



Machining and Manufacturing Automation

Tools Required First Day of Classes

Estimated Cost: \$1,000

Quantity	Description
Program Required Tools	
1	Scientific Calculator (TI 30X or comparable)
1	Safety Glasses (ANSI Z87)
1	USB (Flash) Drive
1	Slip Joint Pliers
1	Tape Measure (25')
1	Welding Gloves
1	Shade 5 Lens Safety Glasses
1	File, Second Cut, Mill with Handle
1	2" Chip Brush
1	Edge Finder: 0.2" Head Dia, 1/2" Shank Dia
1	Hand Deburring Tool w/ Replacement Blades SPI Kit MSC Part#82924994
1	Machinist Caliper, Micrometer & Ruler Kit: 3 pc, 0 to 6" Caliper, 0 to 1" Micrometer
1	Kit includes: SPI 0" - 6" 0.001 Grad. White Face Dial Calipers SPI 0" - 1" 0.0001 Grad. Outside Micrometer 6" Rigid Rule Case (Recommended Source-MSD online Industrial Supply)
1	Dead Blow hammer: ICON 24 oz. Soft Face Dead Blow Hammer/or similar (Recommended Source-Harbor Freight)
1	3 Drawer Top Toolbox and Padlocks for Locker and Toolbox (recommended Source-Menards)
Supplies required for the Related Welding Course:	
1	Welding helmet with #10 lens. Fixed or lift front. Can be auto darkening. Extra lenses. No sharing of welding hoods.
1	Welding cap
1	Welding cutting goggles with #5 lens. Green-2"x4 1/4" fixed front or auto welding hood that goes to a shade 4 or 5 lens for cutting.
1	Clear safety glasses
1	Ear plugs
1	Standard pliers

- 1 Mig welding or needle nose pliers
- 1 Shielded metal arc leather and Gas metal arc leather welding gloves
- 1 Chipping hammer
- 1 Carbon steel wire brush
- 1 Economy 4 1/2" grinder with two 1/4" grinding wheels and 1 wire wheel attachment. You can purchase an inexpensive grinder for under \$20 if you currently don't own one.
- 1 Pocket flashlight
- 1 Bucket or bag to haul supplies in. No lockers available in welding lab area.

PPE required for Related Welding Course:

- 1 100% cotton long sleeve work shirt. To be worn under your flame-resistant jacket. NO HOODIES
- 1 Flame resistant jacket 100% cotton
- 1 Fitted jeans with no holes or frays
- 1 Leather work boots can be steel toed. No sneakers

**Optional Tools
(Not Required by Program)**

Parallel Set:

- 1 SPI 18 Piece, 6-Inch-Long Parallel Set MSC: #60355351
1-3/4 Inch High, 1/4 Inch Thick, 52-58 RC Hardness, Sold as 9 Pair
(Recommended Source-MSD or Harbor Freight)
- 1 Mitutoyo Mechanical Depth Micrometer
0 to 4" Range MSC part # 06234454
(Recommended Source – MSD)
- 1 Lixie 150H – MH – 30 Oz. Dead Blow Hammer 1 – 1/2 Dia.
With Replaceable Tips, Tip Colors will be Green and Black
(Recommended Source – Amazon)

Mitutoyo Kit MSC #57242166

Machinist Caliper, Micrometer, Ruler & Test Indicator Kit: 5 pc, 0 to 6"

Caliper, 0 to 1" Micrometer

Kit includes:

- 1 Dial Caliper
- Full-Flexible Rule
- Mahogany Case
- Outside Micrometer
- Test Indicator Set
- (Recommended Source – MSD online Industrial Supply)

Mitutoyo Test Indicator Kit: #06385462

- 1 9 Pc, 0.0600" Max, 1.5748" Dial Dia, 0-15-0, 0.0005" Accuracy
(Recommended Source – MSD online Industrial Supply)