

Logix5000™ Controllers

RSLogix™ 5000 Level 5: Advanced Motion Programming Course Description

COURSE AGENDA

Day 1

- Manually Tuning Axes
- Programming Motion Event Functions and Interrupt Driven Tasks
- Programming Output Cam and Pending Cam Instructions

Day 2

- Programming Coordinated Move Instructions and Termination Types in Cartesian Space
- Programming Add-On Instructions
- Organizing a Motion Control Project Using the Power Programming State-Model
- Programming Coordinated Move Transform Instructions in a Pick and Place Application



COURSE NUMBER: CCN190-LD

Course Purpose

This course is intended to provide you with the skills to configure and program Logix5000 applications specifically for integrated motion control functionality using ladder logic, including SERCOS motion control technology.

Building upon the skills gained in *RSLogix 5000 Project Development* and *RSLogix 5000 Motion Programming using Ladder Logic*, you will learn how to apply advanced programming skills including manual tuning, advanced camming techniques, coordinated motion, and add-on instructions for motion applications.

Because all Logix5000 products share common features and a common operating system, you will be able to apply the configuring and programming motion control skills learned in this course to any of the Logix5000 controllers that are capable of motion control.

Who Should Attend

Individuals who need to program advanced Logix5000 motion control systems should attend this course. In addition, only students who are already familiar with Logix5000 systems and motion control should attend this course.

Prerequisites

To successfully complete this course, the following prerequisites are required:

- Ability to perform basic Microsoft® Windows® tasks
- Completion of the *RSLogix 5000 Project Development* course (Course No. CCN143) or equivalent knowledge of or experience with basic ladder logic programming.
- Completion of the *RSLogix 5000 Level 4: Motion Programming Using Ladder Logic* (Course No. CCN142) or equivalent experience.

Technology Requirements

All technology is provided for student use in the classroom by Rockwell Automation. It is not necessary for students to bring any technology with them when attending this course.

Student Materials

To enhance and facilitate your learning experience, the following materials are provided as part of the course package:

- *Student Manual*, which contains the topical outlines and exercises. You will use this manual to follow presentations, take notes, and work through the exercises.
- *RSLogix5000 and Logix5000 Motion Control Procedures Guide*, which provides the steps required to complete RSLogix 5000 motion tasks that are common to the Logix5000 hardware platforms that support motion control. By following the procedures in this job aid, you can immediately apply what is learned in the course to your job.
- *Logix5000 Documentation Reference Guide*. This searchable, electronic resource contains relevant technical publications and is a quick and efficient on-the-job resource.

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Hands-On Practice

Throughout the course, you will have the opportunity to practice skills you have learned through a variety of hands-on exercises. To gain real-world motion programming experience, you will be given specifications to program advanced motion concepts for an application. These functional specifications will be the basis for all hands-on exercises in this course.

After completing all exercises, students will be able to apply advanced motion programming techniques that meet the requirements of several different functional specifications.

As you develop the projects, you will be given the opportunity to test the ladder logic using hardware workstations with devices that represent the application inputs and outputs and servo motors that represent the motion axes. This tuning, programming, and testing experience can be then transferred to your own job responsibilities.

Course Length

This is a two-day course.

Course Number

The course number is CCN190-LD.



IACET CEUs

CEUs Awarded: 1.4

To Register

To register for this or any other Rockwell Automation training course, contact your local authorized Allen-Bradley Distributor or your local Sales/Support office for a complete listing of courses, descriptions, prices, and schedules.

You can also access course information via the Web at <http://www.rockwellautomation.com/training>

Power, Control and Information Solutions

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