

COURSE DESCRIPTION

Logix5000™ Controllers

COURSE AGENDA

Day 1

- Overview
- Configuring a Logix5000 System for Motion Control Applications
- Configuring SERCOS Servo Axes
- Configuring Analog Servo Axes

Day 2

- Configuring Analog Servo Axes (cont.)
- Testing and Tuning Axes
- Programming Basic Motion Routines

Day 3

- Programming Basic Motion Routines (cont.)
- Programming a Fault Routine
- Programming an Electronic Gearing Routine
- Programming a Virtual Axis

RSLogix™ 5000 Level 4: Motion Programming Using Ladder Logic



COURSE NUMBER: CCN142

Course Purpose

This course is intended to provide plant personnel with the skills to configure and program Logix5000 applications specifically for integrated motion control functionality using ladder logic, including both SERCOS and analog motion control technologies.

Building upon the skills gained in the *RSLogix 5000™ Level 3: Project Development* course, students will learn how to apply the Logix5000 architecture to a multi-axis motion control system while developing programming skills that incorporate other components in a Logix5000 system, such as adding system modules, sharing tasks between multiple controllers, programming ladder logic, and using digital I/O.

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

LISTEN. THINK. SOLVE.™

**Rockwell
Automation**

COURSE DESCRIPTION

Logix5000™ Controllers

Who Should Attend

Individuals who need to configure and program Logix5000 motion control systems should attend this course. In addition, only students who are already familiar with Logix5000 systems and general 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 Motion Control Fundamentals* course (Course No. CCN130) or equivalent knowledge of or experience with drives, feedback devices, and velocity and position loop systems
- Completion of *the RSLogix 5000™ Level 3: Project Development* course (Course No. CCP143) or equivalent experience
- Experience with entering and debugging ladder logic

Student Materials

To enhance and facilitate each student's learning experience, the following materials are provided as part of the course package:

- *Student Manual*, which contains the key concepts, definitions, and examples presented in the course and includes the hands-on exercises.
- *RSLogix and Logix5000 Procedures Guide*, which provides all the steps required to complete common Logix5000 tasks, including the tasks in the exercises. By following the procedures in this job aid, students can immediately apply what is learned in the course to their own job.
- *Logix Controller Motion Instruction Set Reference Manual*, which provides the details of the motion instructions available for Logix5000 controllers

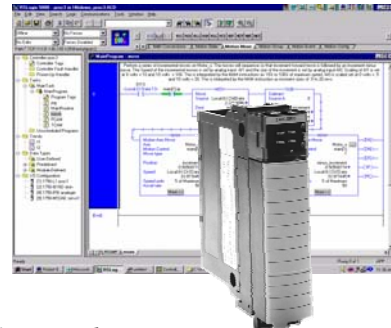
Hands-On Practice

Hands-on practice is an integral part of learning and this course offers extensive hands-on opportunities. Throughout the exercises, students will use a workstation

Hands-On Practice (cont.)

containing real and simulated devices to practice the tasks involved in programming a motion control application.

After configuring a project that contains the required hardware, students will program a variety of motion routines, including gearing and virtual axis routines. Upon completion of the course, students will have programmed a complete motion control project that runs an actual application using both analog servo axes and SERCOS servo axes.



Next Learning Level

Once students have mastered the skills covered in this course, they will be prepared to attend other Rockwell Automation training courses that will enable them to optimize their motion control application based on the equipment in their plant. One example of such a course is the *RSLogix5000 Level 5: Advanced Motion Programming* course (CCN190).

Course Length

This is a three-day course.

Course Number

The course number is CCN142.

IACET CEUs

CEUs Awarded: 2.1



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>

www.rockwellautomation.com

Power, Control and Information Solutions

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444

Europe/Middle East/Africa: Rockwell Automation SA/NV, Vorstlaan/Boulevard du Souverain 36, 1170 Brussels, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640

Asia Pacific: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846