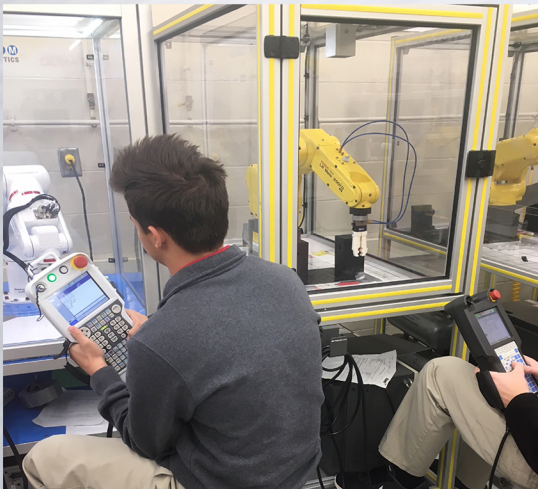
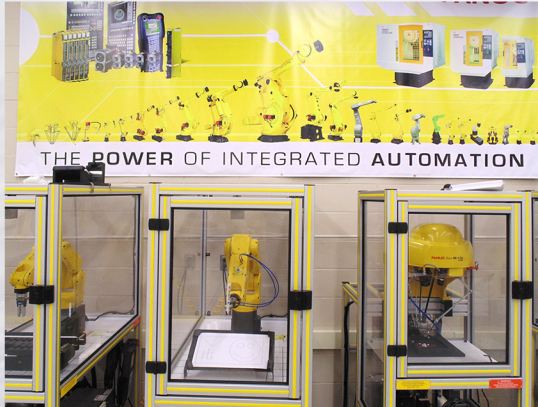


tolles

RAMTEC

INDUSTRIAL MAINTENANCE CERTIFICATE PROGRAM



Attention: Individuals and Companies looking for advanced training to keep up with technology and industry evolution.

Explore how Tolles RAMTEC can provide a hands-on experience that transitions directly from classroom to workplace.

Today manufacturing involves robotics, computer-aided machinery and technology to improve products and processes. Across the United States, there are over 1,750,000 manufacturing job positions that need to be filled with highly skilled workers. According to the U.S. Bureau of Labor Statistics, the number of unfilled jobs in this sector increases by 500,000 every year.



Tolles Career & Technical Center

Located on route 42 just
South of Plain City,
less than ten miles from
I-270, I-70, or 33RT.

7877 U.S. Highway 42 South,
Plain City, OH 43064

Contact

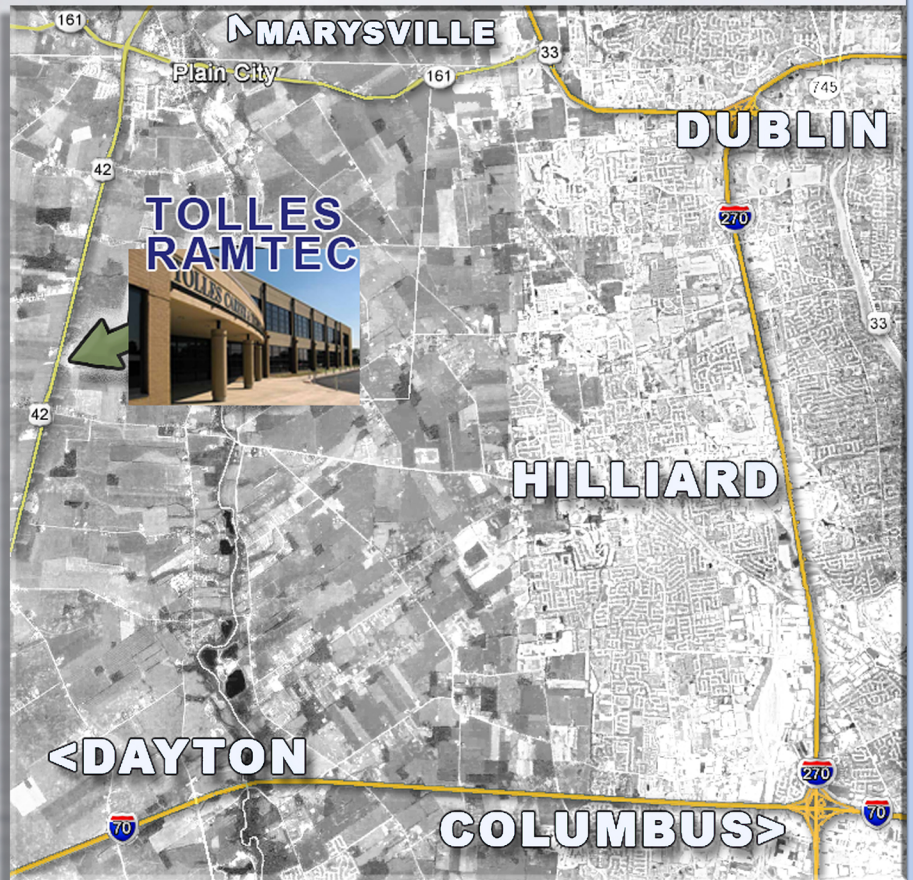
Troy Shampel,
RAMTEC Business Liaison,

614-873-4666, ext. 4320
tshampel@tollestechnology.com

or

Cindy Zeallear
Administrative Assistant

614-873-4666, ext. 4248
czeallear@tollestechnology.com



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Classes can be taken individually or as part of our Industrial Maintenance Certificate Program.

Courses are taught to Industry standards with focus on current manufacturing needs. Full industry official certifications are available in designated classes.



• **Parker Hydraulics & Pneumatics Training:**

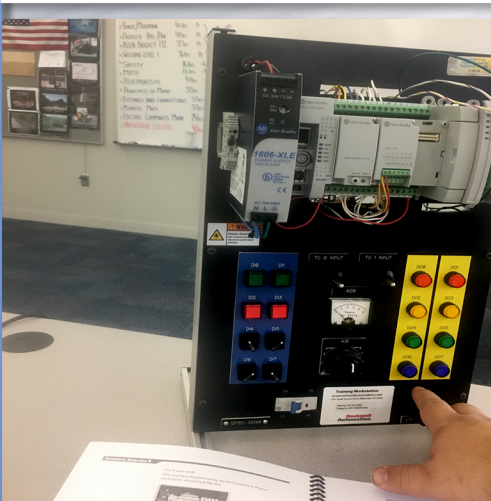
This training is meant for the maintenance technician who needs hands-on exposure to hydraulics and pneumatic systems found in the modern manufacturing facility. Hands-on labs are meant to expose the students to various problems and design considerations in the hydraulic systems. The training will cover industrial safety, hydraulic system basics, basics of fluid power, hydraulic prints and schematics, hydraulic accumulators, basic pneumatic principles and systems, and much more.



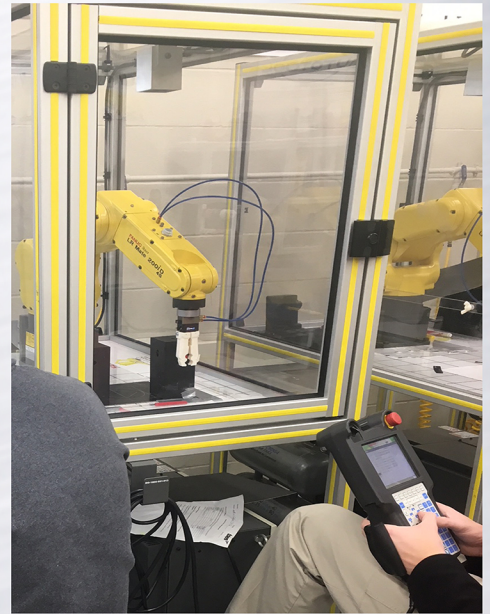
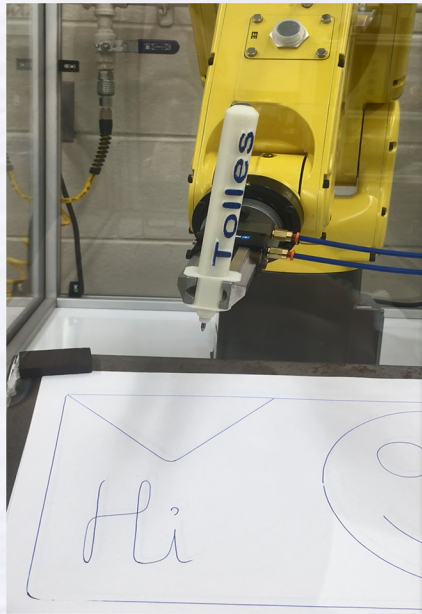
40 hrs Students completing course will receive official certification.



• **Allen Bradley Basic PLCs:** This course introduces the concepts of Programmable Logic Controllers and Programmable Automation Controllers via a combination of wiring, programming, and troubleshooting exercises. The topics will expose the student to the various ways inputs and outputs are handled within the controller, how to navigate the logic, and how to locate each of these components within a project. When finished with this course, the student will have the knowledge necessary to connect to an existing controller, navigate the logic, and troubleshoot both digital and analog I/O.



32 hrs Students completing course will receive official certification.



- **FANUC Handling Tool Operations & Programming Training :**

Students will learn the skills industry demands from FANUC certified instructors using a FANUC approved curriculum and equipment. Trainees will learn basic operations, programming, and troubleshooting. Students completing this course will be able to power-up and jog the robot, teach frames, recover from robot faults, as well as execute, create and modify programs. The course consists of lectures, and hands-on lab time.

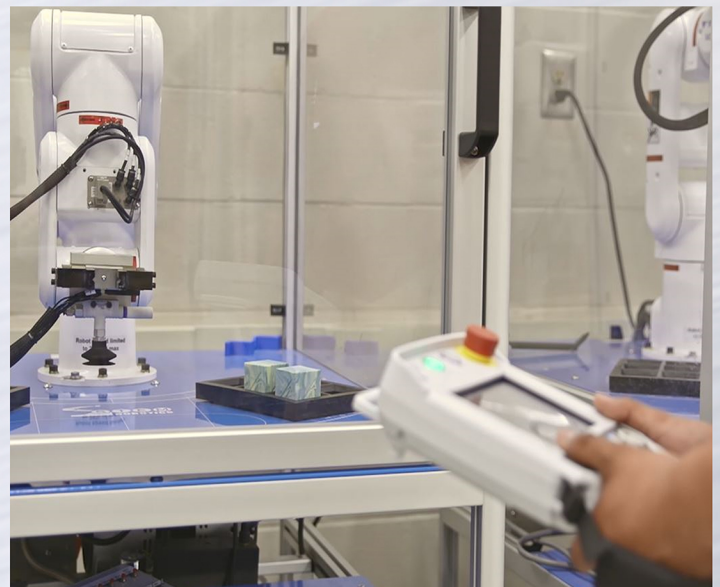
- 40 Hours Students completing course and passing final exam will receive official FANUC CERT Handling Tool Operations and Programming Certification.

- **Yaskawa Motoman Robotics Training:** Trainees will learn basic operations, programming, and troubleshooting. Students completing this course will be able to power-up and jog the robot, teach frames, recover from robot faults, as well as execute, create and modify programs. The course consists of lectures and hands-on lab time.

- 40 Hours Students completing course will and passing final exam receive official Yaskawa Basic Programming with Material Handling certification.



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Level one classes should be taken before attempting level two Courses.

Workforce Safety: The objective of this course is for trainees to be able to identify safety issues in the workplace. Topics covered: bloodborne pathogens, electrical safety, fire protection, fall protection, space hazards, hazard communication, hazardous materials, material handling, machine guarding, work zones, tag in / tag out procedures and more.

16 hours

Industrial Math: This course is a refresher course for math used in everyday industrial maintenance. Topics covered: unit conversions, fractions to decimals, fractions, averages, percentages and the use of standard industrial equations.

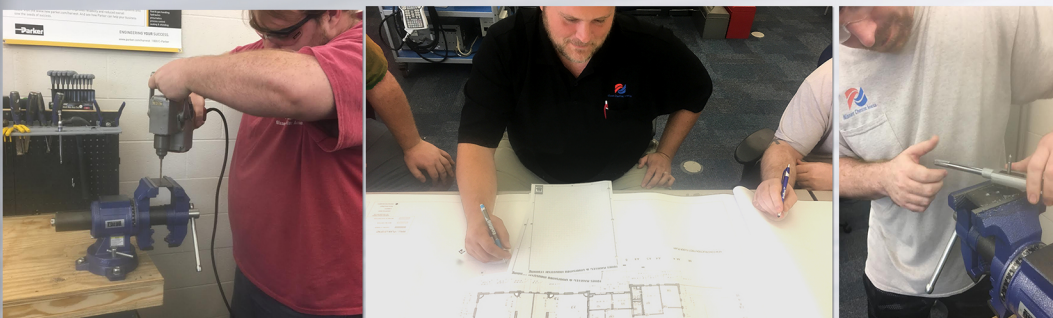
16 hours

Print Reading, GD&T, and Schematics: Trainees will learn how to navigate, comprehend, and interpret a variety of engineering drawings including: reading prints to identify the height, width, and length dimensions to understand drawing details. Standard symbols and abbreviations on prints, schematics, and wiring diagrams will be covered. Dimensional and geometric tolerances on production prints for inspection and assuring proper part functionality will also be included.

32 hours

Manufacturing Maintenance Principles: This course introduces basic tool applications, standard fasteners, shafts, bearings, couplings, gears, drives, seals, motors, brakes, clutches, cams, machine disassembly/reassembly and more.

32 hours



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Level Two classes

Fittings and Connections: This hands-on course introduces basic plumbing and air connections. When to use specific connections and how to make them will also be presented.

32 hours

Manual Machining: This course introduces the basic principles of manual machining. This course will include: general machine safety, machining terminology and the basics of manual turning, grinding, drilling and milling.

32 hours

Electrical Component Maintenance: This course introduces essential electrical components found in controls and low voltage machines. Proper techniques for making electrical connections, including practicing proper soldering techniques will be presented.

24 hours

Level Three Class.

Basic Industrial Electric:

Topics covered in this course include: electrical safety, electrical equipment & devices, operation / connections, earthing, circuits, faults, fuses, overloads, motor control, testing, electrical isolation, and more.

40 hours

Additional Elective Classes

Advanced Welding:

After completion of the Basic Welding course, principles and applications will be expanded in this advanced course. It provides training on mild steel with single and multipass welds. Upon successful completion of the course, student will receive a Certificate of Completion. This course will help prepare students for the AWS D1.1 Structural Weld Certification Exam*

*Exam offered through Hobart.

60 hours



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Class Description	Hours	Cost	Class scheduling information
FANUC Basic Operations & Programming	40	\$1,800.00	Anytime
Note: For Certificate Program only one Robotics course needed			
Yaskawa Motoman Robotics	40	\$1,800.00	Anytime
Parker Hydraulics and Pneumatic	40	\$1,000.00	Anytime
Allen Bradley Basic PLCs	32	\$800.00	Anytime
Welding Level 1 Students required to purchase own welding equipment.	32	\$500.00	Anytime
* Note: The above may be taken at anytime with no prerequisites			
Workforce Safety	16	\$500.00	Level One Class
Industrial math	16	\$500.00	Level One Class
Blueprint Reading / GD&T	32	\$600.00	Level One Class
Manufacturing Maintenance Principles	32	\$800.00	Level One Class
* Note: Students should complete all level one courses before taking a Level two class			
Fittings and Connections	32	\$600.00	Level Two Class
Manual Machining	32	\$800.00	Level Two Class
Component Electrical Maintenance	24	\$600.00	Level Two Class
* Note: Students should complete all level Two courses before taking a Level Three class			
Industrial Electric	40	\$1,000.00	Level Three Class
Elective Classes			
Advanced Welding Pre-reg successful completion of Basic Welding Class	60	\$800.00	

Class structure, course length, and pricing, are subject to change.
This sheet is for general planning, not guarantees.
Contact Tolles RAMTEC for our most updated information.



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Tentive Tolles RAMTEC Industrial Maintenance Program course schedule.

Classes are offered
Monday - Thursday
10:30am to 1:30 pm
or
6:00pm to 9:00 pm.

Full-day Friday classes
are separate and run
from 8:30am to 5:00pm.

	Safety Course
	Industrial Math
	Prints, Schematics, and GD&T
	Principles of Industrial Maintenance
	FANUC Robotics
	Fittings and Connections
	Parker Hydraulics / Pneumatics
	Electronic Component Maintenance
	Motoman Robotics
	Programmable Logic Controls
	Manual Machining
	Welding Level 1
	Industrial Electric

* Sept. 11th & 13th night class only

* OCT. 18th and 23rd day class only

Classes FEBRUARY 8th, 21st - 28th will be used
as make up classes in case of weather.

SEPTEMBER

M	T	W	T	F
3	4	5	6	7
10	11*	12	13*	14
17	18	19	20	21
24	24	26	27	28

DECEMBER

M	T	W	T	F
3	4	5	6	7
10	11	12	13	14
17	18	19	20	21
24	25	26	27	28

MARCH

M	T	W	T	F
				1
4	5	6	7	8
11	12	13	14	15
18	19	20	21	22
25	26	27	28	29

JUNE

M	T	W	T	F
3	4	5	6	7
10	11	12	13	14
17	18	19	20	21
24	25	26	27	28

September

M	T	W	T	F
2	3	4	5	6
9	10	11	12	13
16	17	18	19	20
23	24	25	26	27

301

OCTOBER

M	T	W	T	F
1	2	3	4	5
8	9	10	11	12
15	16	17	18*	19
22	23*	24	25	26
29	30	31		

JANUARY

M	T	W	T	F
	1	2	3	4
7	8	9	10	11
14	15	16	17	18
21	22	23	24	25
28	29	30	31	

APRIL

M	T	W	T	F
1	2	3	4	5
8	9	10	11	12
15	16	17	18	19
22	23	24	25	26
29	30			

JULY

M	T	W	T	F
1	2	3	4	5
8	9	10	11	12
15	16	17	18	19
22	23	24	25	26
29	30	31		

October

M	T	W	T	F
	1	2	3	4
7	8	9	10	11
14	15	16	17	18
21	22	23	24	25
28	29	30	31	

NOVEMBER

M	T	W	T	F
			1	2
5	6	7	8	9
12	13	14	15	16
19	20	21	22	23
26	27	28	29	30

FEBRUARY

M	T	W	T	F
				1
4	5	6	7	8
11	12	13	14	15
18	19	20	21	22
25	26	27	28	

MAY

M	T	W	T	F
		1	2	3
6	7	8	9	10
13	14	15	16	17
20	21	22	23	24
27	28	29	30	31

AUGUST

M	T	W	T	F
			1	2
5	6	7	8	9
12	13	14	15	16
19	20	21	22	23
26	27	29	29	30

More class sections
are frequently added.
Please contact us
for up to date offerings.