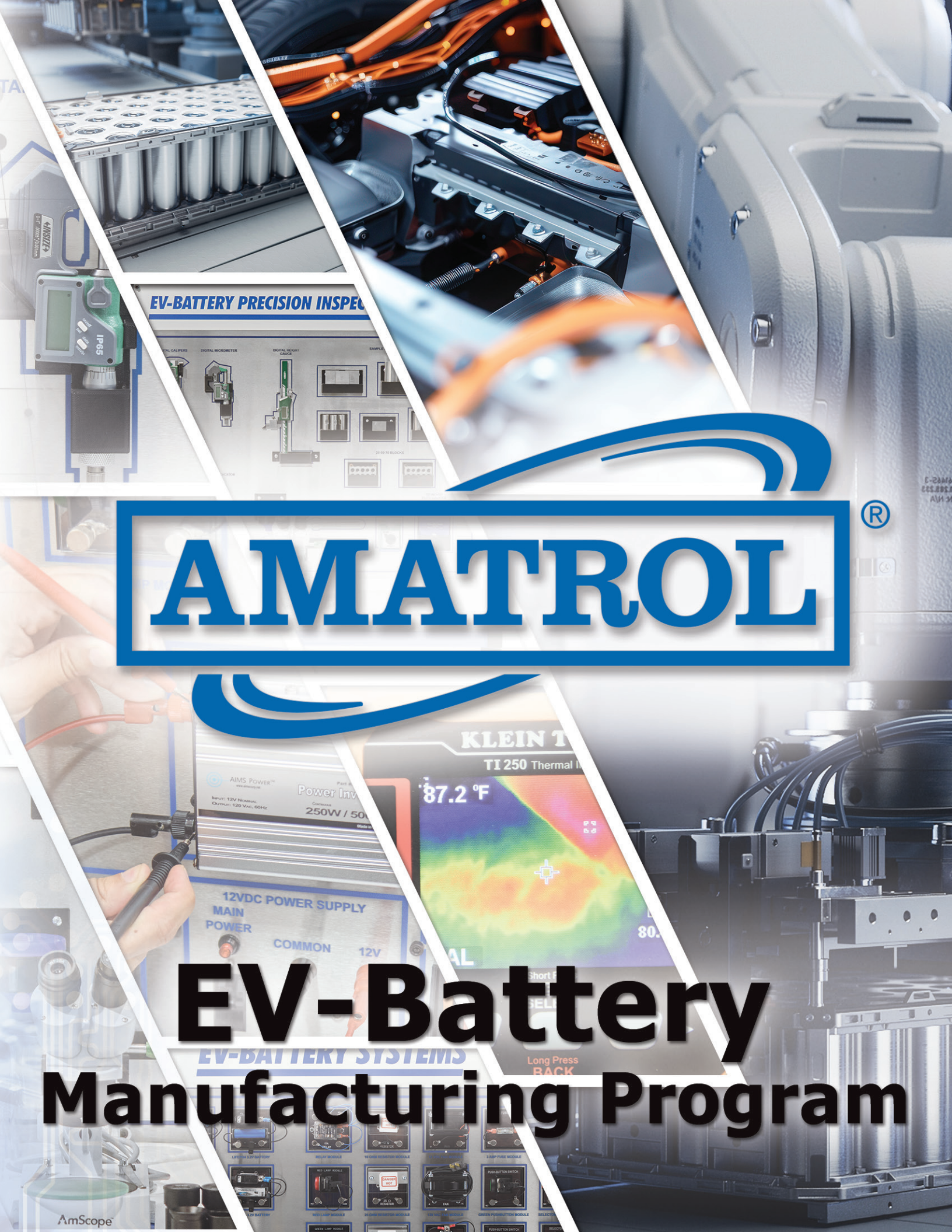




AMATROL®

EV-Battery Manufacturing Program

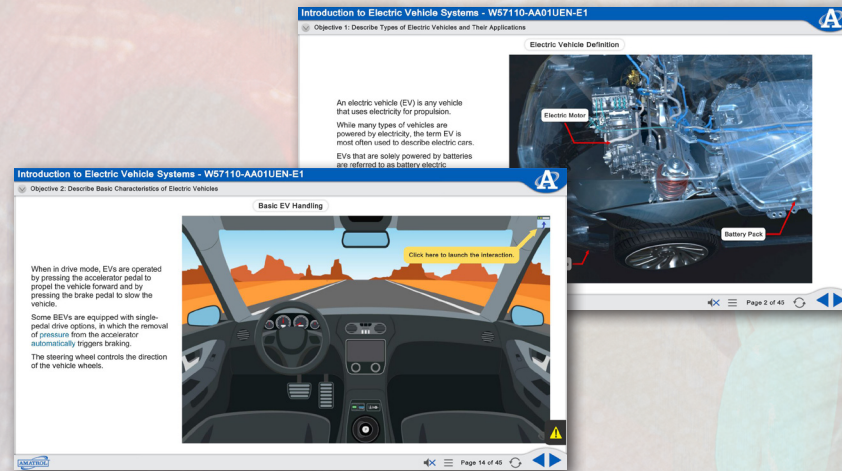


ELECTRIC VEHICLE BATTERY PROGRAM

EV-Battery Technology Fundamentals (T7022)

(Aligns with SACA Certification C-110)

- Introduction to Electric Vehicle Systems
- Voltage and Current Concepts
- Circuit Protection
- Lithium-Ion Battery Operation and Safety
- Battery Charging
- EV Battery Handling and Storage
- Battery Packs
- EV-Battery Production and Testing
- Battery Life and Aftermarket Testing

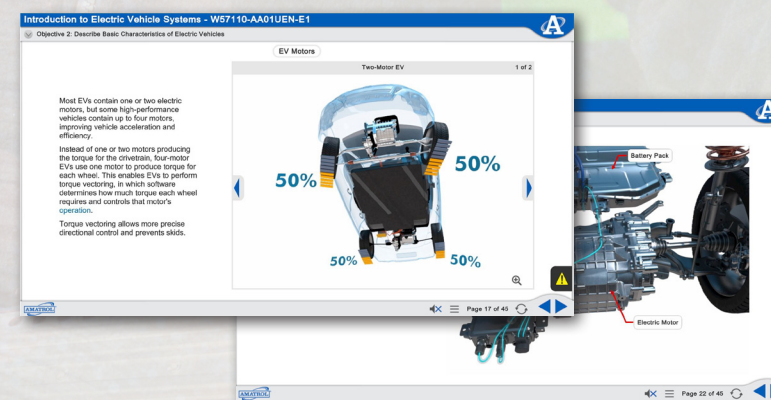


EV-Battery Smart Manufacturing Systems 1 (410-EVSM1)

(Aligns with SACA Certification C-112)

Requires: Skill Boss Manufacturing (95-MSB2AB)

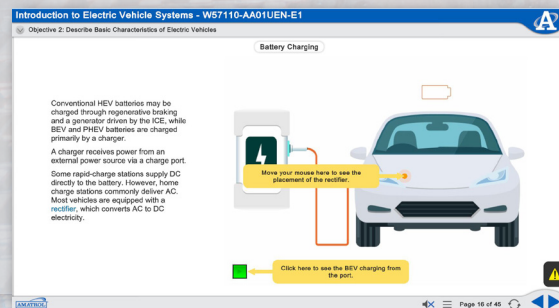
- EV-Battery Manufacturing Materials and Processes
- Technology in Modern Manufacturing
- Safety Responsibilities
- Mechatronics Concepts
- Smart Factory System Operation
- Manufacturing Metrics
- Cybersecurity Risks in Manufacturing
- Torque Tools
- Hazardous Materials Standards



EV-Battery Precision Inspection (910-QC4)

(Aligns with SACA Certification C-111)

- EV-Battery Measurements
- Basic Part Dimensions and Tolerancing
- Digital Caliper and Height Gauge Measurement
- Digital Data Collection
- Digital Micrometer and Indicator Measurement
- Go-No Go Gauging
- Weight, Thickness, and Viscosity Measurement
- Digital Microscope Inspection

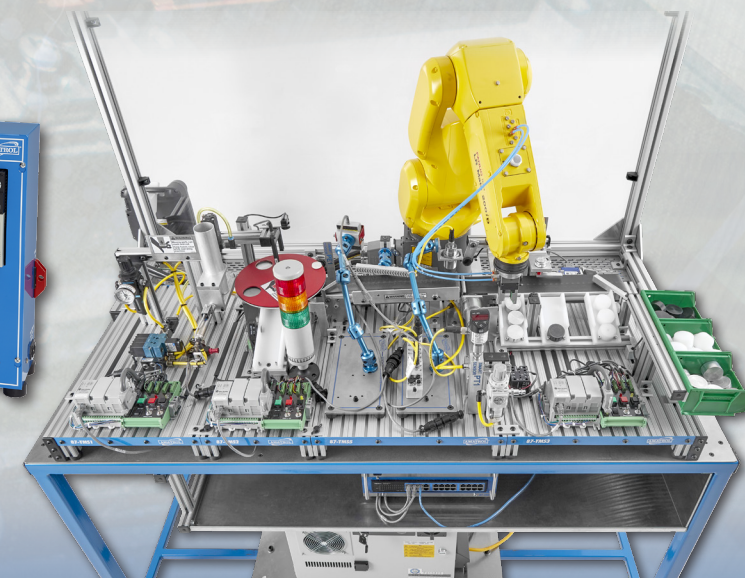
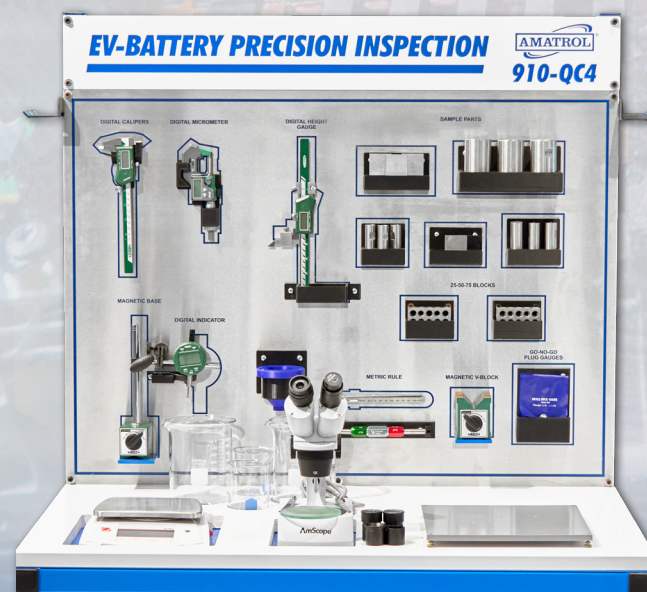
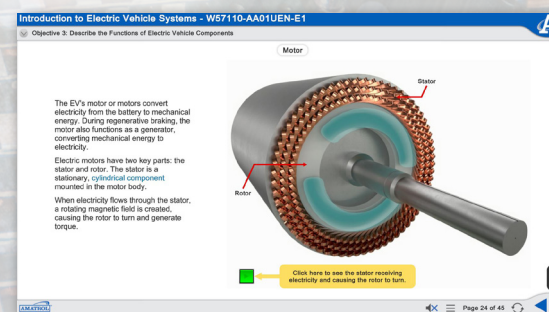


EV-Battery Smart Manufacturing Systems 2 (410-EVSM2)

(Aligns with SACA Certification C-114)

Requires: either Skill Boss Manufacturing (95-MSB2AB) with Visual Communications Kit (11350) or Inventory Station (87-TMS1) with Tabletop Mechatronics Learning System (870-PTAB82) and Visual Communications Kit (11352)

- Manufacturing Data Visualization Tools
- Introduction to Statistical Process Control
- Control Chart Analysis
- Lean Manufacturing Concepts
- Principles of Smart Automation
- PLC Network Communication
- VFD Operation
- Mechatronics Systems Operation

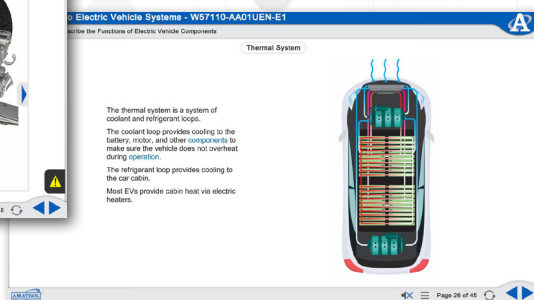
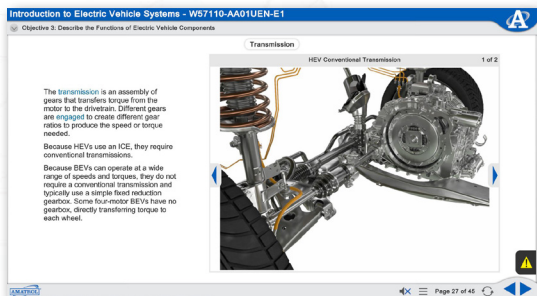


EV-Battery Maintenance Operations (410-EVM01)

(Aligns with SACA Certification C-113)

Requires: Skill Boss Manufacturing (95-MSB2AB), customer-supplied power screwdriver, and either Portable Hydraulics (990-BH1) or Basic Hydraulics (85-BH)

- Total Productive Maintenance (TPM)
- System Documentation
- Principles of Mechanical Power Transmission
- Basic Shaft/Coupling Maintenance
- Pneumatic and Hydraulic Actuator Operation
- Fluid Power Speed Control
- Automatic Input Devices
- Electronic Sensors

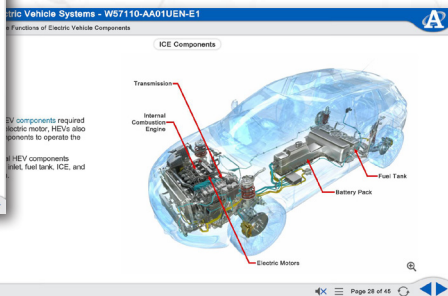


Robot Systems Operation 1 (88-RF11/88-RF12)

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

Requires: either Amatrol SWF Station (87-SWF) with FANUC LR Mate [88-RF11] or FANUC LR Mate Cert Cart (fenceless or non-fenceless) [88-RF11 & 88-RF12]

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



Guided by EV industry experts and in partnership with MichAuto, an initiative of the Detroit Regional Chamber Foundation, Amatrol developed these new products and eLearning courses to focus on essential elements of EV-battery manufacturing.

The skills and topics featured in these courses directly align with several Smart Automation Certification Alliance (SACA) credentials, so that future members of the EV-battery workforce will gain the skills they need to be successful and then attain credentials that will prove to employers that they are highly qualified.



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