

# Applied Robotic Welding Processes

## Course Duration

The duration is 3 days  
Frequency of course taught on an as-required basis.

## Course Description

A 3-day training program covering applied welding of advanced materials, technologies, and processes. Throughout the course, you will apply classroom theory in our lab. Using our robots, you will practice welding on prepared coupons. After practicing on weld coupons, you are encouraged to weld on your actual parts. Procedures and parameters can then be taken back with you to optimize your weld cell's capabilities.

## Course Prerequisites

The person attending must have completed the Lincoln Automation Basic Robotic Programming and System Training Course.

## Main Topics

### Technologies

- Waveform Control Technology®
- Digital Communications
- Synergic
- Adaptive Loop

### Modes of Metal Transfer

- Short-Arc Transfer
- Globular Transfer
- Axial Spray Transfer
- Pulse Spray Metal Transfer
- Surface Tension Transfer® (STT®)
- Power Mode
- RapidArc™
- Pulse-on-Pulse®
- Tandem MIG®
- Synchronized Tandem MIG®

### Effects of Variables

- Torch angles
- Various shielding gases
- Current Density
- Electrode Efficiency
- Deposition Rate
- Electrode Extension and Contact To Work Distance (CTWD)



### Recognition and Recovery from Common Weld Discontinuities

- Porosity
- Spatter
- Undercut
- Incomplete Fusion / Inadequate Penetration
- Incorrect weld shape and size

### Basic System Maintenance

### Any Questions?

Contact our Automation Service School Coordinator at:  
(888) 935-3878

