ATS

SkillPoint™

ATS TECHNICAL TRAINING SOLUTIONS

COURSE CATALOG

▣ Hands On Courses

▣ Online Courses

🔧 Hands on Courses

Electrical/Electronic and Industrial Motor Drives

- ### EL102-Wiring Simplified

  Learn how to practice electrically safe work habits, use a multimeter, calculate circuit loads, select conductors, run wiring, and connect components to complete a circuit. Students also receive hands on practice of various conduit bending techniques.

  Estimated class duration: 24 hours

- ### EL103-Soldering Basics

  An introductory course for maintenance technicians to successfully understand and safely use the tools, processes and applications involved with soldering through hands on lab exercises.

  Estimated class duration: 16 hours

- ### EL121-Electrical Controls & Components

  A workshop designed for beginners, by learning fundamental concepts of electricity / ohms law, safety, multimeters, identifying and checking electrical components, circuits, components, schematics, ladder diagrams, motors and more.

  Estimated class duration: 28 hours

- ### EL122-Electrical Troubleshooting, Relay Logic

  This course reviews electrical theory, component identification and operation, and multimeters. Using hands on trainers, students wire and test various relay control circuits, while learning relay logic to help prepare them to engage in PLC troubleshooting.

  - Interpretation of ladder logic symbols and diagrams
  - Understanding basic electrical troubleshooting theory
  - Series and parallel circuit logic and diagnostics
  - Ladder logic creation and diagramming
  - Interpretation of electrical schematics and troubleshooting
  - Development of motor starter circuits
  - Creating ladder logic for relays, timers, and starters
  - Safely troubleshoot live circuits (NFPA70E Arc-Flash)
  - Use a meter (DVOM) in electrical troubleshooting

  Estimated class duration: 28 hours

- ### EL132-Electrical Print Reading

  An introduction to electrical theory and ohms law, basic electrical symbols are described and explained at a component level. Various types of electrical diagrams are introduced so their function can be analyzed by the class. Students can also supply diagrams from their plant for review.

  Estimated class duration: 16 hours

▪ EL201-Industrial Electronics Maintenance

This course is designed to aid in the understanding and troubleshooting of electronic system components when board level diagnostics are required. The understanding gained within this course enables electrical technicians to troubleshoot electronic component failures at a more complex level, allowing for root cause failure analysis and prevention of repeat failure.

- Efficiently and effectively identify which circuit board needs replaced or repaired
- Troubleshoot solid-state circuits
- Use oscilloscopes and multi-meters to trace signals
- Understand resistors, capacitors, inductors, diodes, SCR's, TRIAC's, and other solid-state devices
- Safely work with electronic equipment, protecting people and equipment

Estimated class duration: 28 hours

▪ EL235-Advanced Electrical Troubleshooting

Hands-on training course for maintenance personnel required to perform advanced electrical maintenance on production and support equipment including various electrical circuits and programmable logic controllers. Techs will be involved with higher level electrical circuit troubleshooting and development, and NFPA70E safety.

- Single phase to 3 phase power conversion
- Wiring advanced electrical circuits
- Advanced Troubleshooting circuit issues
- SLC 500 PLC I/O board configuration
- Upload/Downloading plc programs

Estimated class duration: 28 hours

▪ EL355-Troubleshooting & Repair of AB Flex 70/700 Drives

Hands-on Flex 70/700 drives maintenance and troubleshooting: including parameters, meter and oscilloscope measurements, Communications modules, HIM utilization, and drive terminal interfaces.

Estimated class duration: 28 hours

▪ EL371-NFPA70E Electrical Safe Work Practices

A hands-on training focusing on how to utilize the standard and apply that knowledge. This class is available as a one-day refresher course, a two-day full content course or as an extension option for many of our hands-on classes.

- Electrical safe work practices
- Recognizing electrical hazards
- Emergency procedures
- OSHA requirements
- NFPA70E code updates
- Arc Flash / Arc Blast Shock / Electrocution
- Proper PPE use and inspection
- Lockout energy controls (LECP) procedures
- Multimeter safety

Estimated class duration: 8 or 16 hours

* MEETS SAFETY REGULATIONS

PLC

- ### PLC202-PLC 500 & 5000 Platforms

  This course covers the basic operations and troubleshooting of PLC's, utilizing Rockwell RSLinx/Logix PC software as the main interface point.

  - Basic Electricity
  - Ladder Logic
  - Electrical Schematics
  - Motor Starter Circuits
  - Creating Ladder Logic for Relays PC to PLC communications
  - Rockwell RSLinx Software Driver Selection
  - PC Com Port Selection
  - PLC Fundamentals 1
  - Going Online with RSLinx/Logix
  - RSLinx/Logix Software Navigation
  - Program Upload and Download
  - Program Search Options
  - PLC Tagging and Labeling
  - Troubleshooting PLC Faults
  - Troubleshooting with PLC Programs
  - Troubleshooting I/O
  - PLC Components & Operation
  - Relay Ladder vs. PLC Ladder
  - PLC Scan Time and Method Variances
  - SLC500, ControlLogix, CompactLogix, & MicroLogix Specifics

  Estimated class duration: 28 hours

- ### PLC300-PLC Troubleshooting & Repair

  Siemens S7 PLC control system troubleshooting. The student will configure, assemble, write, edit, force I/Os, backup, restore and monitor ladder or STL logic to execute specific program functions using a student workstation.

  Estimated class duration: 28 hours

- ### PLC401-PanelView™ Modifications and Communications

  This course is ideal for technicians tasked with replacing, reprogramming, and installing PanelView displays and using the Rockwell PanelBuilder software. Subjects include setup, screen modification, communications, ladder diagnostics and troubleshooting.

  Estimated class duration: 28 hours

- ### PLC481-ControlLogix & RSLogix 5000

  Configure, assemble, and then write the necessary ladder logic to execute tasks with a ControlLogix 5000 controller.

  Estimated class duration: 28 hours

Robotics

▪ RB220-Fanuc Robotics System R-J# Series Controller

Operation and maintenance on a FANUC System RJ, RJ-2, RJ-3 or RJ-3iB controller, utilizing the teach pendant as the main interface point. Tasks include familiarization in jogging the robot, recovering from common faults, basic programming, program execution, I/O manipulation, and back-up file management. Additionally, this course introduces common maintenance practices including periodic maintenance, preventative maintenance, and axis mastering.

Estimated class duration: 24 hours

CNC

▪ CNC201-CNC Maintenance and Troubleshooting

Operation and maintenance for CNC Controlled equipment. This course uses FANUC 0iC and/or 16/18i, to teach navigation of the CNC control, system diagnostic features, basic operations, program interpretation, and troubleshooting of CNC components through feedback devices. Activities include familiarization in jogging the machine, recovering from common faults, MDI programming, program execution, I/O manipulation, troubleshooting with PMC logic, and servo system diagnostics.

Estimated class duration: 28 hours

MECHANICAL AND PRECISION MAINTENANCE

▪ ME127-Troubleshooting Mechanical Power Systems

Identify problems, troubleshoot, and perform maintenance on drive systems including belts, chains, gear drives and recirculating ball screws. Drive system serviceability, measurement and maintenance are of paramount focus in this course.

Estimated class duration: 28 hours

▪ ME170-Mechanical Print Reading

This class discusses the complexities of geometric dimensioning and tolerancing, various print views, projections, and functions of mechanical prints, while developing skills that allow technicians to interpret both, the prints of the equipment they are responsible for maintaining, as well as understanding the parts that are being manufactured.

- Identify details, markings, and machine parts from an assembly drawing
- Identify an object from an orthographic drawing
- Identify elements located within the title block of a detail drawing
- Identify screw threads from a number specification
- Identify and interpret an assembly drawing

Estimated class duration: 16 hours

Mechanical And Precision Maintenance

▪ ME202-Bearing Life Improvement

Improve equipment longevity by diagnosing the root cause of bearing failures and the preventative measures required to alleviate premature failures. Additionally, bearing and bearing seal types are identified and discussed to ensure that students understand the proper application, adjustment and tolerances associated with different bearing types.

- Determine proper sizes of shafts and housings
- Measure straight and tapered shafts
- Demonstrate proper bearing mounting and dismounting techniques
- Properly lubricate rolling bearings
- Monitor rolling bearings to prevent catastrophic failure

Estimated class duration: 24 hours

▪ ME221-Industrial Gearbox Repair (Speed Reducers)

Troubleshooting, rebuilding, installing, and aligning of industrial gearboxes. Students will develop the skills and methodology to properly address gearbox issues of the worm, helical, herringbone, spur, and other types. Additionally, this course covers a selection of lubricants, their applications, and a breakdown on service rating.

- Troubleshoot failed gear boxes
- Select the proper worm gear box
- Properly install a speed reducer
- Select the ideal coupling for the gearbox by rating, speed, and misalignment factor
- Correctly replace seals and bearings
- Correctly set up a gear box using shims

Estimated class duration: 28 hours

▪ ME227-Precision Maintenance Part 1

In-depth application and use of measuring devices including tapes, vernier calipers, dial calipers, digital calipers, inside micrometers, outside micrometers, depth micrometers, telescoping gauges, feeler gauges, dial indicators and height gages. Also included are fits and tolerances for bearings, housings, and shafts plus strengths and characteristics of common fasteners.

* This course is a pre-requisite to ME228 – Precision Maintenance Part 2.

Estimated class duration: 24 hours

▪ ME228- Precision Maintenance Part 2

A continuation of ME227 – What is torque, including various applications in calculation, conversion and the many fasteners and components that can be impacted by torque. Proper selection and use of a wide variety of torque wrenches. Installation, alignment, and maintenance of many types of chains, sprockets, belts, and pullies. Motor installation, pulley alignment and coupling alignment procedures.

- Understanding of torque
- Use of Keys and Keyways
- Master level understanding of the installation of chains, sprockets, belts, and pullets
- Advanced understanding of pulley alignment, couplings, and shaft alignment including laser alignment

Estimated class duration: 24 hours

Fluid Power

▪ FP131-Liquid Process Pumps Troubleshooting

A workshop for millwrights, plumbers, pipefitters, mechanics, machinery maintenance mechanics, electromechanical technicians and more. Begins with an introduction to liquid process pumps and builds toward concepts like alignment and lubrication allowances.

- Troubleshoot, diagnose and repair failed seals
- Align pumps
- Read pump curves
- Install piping and flanges correctly
- Properly install pumps
- Reduce fugitive emissions
- Repack and adjust pump stuffing boxes
- Install standard shaft couplings

Estimated class duration: 28 hours

▪ FP151-Fluid Power Print Reading

Standard symbology, conventional fluid and pneumatic diagrams, and logic diagrams are explained thoroughly.

- Demonstrate an understanding of symbology, including schematics and piping drawings.
- Understand typical fluid power diagrams
- Interpret schematics including fluid power logic and piping drawings
- Demonstrate understanding of various print attributes: plan view, detail, elevation, isometrics
- Utilize fluid power schematics to identify function of fluid power systems

Estimated class duration: 16 hours

▪ FP153-Fluid Power–Troubleshooting Hydraulics

A lab-based fluid power training course, read and interpret fluid power schematics to understand the component functions and common circuitry. This course provides a hands-on experience in the application of fluid power troubleshooting, inspection and replacement of hydraulic components, and preventative maintenance processes. Hands-on training with directional control valves, pressure controls valves, flow control valves, and actuators

- Understand hydraulic safety best practices
- Apply fluid power theory and Pascal's Law
- Utilize component functionality to demonstrate intensifier functions
- Apply troubleshooting methods at a component level
- Demonstrate function of accumulators
- Understand function and rating of hydraulic fluids, seals, and filters

Estimated class duration: 28 hours

▪ FP161-Troubleshooting Pneumatic Equipment/Controls

Focused on working safely with pneumatic systems and troubleshooting pneumatic logic systems.

- Read pneumatic schematics
- Identify and understand pneumatic components
- Troubleshoot pneumatic control circuits
- Troubleshoot pneumatic Programmable Logic Controllers
- Read and interpret ladder diagrams
- Understand common circuit applications
- Perform preventive maintenance
- Remove, clean, and replace pneumatic components

Estimated class duration: 28 hours

Rigging

▪ RL158-Safe Rigging, Lifting, & Moving of Equipment

Safe lifting and moving - utilization of components and practices "Below the Hook". This course covers proper use and inspection of lifting devices, hand signals, load balancing, jacks, rollers and dollies, and cribbing. Successful completion of this course and exam provides internal qualification in accordance with regulations set forth by OSHA 29CFR1910.184 and 29CRF1926.251.

Estimated class duration: 24 hours

* MEETS SAFETY REGULATIONS

▪ RL161-Overhead Crane Inspection

Students will learn how to perform the OSHA/ANSE frequent and periodic inspections. A hands-on experience customized to fit the customers particular needs.

- Understand crane terms and applicable ANSI standards
- OSHA 1903.1- General Duty Clause
- OSHA 1910.6- Incorporation by Reference
- OSHA 1903.13- Imminent Danger
- OSHA 1910.179 –Overhead and Gantry Cranes
- OSHA 1910.184 with 1926.251 Insert and Applicable Tables
- Demonstrate proper Lockout/Tag Out
- Interpret the definition of crane operation, condition, and limitations
- Identify risk and prevent overhead crane incidents
- Know wire rope technology
- Interpret and Perform inspection procedures
- Adhere to ASME/ANSI B30.xx and CMAA specification 70 & 74

Estimated class duration: 24 hours

* MEETS SAFETY REGULATIONS

Factory Maintenance

▪ FM226-Air Conditioning & Refrigeration Certification

Students earn an EPA Refrigerant Recovery Certification in this three-day course. Beginning with an overview of HVAC, students prepare to take the certification test by learning safety, electrical, troubleshooting and filtration concepts, to name a few.

- Understand the physics of heat and heat transfer
- Apply basic electrical theory and troubleshooting
- Apply Print reading and Schematics Skills to HVAC
- Safely work with refrigeration and air conditioning systems
- Understand the methods of heating, filtration, and humidification

Estimated class duration: 28 hours

🖥 Online Courses

Foundational

▪ Safety

- Introduction to OSHA 101
- Ergonomics 102
- Personal Protective Equipment 111
- Noise Reduction and Hearing Conservation 121
- Respiratory Safety 131
- Lockout/Tagout Procedures 141
- Machine Guarding 271
- SDS and Hazard Communication 151
- Bloodborne Pathogens 161
- Walking and Working Surfaces 171
- Fire Safety and Prevention 181
- Flammable/Combustible Liquids 191
- Hand and Power Tool Safety 201
- Safety for Lifting Devices 211
- Powered Industrial Truck Safety 221
- Confined Spaces 231
- Environmental Safety Hazards 241

▪ Applied Mathematics

- Math Fundamentals 101
- Math: Fractions and Decimals 111
- Applied and Engineering Sciences 110
- Units of Measurement 112
- Basics of Tolerance 121
- Manufacturing Process Applications: Part I 124
- Manufacturing Process Applications: Part II 125
- Blueprint Reading 131
- Algebra Fundamentals 141
- Geometry: Lines and Angles 151
- Geometry: Triangles 161
- Geometry: Circles and Polygons 171
- Shop Geometry Overview 170
- Trigonometry: The Pythagorean Theorem 201
- Trigonometry: Sine, Cosine, Tangent 211
- Trigonometry: Sine Bar Applications 221
- Shop Trig Overview 210
- Statistics 231
- Interpreting Blueprints 230
- Concepts of Calculus 310

▪ Materials

- Introduction to Physical Properties 101
- Introduction to Mechanical Properties 111
- Introduction to Metals 121
- Introduction to Plastics 131
- Metal Manufacturing 140
- Overview of Plastic Processes 145
- Classification of Steel 201
- Essentials of Heat Treatment of Steel 211
- Hardness Testing 221
- Ferrous Metals 231
- Nonferrous Metals 241
- Thermoplastics 251
- Thermosets 261
- Introduction to Ceramics 141
- Principles of Injection Molding 255
- Principles of Thermoforming 265
- Exotic Alloys 301

▪ Inspection

- Basic Measurement 101
- Calibration Fundamentals 111
- Basics of Tolerance 121
- Blueprint Reading 131
- Hole Standards and Inspection 141
- Thread Standards and Inspection 151
- Surface Texture and Inspection 201
- Measuring System Analysis 300
- Introduction to GD&T 301
- Introduction to GD&T 200 (1994)
- Major Rules of GD&T 311
- Interpreting GD&T 310 (1994)
- Inspecting a Prismatic Part 321
- Inspecting a Cylindrical Part 331
- Advanced Hole Inspection 341
- Inspecting with Optical Comparators 351
- Inspecting with CMMs 361
- Calibration and Documentation 371

Quality / Lean

- Quality Overview 111
- Lean Manufacturing Overview 101
- ISO 9000 Review 121
- ISO 9001 2015 Review 122
- Continuous Process Improvement: Managing Flow 124
- Continuous Process Improvement: Identifying and Eliminating Waste 125
- Approaches to Maintenance 131
- Process Design and Development 133
- Product Design and Development 134
- Developing a Lean Culture 135
- Production System Design and Development 136
- Equipment/Tool Design and Development 137
- Introduction to Supply Chain Management 115
- Total Productive Maintenance 141
- 5S Overview 151
- Cell Design and Pull Systems 161
- Introduction to Six Sigma 171

- Quality and Customer Service 175
- Troubleshooting 181
- Conducting Kaizen Events 191
- Conducting an Internal Audit 201
- SPC Overview 211
- TS 16949: 2009 Overview 221
- Metrics for Lean 231
- Process Flow Charting 241
- Strategies for Setup Reduction 251
- Total Quality Management Overview 261
- Management Tools: Problem Solving 270
- Management Tools: Product and Process Design 275
- Value Stream Mapping: The Present State 300
- Six Sigma Goals and Tools 310
- Value Stream Mapping: The Future State 311
- Managing Practices for Total Quality 320
- Maintaining a Consistent Lean Culture 330
- Transforming Lean into Business Results 340
- Measuring Lean Systems 350

Machining

Abrasives

- Introduction to Abrasives 101
- Grinding Processes 201
- Grinding Safety 211
- Basic Grinding Theory 221
- Basics of the Surface Grinder 231
- Basics of the Cylindrical Grinder 232
- Basics of the Centerless Grinder 233
- Setup for the Surface Grinder 241
- Setup for the Cylindrical Grinder 242
- Setup for the Centerless Grinder 243
- Surface Grinder Operation 251
- Cylindrical Grinder Operation 252
- Centerless Grinder Operation 253
- Introduction to Grinding Fluids 261
- Grinding Variables 301
- Grinding Ferrous Materials 311
- Grinding Nonferrous Materials 321
- Grinding Wheel Materials 331
- Dressing and Truing 341
- Grinding Wheel Selection 351
- Grinding Wheel Geometry 361

CNC

- History and Definition of CNC 202
- Introduction to CNC Machines 201
- Basics of the CNC Lathe 211
- Basics of the CNC Mill 212
- Basics of the CNC Swiss-Type Lathe 135
- Coordinates for the CNC Lathe 221
- Coordinates for the CNC Mill 222
- Basics of G Code Programming 231
- Introduction to CAD and CAM for Machining 241
- Control Panel Functions for the CNC Lathe 251
- Control Panel Functions for the CNC Mill 252
- Offsets on the CNC Lathe 261
- Offsets on the CNC Mill 262
- CNC Specs for the Mill 220
- CNC Specs for the Lathe 225
- Creating a CNC Turning Program 301
- Creating a CNC Milling Program 302
- Calculations for Programming the Mill 312
- Canned Cycles for the Lathe 321

Machining

▪ CNC Controls: Fanuc

- Fanuc Mill: Control Panel Overview 250
- Fanuc Lathe: Control Panel Overview 255
- Fanuc Mill: Entering Offsets 260
- Fanuc Lathe: Entering Offsets 265
- Fanuc Mill: Locating Program Zero 270
- Fanuc Lathe: Locating Program Zero 275
- Fanuc Mill: Program Execution 280
- Fanuc Lathe: Program Execution 285
- Fanuc Mill: Program Storage 310
- Fanuc Lathe: Program Storage 315
- Fanuc Mill: First Part Runs 320
- Fanuc Lathe: First Part Runs 325

▪ CNC Controls: Haas

- Haas Mill: Control Panel Overview 250
- Haas Lathe: Control Panel Overview 256
- Haas Mill: Entering Offsets 260
- Haas Lathe: Entering Offsets 265
- Haas Mill: Locating Program Zero 270
- Haas Lathe: Locating Program Zero 275
- Haas Mill: Program Execution 280
- Haas Lathe: Program Execution 285
- Haas Mill: Program Storage 310
- Haas Lathe: Program Storage 315
- Haas Mill: First Part Runs 320
- Haas Lathe: First Part Runs 325

▪ CNC Controls: Mazak

- Mazak Mill: Control Panel Overview 250
- Mazak Lathe: Control Panel Overview 255
- Mazak Mill: Safety for the Mill 260
- Mazak Lathe: Safety for the Lathe 265
- Mazak Mill: Locating Program Zero 270
- Mazak Lathe: Locating Program Zero 275
- Mazak Mill: Entering Offsets 280
- Mazak Lathe: Entering Offsets 285
- Creating an EIA/ISO Program for the Mazak Mill 286
- Creating an EIA/ISO Program for the Mazak Lathe 287
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- Creating a Mazatrol Program for the Lathe 289
- Mazak Mill: Program Execution 290
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- Mazak Mill: First Part Runs 320
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▪ Manual Machining

- Manual Mill Basics 201
- Engine Lathe Basics 211
- Manual Mill Setup 221
- Engine Lathe Setup 231
- Benchwork and Layout Operations 210
- Manual Mill Operation 220
- Engine Lathe Operation 261
- Threading on the Engine Lathe 301
- Taper Turning on the Engine Lathe 311
- Holemaking on the Mill 271

▪ Metal Cutting

- Safety for Metal Cutting 101
- Cutting Processes 111
- Overview of Machine Tools 121
- Basic Cutting Theory 201
- Introduction to Screw Machining 160
- Band Saw Operation 211
- Introduction to Metal Cutting Fluids 221
- Metal Cutting Fluid Safety 231
- Toolholders for Turning 260
- Speed and Feed for the Lathe 301
- Speed and Feed for the Mill 311
- Cutting Tool Materials 321
- Carbide Grade Selection 331
- ANSI Insert Selections 341
- Lathe Tool Geometry 351
- Mill Tool Geometry 361
- Drill Tool Geometry 371
- Optimizing Tool Life and Process 381
- Impact of Workpiece Materials 391
- High-Speed Machining 310
- Hard Turning 315
- Machining Titanium Alloys 325

▪ Workholding

- Introduction to Workholding 101
- Supporting and Locating Principles 111
- Locating Devices 121
- Clamping Basics 131
- Chucks, Collets, and Vises 141
- Fixture Body Construction 200
- Fixture Design Basics 201
- Drill Bushing Selection 230

Maintenance

▪ Electrical Systems

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- Safety for Electric Work 111
- Introduction to Circuits 201
- Introduction to Magnetism 211
- DC Circuit Components 221
- NEC Overview 231
- AC Fundamentals 241
- Electrical Instruments 251
- Electrical Print Reading 261
- DC Power Sources 271
- AC Power Sources 281
- Conductor Selection 291
- Series Circuit Calculations 301
- Parallel Circuit Calculations 311
- Battery Selection 321

▪ Hydraulics & Pneumatics

- Introduction to Fluid Systems 101
- Introduction to Hydraulic Components 221
- The Forces of Fluid Power 201
- Safety for Hydraulics and Pneumatics 211
- Introduction to Pneumatic Components 231
- Introduction to Fluid Conductors 241
- Preventive Maintenance for Fluid Systems 261
- Hydraulic Power Variables 200
- Pneumatic Power Variables 311
- Fluid System Print Reading 220
- Hydraulic Control Valves 341
- Pneumatic Control Valves 351
- Actuator Applications 240
- Fittings for Fluid Systems 251
- Hydraulic Power Sources 302
- Hydraulic Schematics and Basic Circuit Design 342
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▪ Mechanical Systems

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- Safety for Mechanical Work 111
- Power Transmission Components 201
- Forces of Machines 121
- Lubricant Fundamentals 211
- Mechanical Power Variables 202
- Bearing Applications 221
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▪ Rigging

- Introduction to Machine Rigging 111
- Rigging Equipment 120
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▪ Motor Controls

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- Control Devices 211
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- Limit Switches and Proximity Sensors 231
- Introduction to Electric Motors 301
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Maintenance

■ PLCs: Allen Bradley / Rockwell

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- Hardware for PLCs 211
- Basics of Ladder Logic 221
- Numbering Systems and Codes 222
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- PLC Program Control Instructions 310
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■ PLCs: Siemens

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- Basic Function Block Diagram Programming for Siemens PLCs 290
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■ Robotics

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Welding

Welding

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- Oxyfuel Welding Safety 105
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- PPE for Welding 111
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Additive Manufacturing

Additive Manufacturing

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- Die Cutting Variables 200
- Monitoring Press Operations 220
- Guiding System Components 230
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Composite Processing

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- Additive Manufacturing Materials Science 211
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