



# Skilled Trades Related Technical Instruction (RTI)/ Apprenticeship & Pre-Apprenticeship Program

Designed by Manufacturers to Meet the Needs of Jackson, Hillsdale, and  
Lenawee County Manufacturers

the academy for manufacturing careers

This program is sponsored by and delivered through JAMA in partnership with South Central Michigan Works! and is certified as a Registered Apprenticeship Program by the U.S. Dept. of Labor's Bureau of Apprenticeship and Training (USDOL-BAT).

### PROGRAM FEATURES:

- **Not Just for Apprentices**—The classes are open to anyone!
- **Flexibility in Scheduling and Delivery**—Courses can be offered when they're needed and where they're needed.
- **Flexibility in Electives**—Companies can mix and match courses for their apprentices.
- **Flexibility in Instructors**—Got a current or retired employee who could train? Let us know!
- **Compressed Training Time**—Courses are completed in weeks rather than months!
- **College Credit**—Most courses automatically earn college credit at one or more area institutions at no additional cost.
- **Manufacturer Oversight**—A Manufacturers Board of Review keeps the program relevant to the needs of the manufacturers.

### FOR MORE INFO:

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### RTI/APPRENTICESHIP COURSE MATRIX

Course Title	Tool & Die Maker	Machinist	Machine Builder	Machine Repair	Industrial Electrician	Industrial Maintenance Mechanic
Industrial Blueprint Reading	X	X	X	X	X	X
Introduction to CAD	X	X	X	X	X	X
Basic Math	X	X	X	X	X	X
Pre-Algebra	X	X	X	X	X	X
Introductory Algebra	X	X	X	X	X	X
Machining Theory & Methods	X	X	X	X		X
Basic Gauges & Measurement	X	X	X	X		X
Materials/Metallurgy	X	X	X	X		X
Basic Industrial Electricity	X	X	X	X	X	X
Problem Solving	X	X	X	X	X	X
Intro to Lean Theory	X	X	X	X	X	X
Safety & First Aid	X	X	X	X	X	X
Basic Computer Skills	X	X	X	X	X	X
Work/Life Skills: • Communication (Written & Verbal) • Team Building • Work Ethic	X	X	X	X	X	X
Int. Blueprint Reading/GD&T	X	X	X	X		
Trigonometry	X	X			X	
Geometry	E	E	X			X
Precision Machining Methods	X	X	X	X		X
Industrial Hydraulics/Pneumatics	X	X	X	X	X	X
Welding I	X	X	X	X		X
Welding II						X
Moldmaking	X					
Jig & Fixture Design	X	X	X	X		
Die Theory & Design	X					
CNC Theory & Programming	X	X				
EDM Theory	X	X				
Machine Maintenance & Troubleshooting	X	X	X	X	X	X
Basic PLC			X	X	X	X
Industrial Wiring			X	X	X	X
Drive Components & Bearings			X	X		X
Robotics & Material Handling			X	X		
Electrical Troubleshooting					X	X
National Electrical Code					X	
Electronics I					X	
Introduction to Digital Electronics					X	
Industrial Motor Controls					X	
Electrical Motors & Controls					X	

X = Required Course E = Elective Course



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