

The logo for ES&E is displayed in a white, bold, sans-serif font. The ampersand is smaller and positioned between the 'S' and 'E'. The entire logo is contained within a blue rectangular box with a white border.

ES&E

AUTOMATION TRAINING

The title 'CLASS CATALOG' is written in a large, white, bold, sans-serif font with a black outline. It is centered on the page and overlaid on a background of two people looking at a tablet. The background is dark with a network of white lines and glowing blue and orange light effects.

**CLASS
CATALOG**



**ST-ELE-01
ELECTRICAL BASICS
ONE AND A HALF DAYS**

THIS CLASS INCLUDES

BASIC ELECTRICAL THEORY AND LAWS
TYPES OF CIRCUITS AND COMPONENTS
METHODS OF CONTROLLING ELECTRICAL MOTORS
WIRING OF MOTOR STARTER CIRCUITS
BASIC METERING
READING ELECTRICAL SCHEMATTICS

HANDS-ON PRACTICE

LAB TRAINERS
EXERCISES PROVING ELECTRICAL THEORY
EXERCISES ON THE RELATIONSHIP TO SCHEMATICS & ELECTRICAL DEVICES

PREREQUISITES

NONE

SUMMARY

THIS COURSE PROVIDES YOU WITH THE BASIC SKILLS NECESSARY TO UNDERSTAND AND TROUBLESHOOT AN ELECTRICAL CIRCUIT AND COMPONENTS IN AN INDUSTRIAL CONTROL PANEL USING SCHEMATICS. THIS COURSE PROVIDES OPPORTUNITIES TO WORK WITH WIRING COMPONENTS, USING MULTIMETERS, AND REVIEWING AND READING ELECTRICAL SCHEMATICS. DURING THE CLASS, YOU WILL GAIN THE HANDS-ON SKILLS REQUIRED TO TROUBLESHOOT FAILED COMPONENTS.



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ST-SEN-01
SENSOR APPLICATION AND SETUP BASICS
HALF DAY

THIS CLASS INCLUDES

- WHAT IS A SENSOR
- SENSOR SET UP AND PARAMETERS
- DIFFERENT SENSOR TYPES
- SENSING MODES & APPLICATIONS
- HOW DIFFERENT SENSORS FUNCTION
- PNP VS NPN
- INTRODUCTION TO SMART SENSORS & IO LINK

HANDS-ON PRACTICE

SENSOR LABS

PREREQUISITES

- KNOWLEDGE OF STUDIO 5000
- ST-PLC-02

SUMMARY

THIS COURSE PROVIDES YOU WITH THE BASIC SKILLS NECESSARY TO UNDERSTAND DEVICE LEVEL BASICS, THE FULL CAPABILITIES OF A SENSOR, WHAT IT CAN DO, AND HOW IT CAN HELP YOUR MACHINES, SENSOR WIRING.

OTHER TOPICS INCLUDES HOW DIFFERENT SENSORS CAN SOLVE THE SAME APPLICATION, PROX SENSOR SWITCHING FREQUENCY, AND HALL EFFECT SENSORS. ENGINEER'S, MAINTENANCE, TECHNICIAN, ENTRY LEVEL WORKERS JUST STARTING SHOULD ATTEND THIS COURSE.



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ST-SEN-02
IO LINK MASTERS AND SENSOR BASICS
HALF DAY

THIS CLASS INCLUDES

- ADVANCED SMART SENSORS & IO LINK
- IO-LINK SENSOR FEATURES & BENEFITS
- IO-LINK DEVICE LIBRARY & SENSOR FACEPLATES
- IO-LINK MASTER SETUP
- CHANGE SENSOR PARAMETERS IN IO-LINK
- AUTOMATIC DEVICE CONFIGURATION (ADC)
- ADVANCED DIAGNOSTICS

HANDS-ON PRACTICE

SENSOR LABS

PREREQUISITES

KNOWLEDGE OF STUDIO 5000 & IO LINK
ST-PLC-02

SUMMARY

THIS COURSE PROVIDES YOU WITH THE BASIC SKILLS NECESSARY TO UNDERSTAND THE FULL CAPABILITIES OF SMART SENSORS AND IO-LINK, HOW IO-LINK SENSORS INTEGRATED WITH YOUR PLC, SENSOR CUSTOMIZATION FOR YOUR APPLICATION, UNDERSTANDING HOW IO-LINK PROVIDES LESS MACHINE DOWN TIME AND MORE PRODUCTION. ENGINEER'S, MAINTENANCE, TECHNICIANS, AND ENTRY LEVEL WORKERS USING IO-LINK SHOULD ATTEND THIS COURSE.



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ST-NET-01
ETHERNET NETWORK BASICS
FULL DAY



THIS CLASS INCLUDES

FUNDAMENTALS OF IP ADDRESSES, SUBNET MASKS, & GATEWAYS
CONFIGURING IP SETUP OF DEVICE (ETHERNET/IP COMMISSION TOOL)
RSLINX AND FTLINX DRIVER CONFIGURATION
MANAGED SWITCH HARDWARE OVERVIEW (2500, NATR, 5200, 5800)
NETWORK TOPOLOGY REVIEW AND ASSESSMENT WITH IAB
EXPRESS SETUP, SMART PORTS, CIP SYNC, NAT, & L2 VLAN CONFIGURATION
DHCP POOL, DHCP PERSISTENCE, & SD CARD BACKUP

HANDS-ON PRACTICE

EACH LESSON WILL BE PERFORMED ON AN ETHERNET/IP WORKSTATION

PREREQUISITES

ABILITY TO PERFORM BASIC MICROSOFT WINDOWS TASKS

SUMMARY

UPON COMPLETING THIS COURSE, YOU WILL BE ABLE TO ASSESS AN EXISTING NETWORK, CONNECT WITH EQUIPMENT AND MAKE GENERIC CONFIGURATION CHANGES. YOU WILL HAVE THE OPPORTUNITY TO DEVELOP AND PRACTICE THESE SKILLS BY LEARNING BASIC CONCEPTS AND TERMINOLOGY, PRACTICING A SYSTEMATIC STRATEGY FOR DIAGNOSING AND TROUBLESHOOTING PROBLEMS, AND CONFIGURING A SWITCH USING THE DEVICE MANAGER WEB INTERFACE. TECHNICIANS AND ENGINEERS WHO MUST DEPLOY AND MAINTAIN INDUSTRIAL AUTOMATION AND CONTROL SYSTEM (IACS) NETWORKS SHOULD ATTEND THIS COURSE.



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ST-PLC-01 RS LOGIX 500 TRAINING FULL DAY



THIS CLASS INCLUDES

SETUP RSLINX DRIVERS
PLC DATA STORAGE AND MEMORY
RSLOGIX 500 BASIC NAVIGATION
HARDWARE OVERVIEW, OPTIONS, & OUT OF BOX SETUP
FIRMWARE MANAGEMENT & DATA SEARCHING
NEW PROJECT CREATION, NAVIGATION, & ONLINE MONITORING
CODE DEVELOPMENT, UPLOAD/DOWNLOAD, & FORCING/TOGGLING

HANDS-ON PRACTICE

SLC AND MICROLOGIX SYSTEM HARDWARE
TROUBLESHOOT CONFIGURATION ISSUES
TROUBLESHOOT CONTROLLER, I/O, OR OTHER HARDWARE ISSUES

PREREQUISITES

ABILITY TO PERFORM BASIC MICROSOFT WINDOWS TASKS
KNOWLEDGE OF BASIC LADDER LOGIC INSTRUCTIONS

SUMMARY

THIS COURSE PROVIDES YOU INFORMATION TO MAINTAIN AND TROUBLESHOOT A SLC OR MICROLOGIX SYSTEM WITH NO CURRENT WORKING EXPERIENCE WITH THESE SYSTEMS. UPON COMPLETING THIS COURSE, YOU CAN RESTORE A PREVIOUSLY OPERATIONAL LOGIX500 SYSTEM. ALL LOGIX500 SYSTEMS USE THE SAME CONTROL ENGINE; THEREFORE, TASKS ARE SIMILAR. YOU WILL SEE APPLICABLE REFERENCES FOR OTHER SYSTEMS. EXERCISES ARE PERFORMED ON A SLC WORKSTATION; THE SKILLS TAUGHT IN THIS COURSE CAN BE APPLIED TO ALL LOGIX500 PLATFORMS. YOU CAN PERFORM THESE TASKS ON THE SPECIFIC PLATFORM USED IN YOUR PLANT.



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ST-PLC-02
STUDIO 5000 LOGIX DESIGNER TRAINING
FULL DAY



THIS CLASS INCLUDES

LOGIX OVERVIEW & FTLINX DRIVERS SETUP
HARDWARE OVERVIEW & FIRMWARE MANAGEMENT
NEW PROJECT CREATION, NAVIGATION, IO TREE CONFIG, & DIAGNOSTICS
EXPLORATION OF TAGS (ALIAS), TASKS, PROGRAMS, & ROUTINES
DIFFERENCE BETWEEN PROGRAMMING EDITORS & MANAGERS
CODE DEVELOPMENT, GOING ONLINE, UPLOAD/DOWNLOAD, TRENDING & AOIS
FT ECHO VS LOGIX EMULATE

HANDS-ON PRACTICE

COMPACT & CONTROLLOGIX SYSTEM HARDWARE
STUDIO 5000 SOFTWARE
TROUBLESHOOT CONFIG, CONTROLLER, I/O, OR OTHER HARDWARE ISSUES

PREREQUISITES

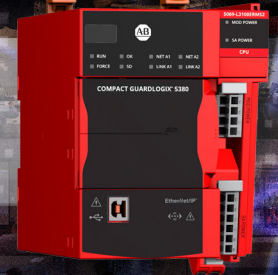
ABILITY TO PERFORM BASIC MICROSOFT WINDOWS TASKS
KNOWLEDGE OF BASIC LADDER LOGIC INSTRUCTIONS

SUMMARY

THIS COURSE PROVIDES YOU INFORMATION TO MAINTAIN AND TROUBLESHOOT COMPACT & CONTROLLOGIX SYSTEMS WITH NO CURRENT WORKING EXPERIENCE WITH THESE SYSTEMS. UPON COMPLETING THIS COURSE, YOU CAN RESTORE A PREVIOUSLY OPERATIONAL LOGIX5000 SYSTEM. ALL LOGIX5000 SYSTEMS USE THE SAME CONTROL ENGINE; THEREFORE, TASKS ARE SIMILAR. YOU WILL SEE APPLICABLE REFERENCES FOR OTHER SYSTEMS. EXERCISES ARE PERFORMED ON A SLC WORKSTATION; THE SKILLS TAUGHT IN THIS COURSE CAN BE APPLIED TO ALL LOGIX5000 PLATFORMS. YOU CAN PERFORM THESE TASKS ON THE SPECIFIC PLATFORM USED IN YOUR PLANT.



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ST-PLC-03 CONNECTED COMPONENT WORKBENCH & MICRO800 FULL DAY

THIS CLASS INCLUDES

- SETUP RSLINX DRIVERS
- PLC DATA STORAGE AND MEMORY
- CCW BASIC NAVIGATION
- HARDWARE OVERVIEW, OPTIONS, & OUT OF BOX SETUP
- FIRMWARE MANAGEMENT, DATA SEARCHING & ONLINE MONITORING
- NEW PROJECT CREATION, NAVIGATION, & SIMULATOR SETUP
- CODE DEVELOPMENT, UPLOAD/DOWNLOAD, & FORCING/TOGGLING

HANDS-ON PRACTICE

- MICRO800 SYSTEM HARDWARE
- CONNECTED COMPONENT WORKBENCH SOFTWARE
- TROUBLESHOOT CONFIG, CONTROLLER, I/O, OR OTHER HARDWARE ISSUES

PREREQUISITES

- ABILITY TO PERFORM BASIC MICROSOFT WINDOWS TASKS
- KNOWLEDGE OF BASIC LADDER LOGIC INSTRUCTIONS

SUMMARY

THIS COURSE PROVIDES YOU INFORMATION TO MAINTAIN AND TROUBLESHOOT A MICRO800 SYSTEM WITH NO CURRENT WORKING EXPERIENCE WITH THESE SYSTEMS. UPON COMPLETING THIS COURSE, YOU CAN RESTORE A PREVIOUSLY OPERATIONAL MICRO800 SYSTEM. ALL MICRO800 SYSTEMS USE THE SAME CONTROL ENGINE; THEREFORE, TASKS ARE SIMILAR. YOU WILL SEE APPLICABLE REFERENCES FOR OTHER SYSTEMS. EXERCISES ARE PERFORMED ON A SLC WORKSTATION; THE SKILLS TAUGHT IN THIS COURSE CAN BE APPLIED TO ALL MICRO800 PLATFORMS. YOU CAN PERFORM THESE TASKS ON THE SPECIFIC PLATFORM USED IN YOUR PLANT.



SCAN QR CODE OR CLICK HERE TO REGISTER NOW!



ST-PLC-04
STUDIO 5000 LOGIX DESIGNER WITH SAFETY
FULL DAY

THIS CLASS INCLUDES

- LEARNING GUARDLOGIX CONCEPTS AND TERMINOLOGY
- CREATING AND CONFIGURING A GUARDLOGIX PROJECT
- ADDING AND CONFIGURING COMPACT 5000™ GUARD I/O™ SAFETY MODULES
- GENERATING SAFETY SIGNATURES
- LOCKING/UNLOCKING A GUARDLOGIX CONTROLLER
- PROGRAMMING SAFETY INSTRUCTIONS
- TROUBLESHOOTING A GUARDLOGIX PROJECT

HANDS-ON PRACTICE

- MICRO800 SYSTEM HARDWARE
- CONNECTED COMPONENT WORKBENCH SOFTWARE
- TROUBLESHOOT CONFIG, CONTROLLER, I/O, OR OTHER HARDWARE ISSUES

PREREQUISITES

- UNDERSTANDING OF MACHINE SAFETY AND SAFETY STANDARDS
- STUDIO 5000 BASICS : PLC 02

SUMMARY

THIS COURSE PROVIDES YOU INFORMATION TO MAINTAIN AND TROUBLESHOOT A GUARDLOGIX5000 SYSTEM WITH NO CURRENT WORKING EXPERIENCE WITH THESE SYSTEMS. UPON COMPLETING THIS COURSE, YOU CAN RESTORE A PREVIOUSLY OPERATIONAL LOGIX5000 SYSTEM. ALL LOGIX5000 SYSTEMS USE THE SAME CONTROL ENGINE; THEREFORE, TASKS ARE SIMILAR. YOU WILL SEE APPLICABLE REFERENCES FOR OTHER SYSTEMS. EXERCISES ARE PERFORMED ON A COMPACT GUARDLOGIX WORKSTATION: THE SKILLS TAUGHT IN THIS COURSE CAN BE APPLIED TO ALL LOGIX5000 PLATFORMS. YOU CAN PERFORM THESE TASKS ON THE SPECIFIC PLATFORM USED IN YOUR PLANT.



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ST-HMI-01 PANELVIEW PLUS AND FACTORYTALK VIEW MACHINE EDITION FULL DAY

THIS CLASS INCLUDES

- HARDWARE OVERVIEW
- OUT OF BOX HARDWARE SETUP & FIRMWARE UPGRADES
- HARDWARE FEATURES & CAPABILITIES
- NEW PROJECT CREATION & NAVIGATION
- ESTABLISHING COMMUNICATIONS & TRANSFERRING MER
- ANIMATING BASIC GRAPHIC ELEMENTS
- TESTING FTVIEW ME APPLICATION

HANDS-ON PRACTICE

- PREPARE PANELVIEW PLUS TERMINAL FOR OPERATION
- CREATE & RUN A NEW APPLICATION ON A TERMINAL
- CREATE, CONFIGURE, & ANIMATE OBJECTS ON GRAPHIC DISPLAYS

PREREQUISITES

- ABILITY TO PERFORM BASIC MICROSOFT WINDOWS TASKS
- COMPLETION OF STUDIO 5000 BASICS - PLC02

SUMMARY

THIS COURSE PROVIDES YOU WITH THE SKILLS NECESSARY TO DEVELOP FACTORYTALK VIEW MACHINE EDITION (ME) APPLICATIONS THAT RUN ON THE NEXT-GENERATION PANELVIEW PLUS 7 TERMINALS.

THIS COURSE PROVIDES OPPORTUNITIES TO WORK WITH FACTORYTALK VIEW ME SOFTWARE AND RSLINX® ENTERPRISE SOFTWARE AS WELL AS PRACTICE DOWNLOADING FACTORYTALK VIEW ME APPLICATIONS TO A PANELVIEW PLUS TERMINAL. INDIVIDUALS WHO NEED TO CREATE OR MAINTAIN FACTORYTALK ME APPLICATIONS FOR USE ON A PANELVIEW PLUS TERMINAL SHOULD ATTEND THIS COURSE.



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**ST-HMI-02
PANELVIEW 800 & CONNECTED COMPONENTS WORKBENCH
FULL DAY**



THIS CLASS INCLUDES

- HARDWARE OVERVIEW
- OUT OF BOX HARDWARE SETUP & FIRMWARE UPGRADES
- HARDWARE FEATURES & CAPABILITIES
- NEW PROJECT CREATION & NAVIGATION
- ESTABLISHING COMMUNICATIONS & TRANSFERRING FILES
- ANIMATING BASIC GRAPHIC ELEMENTS

HANDS-ON PRACTICE

- PREPARE PANELVIEW 800 TERMINAL FOR OPERATION
- CREATE & RUN A NEW APPLICATION ON A TERMINAL
- CREATE, CONFIGURE, & ANIMATE OBJECTS ON GRAPHIC DISPLAYS

PREREQUISITES

- ABILITY TO PERFORM BASIC MICROSOFT WINDOWS TASKS
- COMPLETION OF STUDIO 5000 BASICS - PLC02

SUMMARY

THIS COURSE PROVIDES YOU WITH THE SKILLS NECESSARY TO DEVELOP SKILLS NECESSARY TO DEVELOP CONNECTED COMPONENTS WORKBENCH APPLICATIONS THAT RUN ON PANELVIEW 800 TERMINALS. THIS COURSE PROVIDES OPPORTUNITIES TO WORK WITH BOTH HARDWARE AND SOFTWARE. INDIVIDUALS WHO NEED TO CREATE OR MAINTAIN CCW APPLICATIONS FOR USE ON A PANELVIEW 800 TERMINAL SHOULD ATTEND THIS COURSE.



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**ST-HMI-03
PANELVIEW 5000 AND STUDIO 5000 VIEW DESIGNER
FULL DAY**



THIS CLASS INCLUDES

- HARDWARE OVERVIEW
- OUT OF BOX HARDWARE SETUP & FIRMWARE UPGRADES
- HARDWARE FEATURES & CAPABILITIES
- NEW PROJECT CREATION & NAVIGATION
- ESTABLISHING COMMUNICATIONS & TRANSFERRING VPD
- ANIMATING BASIC GRAPHIC ELEMENTS
- TESTING VPD APPLICATION

HANDS-ON PRACTICE

- PREPARE PANELVIEW 5000 TERMINAL FOR OPERATION
- CREATE & RUN A NEW APPLICATION ON A TERMINAL
- CREATE, CONFIGURE, & ANIMATE OBJECTS ON GRAPHIC DISPLAYS

PREREQUISITES

- ABILITY TO PERFORM BASIC MICROSOFT WINDOWS TASKS
- COMPLETION OF STUDIO 5000 BASICS - PLC02

SUMMARY

THIS COURSE PROVIDES YOU WITH THE SKILLS NECESSARY TO DEVELOP VIEW DESIGNER APPLICATIONS THAT RUN ON THE NEXT-GENERATION PANELVIEW 5000 TERMINALS. THIS COURSE PROVIDES OPPORTUNITIES TO WORK WITH BOTH HARDWARE AND SOFTWARE. INDIVIDUALS WHO NEED TO CREATE OR MAINTAIN VIEW DESIGNER APPLICATIONS FOR USE ON A PANELVIEW 5000 TERMINAL SHOULD ATTEND THIS COURSE.



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**ST-HMI-04
OPTIXPANEL AND FACTORYTALK OPTIX
FULL DAY**



THIS CLASS INCLUDES

- HARDWARE OVERVIEW
- OUT OF BOX HARDWARE SETUP & FIRMWARE UPGRADES
- HARDWARE FEATURES & CAPABILITIES
- NEW PROJECT CREATION & NAVIGATION
- ESTABLISHING COMMUNICATIONS & TRANSFERRING RUNTIME FILES
- ANIMATING BASIC GRAPHIC ELEMENTS
- TESTING OPTIX APPLICATIONS

HANDS-ON PRACTICE

- PREPARE OPTIX TERMINAL FOR OPERATION
- CREATE & RUN A NEW APPLICATION ON A TERMINAL
- CREATE, CONFIGURE, & ANIMATE OBJECTS ON GRAPHIC DISPLAYS

PREREQUISITES

- ABILITY TO PERFORM BASIC MICROSOFT WINDOWS TASKS
- COMPLETION OF STUDIO 5000 BASICS - PLC02

SUMMARY

THIS COURSE PROVIDES YOU WITH THE SKILLS NECESSARY TO DEVELOP OPTIX APPLICATIONS THAT RUN ON THE OPTIXPANEL TERMINALS. THIS COURSE PROVIDES OPPORTUNITIES TO WORK WITH BOTH HARDWARE AND SOFTWARE. INDIVIDUALS WHO NEED TO CREATE OR MAINTAIN OPTIX APPLICATIONS FOR USE ON A OPTIXPANEL TERMINAL SHOULD ATTEND THIS COURSE.



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**ST-VFD-01
INDUCTION MOTOR BASICS
HALF DAY**

THIS CLASS INCLUDES

- HISTORY OF INDUCTION MOTORS & HOW THEY WORK
- MOTOR TYPES, PARTS, & NAMEPLATE DATA
- CAUSES OF MOTOR FAILURES
- THERMAL PROTECTION OPTIONS
- INGRESS PROTECTION
- SHAFT CURRENT OPTIONS
- THERMAL IMAGING & VIBRATION ANALYSIS

HANDS-ON PRACTICE

- HOW TO CHECK A MOTORS INSULATION RESISTANCE
- HOW TO USE AN INSULATION TESTER
- HOW TO MEASURE VOLTAGE AND CURRENT TO A MOTOR

PREREQUISITES

A BASIC UNDERSTANDING OF ELECTRICAL TERMS SUCH AS VOLTAGE, CURRENT, RESISTANCE, ETC.

SUMMARY

THIS COURSE PROVIDES YOU A BASELINE KNOWLEDGE OF INDUCTION MOTORS AND HOW THEY ARE APPLIED IN AN INDUSTRIAL SETTING. THIS COURSE IS IDEAL FOR ENGINEERS, TECHNICIANS AND AUTOMATION PROFESSIONALS WHO DEAL WITH INDUCTION MOTORS ON A DAILY BASIS..



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**ST-VFD-02
VFD BASICS
HALF DAY**



THIS CLASS INCLUDES

VFD TYPES, SECTIONS, AND PARTS
HOW A VFD WORKS & WHAT A VFD CONTROLS ON A MOTOR
KNOWN PROBLEMS USING VFD'S
BASIC & COMMUNICATION VFD PARAMETERS
USING THE VFD KEYPAD
TWO-WIRE/THREE-WIRE CONTROL, PRESET SPEED & SKIP FREQUENCIES
TROUBLESHOOTING & UNDERSTANDING VFD FAULTS

HANDS-ON PRACTICE

INSTRUCTOR LED DEMOS

PREREQUISITES

BASIC KNOWLEDGE OF ELECTRICAL TERMINOLOGY
SUCH AS VOLTAGE, CURRENT, RESISTANCE, ETC.

SUMMARY

THIS COURSE PROVIDES YOU A BASELINE KNOWLEDGE OF VARIABLE FREQUENCY DRIVES AND HOW THEY ARE APPLIED IN AN INDUSTRIAL SETTING. THIS COURSE IS IDEAL FOR ENGINEERS, TECHNICIANS AND AUTOMATION PROFESSIONALS WHO DEAL WITH VARIABLE FREQUENCY DRIVES FOR MANUFACTURING EQUIPMENT OR FACILITIES.



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**ST-VFD-03
POWERFLEX 520 AC DRIVES
FULL DAY**

THIS CLASS INCLUDES

POWERFLEX 520 SERIES INTRODUCTION

WIRING CONSIDERATIONS

KAUTOMATIC DEVICE CONFIGURATION (ADC)

SAFETY CONSIDERATIONS

HIM OPTIONS

UNDERSTANDING FAULTS

MODERNIZATION OF LEGACY PRODUCTS

HANDS-ON PRACTICE

LABS WITH POWERFLEX 525

(CCW, STUDIO 5000)

PREREQUISITES

BASIC KNOWLEDGE OF WINDOWS OPERATIONS

ST-VFD-01 AND ST-VFD-02

SUMMARY

THIS COURSE PROVIDES YOU A BASELINE KNOWLEDGE OF POWERFLEX 520 SERIES AND HOW IT IS USED ON THE MANUFACTURING FLOOR.

THIS COURSE IS IDEAL FOR ENGINEERS, TECHNICIANS AND AUTOMATION PROFESSIONALS WHO DEAL WITH VARIABLE FREQUENCY DRIVES FOR MANUFACTURING EQUIPMENT OR FACILITIES.



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**ST-MOT-01
INTEGRATED MOTION BASICS
FULL DAY**

THIS CLASS INCLUDES

- MOTION CONTROL OVERVIEW
- MECHANICAL DEVICES
- HARDWARE OVERVIEW, WIRING, & AXIS CONFIGURATION
- MOTION PROGRAMMING BEST PRACTICES
- MOTION DIRECT COMMANDS
- SERVO TROUBLESHOOTING AND TRENDS
- AUTO TUNING

HANDS-ON PRACTICE

- INSTRUCTOR LED DEMOS

PREREQUISITES

- BASIC KNOWLEDGE OF WINDOWS OPERATIONS
- KNOWLEDGE OF STUDIO 5000 LOGIX & LADDER LOGIC PROGRAMMING

SUMMARY

THIS COURSE PROVIDES YOU A FOUNDATIONAL OVERVIEW OF ROCKWELL AUTOMATION'S INTEGRATED MOTION SYSTEMS. AND PROGRAMMING. PARTICIPANTS WILL DEVELOP AN UNDERSTANDING OF SERVO MOTOR APPLICATIONS AND LEARN HOW TO IMPLEMENT THEM EFFECTIVELY. THE COURSE WILL COVER BOTH MECHANICAL AND ELECTRICAL PRINCIPLES RELATED TO SERVO SYSTEMS. ADDITIONALLY, STUDENTS WILL BE TASKED WITH CREATING A BASIC INTEGRATED MOTION PROGRAM TO CONTROL A SERVO MOTOR AND A LINEAR ACTUATOR.



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**ST-MOT-02
INTEGRATED MOTION ADVANCED
FULL DAY**

THIS CLASS INCLUDES

- INTEGRATED MOTION INSTRUCTIONS
- PROGRAMMING FUNCTIONALITY AND MOTION COMMANDS
- DIAGNOSTICS AND TROUBLESHOOTING
- MANUAL TUNING
- INTEGRATED SAFETY
- INTEGRATED SAFE MONITORED FUNCTIONS
- FUNCTIONAL MOTION PROGRAMMING TEST

HANDS-ON PRACTICE

- INSTRUCTOR LED DEMOS

PREREQUISITES

- BASIC KNOWLEDGE OF WINDOWS OPERATIONS
- KNOWLEDGE OF STUDIO 5000 LOGIX & INTEGRATED MOTION CONTROL

SUMMARY

THIS COURSE PROVIDES YOU AN IN-DEPTH UNDERSTANDING OF ADVANCED MOTION CONTROL CONCEPTS & TECHNIQUES USING ROCKWELL AUTOMATION'S INTEGRATED MOTION SYSTEMS. THIS COURSE IS DESIGNED TO ENHANCE SKILLS IN PROGRAMMING INTEGRATED MOTION INSTRUCTIONS, UTILIZING MOTION COMMANDS, AND TROUBLESHOOTING MOTION SYSTEMS EFFECTIVELY. PARTICIPANTS WILL ALSO GAIN KNOWLEDGE IN MANUAL TUNING, INTEGRATED SAFETY, AND SAFE MONITORED FUNCTIONS. THE COURSE INCLUDES HANDS-ON TESTING, ALLOWING LEARNERS TO APPLY THEIR KNOWLEDGE AND REFINE THEIR EXPERTISE.



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**ST-MOT-03
CAM, GEAR, & COORD MOTION
FULL DAY**

THIS CLASS INCLUDES

USING MAG INSTRUCTION
USING MAPC INSTRUCTION
USING MCCP INSTRUCTION
USING MAOC INSTRUCTION
XY & XYZ COORDINATE SYSTEMS
USING MCLM & MCCM
CNC

HANDS-ON PRACTICE

INSTRUCTOR LED DEMOS

PREREQUISITES

BASIC KNOWLEDGE OF WINDOWS OPERATIONS
KNOWLEDGE OF STUDIO 5000 LOGIX & INTEGRATED MOTION CONTROL

SUMMARY

PARTICIPANTS WILL EXPLORE ADVANCED COORDINATED MOTION COMMANDS THAT ENABLE USERS TO SYNCHRONIZE MULTIPLE AXES IN VARIOUS CONFIGURATIONS FOR DIVERSE APPLICATIONS. THEY WILL GAIN KNOWLEDGE OF ELECTRONIC GEARING AND CAMMING, AS WELL AS THE USE OF CARTESIAN COORDINATE SYSTEMS FOR CONTROLLING MULTI-AXIS MECHANICAL SYSTEMS SUCH AS GANTRIES AND DELTA STYLE ROBOTICS. THIS CLASS IS IDEAL FOR ENGINEERS, TECHNICIANS, AND AUTOMATION PROFESSIONALS WHO WORK WITH MULTI-AXIS MECHANICAL SYSTEMS, SUCH AS GANTRIES AND DELTA-STYLE ROBOTS.



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**ST-MOT-04
MECHATRONICS DESIGN
FULL DAY**

THIS CLASS INCLUDES

- CROSSING MOTORS
- DIMENSIONAL DIFFERENCES IN SERVO MOTORS
- SELECTING MECHANICAL COMPONENTS
- MOTION ANALYZER ONLINE
- MOTION ANALYZER OFFLINE

HANDS-ON PRACTICE

- INSTRUCTOR LED DEMOS

PREREQUISITES

- BASIC KNOWLEDGE OF WINDOWS OPERATIONS
- KNOWLEDGE OF STUDIO 5000 LOGIX & INTEGRATED MOTION CONTROL

SUMMARY

THIS COURSE EQUIPS PARTICIPANTS WITH THE SKILLS TO SIZE AND SELECT SERVO MOTORS FOR A VARIETY OF APPLICATIONS. IT OFFERS AN IN-DEPTH EXPLANATION OF HOW TO ANALYZE MECHANICAL SYSTEMS TO DETERMINE APPROPRIATE SERVO SIZING AND OUTLINES PRACTICAL TECHNIQUES FOR UPGRADING AND REPLACING OLDER SERVO MOTORS WITH NEW ONES. THIS COURSE IS DESIGNED FOR ENGINEERS, TECHNICIANS, AND PROFESSIONALS INVOLVED IN DESIGNING, MAINTAINING, OR UPGRADING MOTION CONTROL SYSTEMS.



SCAN QR CODE OR CLICK HERE TO REGISTER NOW!

ST-SOF-03
FACTORYTALK VIEW SITE EDITION
FULL DAY

THIS CLASS INCLUDES

VIEW SE SYSTEM COMPONENTS & DESIGN
BUILD AN APPLICATION FROM SCRATCH
ADD DISPLAYS
WORK WITH TAGS & ANIMATIONS
ALARMING AND TRENDING CAPABILITIES
EXPERIENCE MOBILE ACCESS & CONTROL OPTIONS
DATALOGPRO, GLOBAL OBJECTS, & LANGUAGE-SWITCHING FUNCTIONS

HANDS-ON PRACTICE

LABS WILL BE RUN IN THE CLOUD
STUDENTS SHOULD BRING A LAPTOP THAT CAN ACCESS THE INTERNET

PREREQUISITES

NONE

SUMMARY

WITH AN OPPORTUNITY TO EXPLORE INTRODUCTORY FEATURES OF FACTORYTALK® VIEW SITE EDITION (FACTORYTALK VIEW SE). IF YOU ARE NEW TO FACTORYTALK VIEW SITE EDITION AND FACTORYTALK VIEWPOINT, THIS HANDS-ON LAB PROVIDES THE ABILITY TO LEARN FOUNDATIONAL CAPABILITIES AND FEATURES. THIS COURSE IS INTENDED FOR INDIVIDUALS WHO NEED TO GAIN A BETTER UNDERSTANDING OF FACTORYTALK VIEW SE, BUT NO PREVIOUS EXPERIENCE IS REQUIRED.



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