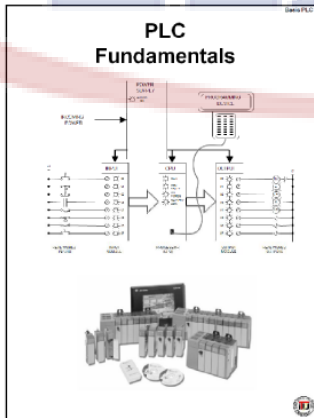
Explain the history as shown on the page.

Explain that while doing the HandsOn portion of this class, the process will be that the student will wire up a circuit on the panel, when it is working, the Instructor will have the student leave the room, then the place a "real-world" bug in the panel. The student will then have to come back and troubleshoot the failure.

Describe what machines or systems in your facility use PLC and what type, brand, and any history about those systems that you have.

Make this a relaxed class to get the most out of it.

Explain that while there are several brands of PLC's on the market. There are limited types of programming, and that even though the units may look different, the overall operation is basically the same.



Start by explaining that even though the PLC operates the machinery, it relies on "REAL WORLD" components such as switches, sensors, relays, lamps, and many others items to get and give information to.

Again, DRIVE HOME the fact that while the PLC does the thinking, it is far to common that the "Real World" devices connected to the PLC are normally what fails in machinery and systems.

Start by describing the INPUTS and the fact that those items can and do fail. Run down each symbol shown and tell what it is and how it can fail. Then describe the outputs shown, and the fact that they fail also.

Use this page to again explain the INPUTS and the OUTPUTS

- Identify the...
- INPUT MODULE
- CPU (Central Processing Unit) (Brain)
- OUTPUT MODULE
- POWER SUPPLY

Ask if the students have "Ever seen a relay coil, or a switch fail?" They have, and let them know that that is still the same possibility with a PLC controlled machine.

Usually the PLC does not "Eat the Program" or the PLC does not get confused. It is getting bad information form an input, or it is waiting for an output to complete an operation. "All in real world Devices"

All PLC's have these components.