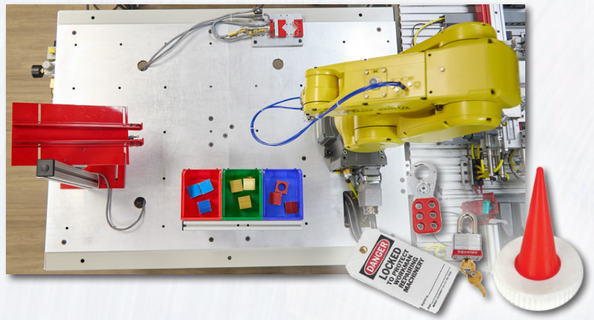
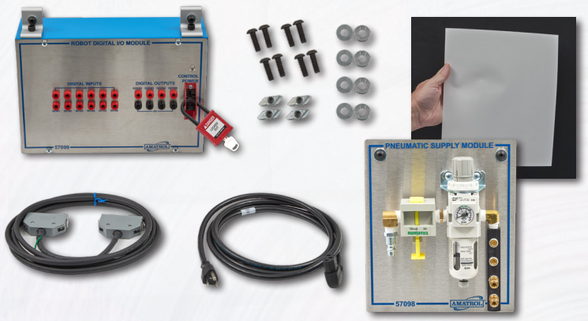
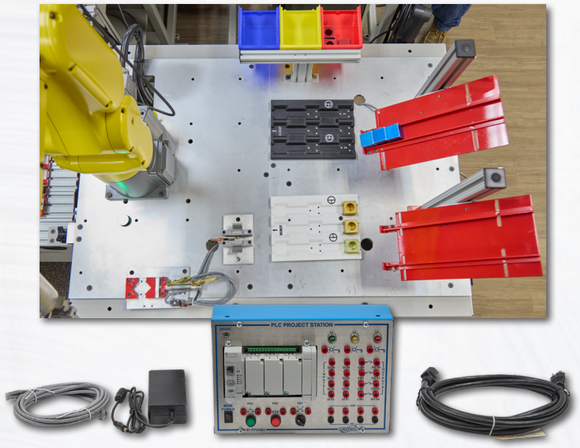

SACA
SMART AUTOMATION CERTIFICATION ALLIANCE
CERTIFIED
GOLD
Allen-Bradley
2080-L50E-24QWB
POWER
RUN
FAULT
FORCE
COMM
AMATROL
®
SACA
SMART AUTOMATION CERTIFICATION ALLIANCE
Robot Operations
& Systems Integration
Certification Learning Systems
CERTIFIED
SILVER

AMATROL® SACA Robot Operations & Systems Integration Certification Learning Systems

Amatrol offers learning systems that combine flexible eLearning curriculum with real industrial equipment to teach learners the hands-on skills they need to earn Smart Automation Certification Alliance (SACA) silver and gold certifications for Certified Industry 4.0 Associate III – Robot System Operations (C-103), Robot System Operations 1 (C-215), and Robot Systems Integration 1 (C-216).











Robot Systems Operation 1

88-RF11

(Aligns with SACA Certifications C-103 & C-215)

Robot Requirements: Smart Robot Workcell with FANUC LR Mate Robot (Amatrol 87-SWF)

Industrial Components

- Set of Parts Bins and Mount
- Set of Rectangular Parts
- Gravity Feeder with Limit Switch
- Assembly Fixture with Electro-Pneumatic Clamp
- Lockout/Tagout Kit
- Pallet
- Reference Point

Learning Topics

- Robot Concepts
- Robot Safety
- Robot Safety Inspection
- Teach Pendant Operation
- Robot Jogging
- Automatic Robot Operation
- Robot Frames
- Robot Point Adjustment
- Robot Faults

88-RF12

(Aligns with SACA Certifications C-103 & C-215)

Robot Requirements: Customer-supplied FANUC CERT Cart with FANUC LR Mate Robot

Industrial Components

- 88-RF11 Components +
- Robot Digital I/O Module
- Pneumatic Regulator Module
- Reusable Grip Tape
- Fastener Kit

Learning Topics

- Robot Concepts
- Robot Safety
- Robot Safety Inspection
- Teach Pendant Operation
- Robot Jogging
- Automatic Robot Operation
- Robot Frames
- Robot Point Adjustment
- Robot Faults

Robot Systems Integration

88-RF22

(Aligns with SACA Certification C-216)

Robot Requirements: Smart Robot Workcell with FANUC LR Mate Robot (Amatrol 87-SWF) or customer-supplied FANUC CERT Cart

Industrial Components

- PLC Project Station Micro 850 with Cable Kit
- Gravity Feeder with Limit Switch
- Set of Parts Bins and Mount
- Pallet
- Inspection Station Assembly
- Inductive Switch Assembly

Learning Topics

- Robot Program Basics
- Ethernet Communications
- Linear Robot Motion
- Robot End Effector Control
- Digital I/O Control
- PLC Workcell Control
- Branching Commands
- Data Registers and Arithmetic Operations
- Looping and Subroutine Commands
- Tool and User Frame Offsets

C-103 Certified Industry 4.0 Associate III - Robot System Operations

SACA's C-103 Certified Industry 4.0 Associate III- Robot System Operations certification is an introductory credential that prepares individuals to operate industrial robots and other industry 4.0 technologies in a modern production environment. This certification is ideal for manufacturing technicians, maintenance technicians and IT professionals seeking to become versed in robot system operations.

Robot System Operations Competencies:

- Concepts & Terminology of Robots
- Robot Setup & Adjustment
- Robot Operations & Basic Programming
- Fixtures/End of Arm Tooling Types & Selection
- Robot-Ethernet Network Communications
- Robot I/O Device & PLC System Interfacing
- Robot Monitoring & Cycle Time Optimization
- Robot Smart Manufacturing Concepts

SACA
SMART AUTOMATION CERTIFICATION ALLIANCE

C-215 Robot System Operations 1

Prepares individuals to set up, adjust, monitor and operate industrial robot systems in an Industry 4.0 automation environment. Key skills include: adhering to robot safety rules, identifying robot types and robot components (and end-effectors), performing normal startup and shutdown, performing emergency shutdown and recovery, identifying robot work envelope, performing robot safety inspection, using teach pendant to view menus and status indicators, using teach pendant to jog robot in joint mode or using Cartesian coordinates, adjusting jog speed, setting and testing robot joint travel limits, using teach pendant to identify robot position in each of 5 frames, defining a frame using 3-point method, loading a robot program using Ethernet or memory card, testing digital robot inputs and outputs, testing robot program in single step or continuous mode, selecting and running robot program using teach pendant, teaching/adjusting robot points using proper frame, identifying/recovering from a fault, and viewing/interpreting robot alarm history.

C-216 Robot Systems Integration 1

Prepares individuals to program, interface, and optimize industrial robot systems in an Industry 4.0 automation environment for these applications: pick and place, basic assembly, machine load/unload, and gluing. Key skills include: interpreting robot programs, developing robot sequence operations and robot program for an application, entering robot programs and points using a teach pendant, interfacing on/off input sensors and solenoid output devices to digital I/O of robot, interfacing digital I/O of robot to PLC, and cycle time optimization. Programs commands include: 3 types of motion, speed, offset, data register, branching, digital I/O, looping, waiting, and macros.

2400 Centennial Blvd.
Jeffersonville, Indiana 47130 U.S.A.
Phone: 812.288.8285 • Fax: 812.283.1584
Toll Free in USA & Canada: 800.264.8285
Email: contact@amatrol.com • www.amatrol.com

AMATROL®

PRINTED IN U.S.A. · COPYRIGHT © 2025 · FORM 6746-A