CCAC
CENTER FOR
Professional
Development

PLC Boot Camp
(SLC 500)

This course will teach how to design, program and operate a PLC to control a number of process applications used by industries all over the world. The skills learned are in high demand everywhere today. These skills include orientation, operation, programming, memory organization, program analysis, motor control, discrete I/O interfacing, troubleshooting, systems troubleshooting, event sequencing, application development timer instructions, counter instructions, program control instructions, and math and data move instructions.

Module Code	LAP #-Skill #	Learning Objective	Self-Assessment
890-AB500-BC	L1-S1	Open a processor file using PLC software	
890-AB500-BC	L1-S2	Download a PLC processor file using PLC programming software	
890-AB500-BC	L1-S3	Configure a serial communications driver	
890-AB500-BC	L1-S4	Monitor PLC operation using the System Communications dialog	
890-AB500-BC	L1-S5	Run a PLC processor file using PLC programming software	
890-AB500-BC	L1-S6	Stop a PLC processor file using PLC programming software	
890-AB500-BC	L2-S1	Convert between Decimal and Binary	
890-AB500-BC	L2-S2	View the status of the SLC 500's Input and Output Data Tables	
890-AB500-BC	L2-S3	Create a PLC project using PLC software	
890-AB500-BC	L2-S4	Configure the I/O for a PLC project using PLC software	
890-AB500-BC	L2-S5	Enter a basic PLC program using PLC software	
890-AB500-BC	L2-S6	Save a PLC program using PLC software	
890-AB500-BC	L2-S7	Edit a program using PLC software	
890-AB500-BC	L2-S8	Generate and print a ladder logic report using PLC software	
890-AB500-BC	L3-S1	Design a PLC program to jog a motor	
890-AB500-BC	L3-S2	Design a PLC programs to control the start/stop of a bi-directional motor	
890-AB500-BC	L3-S3	Design a PLC program to interlock two motors	
890-AB500-BC	L3-S4	Design a PLC program that uses a safety interlock to control the operation of a machine	
890-AB500-BC	L3-S5	View project documentation and use it to operate a PLC program	
890-AB500-BC	L3-S6	Document a PLC program file	
890-AB500-BC	L4-S1	Connect and test a limit switch to a discrete input module	
890-AB500-BC	L4-S2	Connect and test the operation of a solenoid valve to a PLC output	
890-AB500-BC	L4-S3	Connect and test the operation of a motor starter to a PLC	
890-AB500-BC	L4-S4	Connect and test the operation of an electronic sensor to a PLC input module	
890-AB500-BC	L4-S5	Develop an interface wiring diagram to interface a PLC to a machine controller	
890-AB500-BC	L4-S6	Connect and operate a conveyor system using discrete inputs and outputs	
890-AB500-BC	L5-S1	Use PLC status indicators to determine the status of PLC operation	
890-AB500-BC	L5-S2	Troubleshoot PLC power supply problems	
890-AB500-BC	L5-S3	Test a PLC discrete input device	
890-AB500-BC	L5-S4	Test a discrete input module	
890-AB500-BC	L5-S5	Use the Force Function to force an input or output	
890-AB500-BC	L5-S6	Use the Force Function to test a PLC discrete output device	
890-AB500-BC	L5-S7	Test a PLC discrete output module	
890-AB500-BC	L6-S1	View and interpret the processor status file	
890-AB500-BC	L6-S2	Troubleshoot a processor fault	
890-AB500-BC	L6-S3	Use a six-step sequence to troubleshoot a PLC system	
890-AB500-BC	L6-S4	Troubleshoot a PLC-controlled electric motor system	
890-AB500-BC	L6-S5	Use the PLC Search function to find an instruction	
890-AB500-BC	L6-S6	Create and view a PLC Contact Histogram	
890-AB500-BC	L7-S1	Design a reciprocating actuator sequence PLC program	
890-AB500-BC	L7-S2	Design a continuous cycle clamp and drill sequence PLC program	
890-AB500-BC	L7-S3	Troubleshoot a clamp and drill sequence PLC program	
890-AB500-BC	L8-S1	Design a PLC program using a seven-step design process	
890-AB500-BC	L8-S2	Troubleshoot a PLC program with manual and automatic modes	
890-AB500-BC	L8-S3	Design a motor control program that uses both manual and automatic modes	
890-AB500-BC	L8-S4	Design a PLC program that has both Halt and Cycle-Stop functions	
890-AB500-BC	L8-S5	Troubleshoot a PLC program that has both Halt and Cycle-Stop functions	
890-AB500-BC	L9-S1	Enter and edit a PLC program that uses an RTO instruction	
890-AB500-BC	L9-S2	Enter and edit a PLC program that uses a TON instruction	
890-AB500-BC	L9-S3	Enter and edit a PLC program that uses a TOF instruction	
890-AB500-BC	L9-S4	Design a PLC program that provides low voltage starting of an electric motor	
890-AB500-BC	L9-S5	Design a PLC program that uses a time-driven sequence to control an actuator	
890-AB500-BC	L9-S6	Design a PLC program to control a plastic injection molding machine	
890-AB500-BC	L9-S7	Troubleshoot a PLC program which controls a plastic injection molding machine	