Industrial Education Solutions

APT MANUFACTURINGsolutions

FANUC

RA Rockwell Automation

Miller

> "This system was developed to bring alignment between Industry and Education to directly tie into the FANUC CERT program, foundational skills in robotics, vision, and integrated solutions."
>
> *- Paul Aiello*
> *Director of Education*
> *FANUC America Corporation*

> "The success of our training programs has allowed us the opportunity to share the best practices to help other training programs develop the same student outcomes."
>
> *- Anthony Nighswander*
> *President*
> *APT Manufacturing Solutions*

> "Our goal is to integrate Rockwell products with robots to bridge the learning gap. We piece parts together into one great learning system where students can not only learn the technology, but can also understand how to apply it as a system and understand the steps. That's what our customers really want!"
>
> *- Michael Cook*
> *Director*
> *University Partnership Rockwell Automation*

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WE BELIEVE IN EDUCATION....

APT Manufacturing Solutions is an automated equipment builder and precision machine shop equipped with over 30 manual and CNC machines, laser cutting and fabrication equipment, mechanical engineering with 3D solid modeling, and controls engineering with PLC and robot programming. At APT, education and training is weaved into the core of our every move. We recognized years ago that educating the next generation is vital to our success, and the success of manufacturing in America, we have made it one of our primary strategic objectives.

"Our passion is to equip and teach the next generation of workforce to advance manufacturing, technology, innovation, and leadership."

High School Training: Years ago, we founded a state-of-the art high school training center where we opened our doors to high school students from surrounding schools to learn the nuts and bolts of manufacturing. We lead them through coursework and hands-on learning designed to open their eyes to the opportunities they have in industry after school. Courses include:

- OSHA safety 10 hour
- Tools of the trade
- Drafting and 3D Modeling
- Machining

- Welding and Fabrication
- Industrial Wiring and Panel Building
- Basic PLC logic and Control Systems
- Robot handling and programming

Apprenticeship Program: Students who graduate from these programs must enroll in apprenticeship program to continue employment, where they go through a two- or four-year program, fully paid, working during the day and continuing school at a community college at night. This has proven to be a phenomenal approach to education, developed over time based on need for workforce development. The key to this is the partnership that has come between industry and education. We believe this partnership is vital to changing industry and solving the workforce development problem as America moves forward.

"We don't build education trainers…we build industrial equipment with industrial curriculum for the education market."

It was through this partnership with education, as well as our relationship with FANUC Education, and are sold exclusively through the FANUC Education Reseller Network. They carry the industry training curriculum of key manufacturers like FANUC America, Rockwell Automation, and Miller Welding. These partnerships are critical to maintaining high-caliber trainers that model industry standards.

Use our online tool to navigate equipment and programs

Click here to Select the Correct Equipment for Your Program

https://aptmfg.com/products/program-overview/

Advantages of Our Industrial Training Equipment

	OUR TRAINERS	OTHER TRAINERS
Trainers built for manufacturing training	✓	✓
Equipment built with exact same standards as industrial equipment	✓	
Curriculum with labs to apply knowledge	✓	✓
Curriculum comes directly from manufacturer; not rewritten	✓	
Labs are derived from industry practices, like live panel building utilizing industry standard wiring practices	✓	
Certificates upon completion of classwork or modules	✓	✓
Certifications directly from industry leaders like FANUC, Rockwell, and Miller Welding that carry over to the first day on the job	✓	
Rockwell MicroLogix basic PLC		✓
Rockwell CompactLogix advanced PLC integration with Studio 5000	✓	
Advanced courses in FANUC TPP, iRVision, Advanced TPP, DCS	✓	
Advanced courses in integration of area scan, RFID, wireless I/O	✓	

Industrial Controls Center

MTEC-SIM

CRX Cart

CSM™

FANUC CERT PROGRAM

AM-CERT

Weld CERT Cart

FANUC

CONNECT4.0

Rockwell Automation

APT MANUFACTURINGsolutions
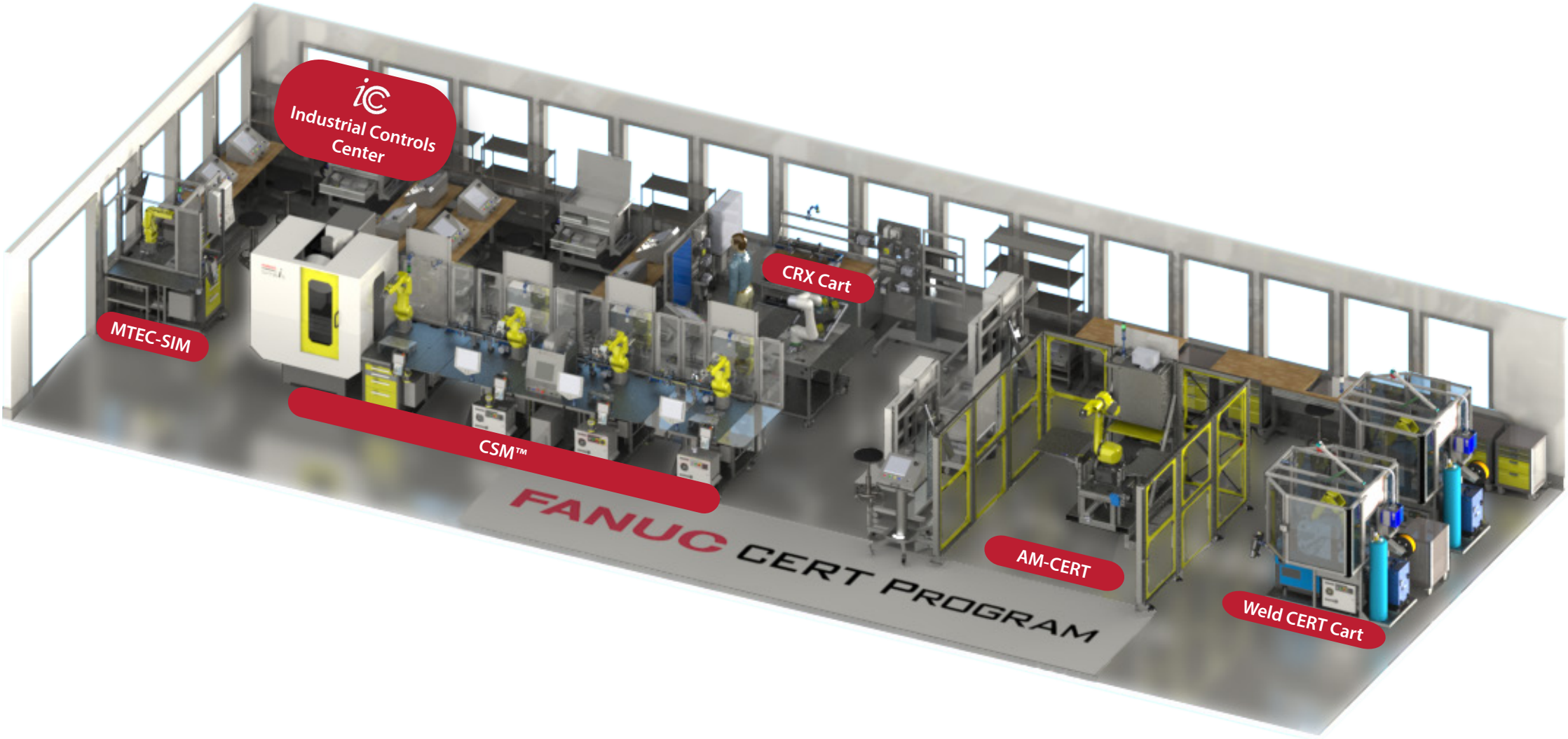
CERTIFICATIONS, CURRICULUM, & SOFTWARE

FANUC

FANUC Education Grant available for new educational institutes. Work with reseller to confirm details.

Material Handling (MH) CERT Instructor Training and Toolkit:
- (1) online seat for CERT Cart Safety Features web course
- (1) online seat for Robot Operations web course
- (1) online seat for HandlingTool or ArcTool Operation and Programming web course
- (1) online seat for HandlingPRO or WeldPRO web course
- (1) seat for live HandlingTool or ArcTool Operation and Programming class at a FANUC facility
- (1) ROBOGUIDE Simulation Software license
- (1) FANUC Robot Operations Manual
- (1) FANUC HandlingTool or ArcTool Operations and Programming Manual
- (1) FANUC HandlingPRO (ROBOGUIDE Simulation) Manual

Material Handling (MH) CERT School Comprehensive Educational Package:
- (25) online seats for Robot Operations web course
- (25) online seats for HandlingTool or ArcTool Operation and Programming web course
- (25) online seats for HandlingPRO or WeldPRO web course
- (25) ROBOGUIDE Simulation software licenses

CNC:
- FANUC CNC industry-recognized certification
- School instructor receives FANUC training using FANUC-approved curriculum
- FANUC CNC Simulators and FANUC CNC controller for student's certification
- Student will receive letter of completion and instructor can issue student certificates from provided template

ARCMate:
- FANUC Advanced Academic Software/ARC Bundle
- FANUC ARCTool Student Certificate Program
- Welding Power Supply Training Program (brand specific; see program details)
- Optional iRVision

Rockwell Automation

SOFTWARE

Rockwell Automation EDU Toolkit Bundle with 1 year subscription included:
- (1) Studio 5000 Logix Designer
- (1) Studio 5000 View Designer
- Plus 100+ more

CURRICULUM

1-year e-learning subscription *(see reseller for details)***:**
- CompactLogix 5000 System Fundamentals
- Basic Ladder Logic Programming
- Ladder Logic Project Development
- Plus many more

Miller

OpenBook™
learning management software

APT MANUFACTURINGsolutions

**Integration Project-Based Learning (PBL) Curriculum**
- Daily lesson plans
- Assessment and grade charts

CERT CART

FANUC's CERT Cart is an entry level cart that teaches students basic Tool Handling Skills as well as iRVision Pick and Place.

Instructors benefit from both FANUC's online and instructor led training, which are the same skills taught at the FANUC Robotics training facility. As an educator attending training, you'll be sitting beside industry programmers and learning the same course material that is being used in industry to apply in your classroom.

This is real world equipment, not a watered-down version. FANUC America provides this training opportunity to instructors as part of its CERT program allowing the industrial certification to be passed on to students.
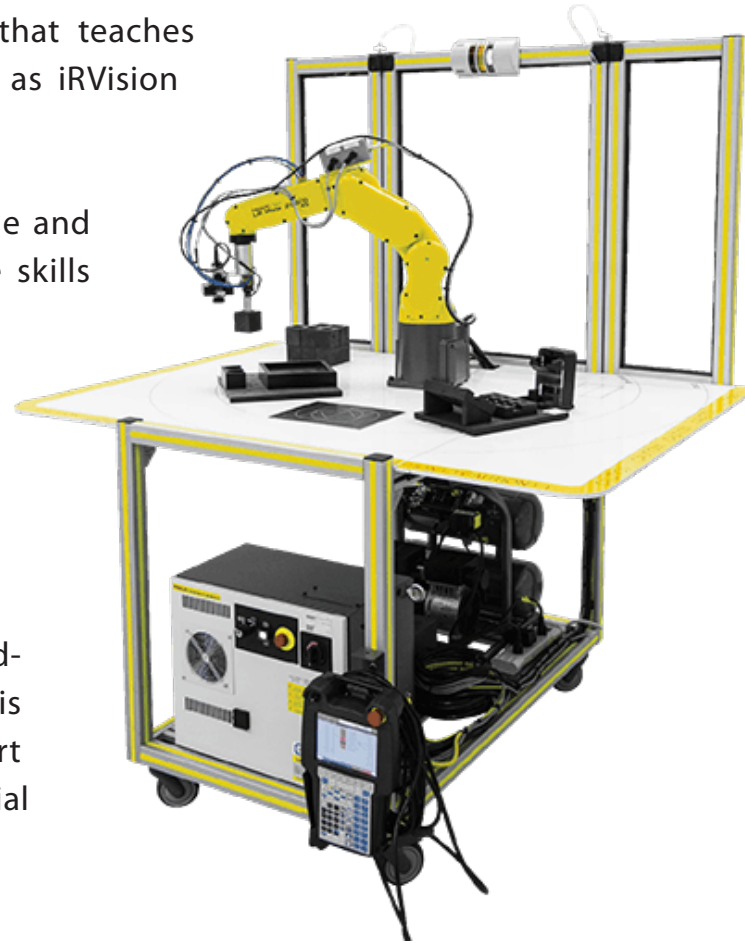
ROBODRILL

There is a growing need for skilled workers competent in the setup, programming and operation of CNC's. Since more manufacturers trust their operations to FANUC CNC's than any other control platform, it's important that students and workers become FANUC CNC certified.

The new-generation ROBODRILL promises unrivaled quality and precision at great hourly rates. With an unbeatable tool change time of 0.7 seconds and a turret capable of handling tools weighing 4 kg, the new advanced version is both the fastest and strongest vertical machining center on the market. With by far the shortest cycle times on most machining operations, all ROBODRILL machines offer incredible performance and unbeatable efficiency.

Using intelligent cutting strategies, ROBODRILL achieves the same results as more powerful machines in less time, regardless of whether your application involves high-speed machining, mold making or 5-axis machining.

FANUC's legendary reliability coupled with easy preventative maintenance procedures keeps downtime to an absolute minimum. And thanks to their extreme longevity, ROBODRILL machines also provide an unbeatable return on investment.

ROBOT WITH CNC MACHINE SIMULATOR

MTEC-SIM - Machine Tending Simulator Educational Cell

- FANUC ROBODRILL Interface between robot and CNC simulator for integration training

- 120 VAC power connection to MTEC-SIM with on-board air compressor for self-contained cell operation

- Fits through 36" door

- Optional *i*RVision 2D for error proofing and guidance

- Built-in Kennedy toolbox for storage

- Students have the opportunity to learn real world advanced automation integration

- Preconfigured with load and unload program templates for simple build with no complex programming needed

- 3-axis mill and 2-axis lathe simulation

APT MANUFACTURINGsolutions

- Modular robot cart
- Welded steel construction
- Fits through standard doorway
- Single 2-jaw EOAT for mill blank and lathe blank
- Fold-up work table for laptop, textbook, etc.
- Safety area scanner for fenceless robot operation or safety interlocked guarding around robot work area
- 3-color beacon operation indicator light
- Swivel casters with brakes and rotation lock

FANUC ROBOTICS

- FANUC LR Mate 200*i*D/7L long arm 6-axis robot
- FANUC R30*i*B Mate Plus robot controller
- 2D *i*RVision optional

FANUC's new R30*i*B Mate Plus robot controllers feature the new *i*Pendant with enhanced screen resolution and processing capability.

The new user interface, *i*HMI, can display guides for setup and programming, as well as tutorials from the main home page which as a design common to FANUC CNCs, enabling easier use of robots.

FANUC CNC

FANUC's CNC simulator is designed specifically for educational purposes, ensuring affordable access to the latest FANUC CNC platform in a compact and portable package, easily integrated into any classroom.

- Switchable mill and lathe system in one simulator
- 3-axis milling / 2-axis turning system + 1 spindle
- Conversational programming and 3D simulation (MGi)
- Inch / metric switchable
- 32 tool offset pairs
- Work piece coordinators G52-G59 + 48 additional on mill

ROBOT WITH CNC MACHINE
MTEC - Machine Tending Educational Cell

- FANUC ROBODRILL Interface between robot and CNC for seamless integration

- 120 VAC power connection to MTEC

- Fits through 36" door *(without ROBODRILL)* and includes four side pick up and transport

- Optional *i*RVision 2D for error proofing and guidance

- Optional built-in Kennedy toolbox for convenience

- Students familiar with CNC and/or robots have the opportunity to learn real world advanced automation integration

- Fenceless or fully-guarded safe work envelope

- Preconfigured with load and unload program templates for simple build with no complex programming needed

- Drawer load for blank parts is safe and can be configured for other parts in the future

APT MANUFACTURINGsolutions

- Fold-up work table for laptop, textbook, etc.

- Safety area scanner for fenceless robot operation or safety interlocked access door to robot work area

- 3-color beacon operation indicator light

- Swivel casters with brakes and rotation lock

- Part locating template for NIMS mill block or dual conveyor in/out for parts blanks

- Single 2-jaw EOAT for NIMS mill block (3/4" x 2 1/2" x 3 1/2" aluminum, 50 pcs included)

FANUC ROBOTICS

- FANUC LR Mate 200*i*D/7L long arm 6-axis robot

- FANUC R30*i*B Mate Plus robot controller

- 2D *i*RVision optional

FANUC's new R30*i*B Mate Plus robot controllers feature the new *i*Pendant with enhanced screen resolution and processing capability.

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FANUC CNC

- Standard CNC 31*i*-B5

- Smart Trouble Shooting Function

- Memory card slot plus USB port

- Built-in interlock function for safety

- Enables robot operation and system status display on the robot operation screen

- Custom PMC to create, read, and write ladder programs

ROBOTIC WELDING TRAINER

- Includes welding power supply training program
- *FANUC iRVision is optional*

- Welded construction
- Tinted sides to protect classroom (helmet required for viewing)
- Fully integrated collapsible mobile cart design, fits through standard 36" door
- FANUC Arc Mate 50iD/7L
- FANUC R30iB Mate plus controller
- Robot work area guarded for student safety
- Collapsed dimensions: 80"L x 33"W x 78"H
- Expanded dimensions: 80"L x 63"W x 78"H

The FANUC ARC Mate 50iD/7L is a high-speed ARC welding robot that is equipped with added reach. Its standard IP67 rating gives it the versatility to work in a variety of different harsh manufacturing environments including dusty and wet areas. With 6 axes, this robot can carry up to 7kg while creating precise arc welds.

With FANUC's ArcTool software, learning on the ARC Mate 50iD/7L will provide students with the knowledge and confidence to operate a variety of FANUC ARC Mate Series Robots and support employer's need to develop more efficient and profitable welding processes.

Miller® WELD CERT CART Features

Integrated Weld Educational Cart

Education & Software

OpenBook™

OpenBook™ is Miller's learning management software. It's designed to help you plan, offer, and assess student learning. It provides welding instructors, learners, and management with an easy tool to teach welding concepts and techniques to a variety of students - from those just starting out to professionals in the field who'd like to learn new skills or refresh their current techniques.

Insight Core™ (Standard)

Simplified, Internet-based welding information solution that reports cell productivity and weld parameter verification.
- Provides basic production metrics such as amps, volts, wire feed speed, arc on time and arc on time percentage

Transform data into actionable information that drives continuous improvement.

Learn more at MillerWelds.com/insight

Features

Auto-Continuum™ Systems

Take your welding to the next level.

The adaptive arcs of Versa-Pulse™ and Accu-Pulse- instantly make adjustments to handle weld tacks, large gaps and inconsistent parts. The result is higher quality welds and fewer weld defects.

Better weld quality

Versa-Pulse™
- Fast, low-heat, low-spatter process
- Great for gap filling
- Shortest arc length/lowest pulse voltage

Accu-Pulse®
- The most popular process for majority of industrial welding applications
- Most adaptive arc on 16+ gauge
- Designed for all weld positions

RMD®
- Lowest heat process, best for gap handling
- Limited travel speed

UP TO 26% MORE WELD POWER

Auto-Continuum 350
11,000 watts

More power, better reliability

FLEXIBLE
- Easily add new processes and custom programs
- Parameter flexibility

Easy to add capabilities

Best for	Standard Spray	High-Deposition MIG	Accu-Pulse	Versa-Pulse	MIG Short Circuit	RMD
Deposition	A	A	A	B	D	D
Gap Filling	D	D	B	B	A	A
Low Heat Input	D	C	B	A	A	A
Out-of-Position Welds			A	B	B	B
Low Spatter	A	A	A	A	C	B
Thick Metals	A	A	A	C	D	D
Thin Metals			B	A	A	A
Increased Travel Speed	A	A	A	A	B	C

HOT ———————————————— **COLD**

Manufacturing Equipment

FILTAIR® 130
- High-efficiency filter designed to capture weld fume
- FilTek™ XL cleanable filters last longer
- Lightweight and portable
- Quieter for a safer, more productive work area

Included: Work Holding Kit (APT88001132)

6" x 1.5" x 6"	3.6" x 1.7" x 3.4"	2.3" x 1.3" x 2.1"
(1) Pivot Angle 150 Mini	(1) Mini Multi Angle	(1) Mini Angle

Optional: PPE Kit (APTWELDPPE)

10% Graduate Discount at Mag Tools
Use APTWELDCELL at mag-tools.com

CONTROLS INTEGRATION

Controls integration is the key to connected systems, IIoT, and industry 4.0. In order to continue to advance in manufacturing technology, we must continue to train connected systems, hardware and software, and integration of control systems.

APT equipment is designed specifically to teach advanced electrical hardware, software development, and integration of control systems. We are using the same equipment and software that is being used in the majority of industrial equipment; not what is cheapest or has free software. We are using the latest technology and hardware.

We have partnered with FANUC America and Rockwell Automation to provide Gift-In-Kind donations, where applicable, to schools who want to get involved on this advanced manufacturing training.

APT provides all programs, drawings, templates, and design documentation unlocked and free of charge. The school has access to every part of the controls system and access to any passwords and security setup within the equipment to develop and teach curriculum that best suits the industry in their region. Our sample programs and templates have been developed by observing and taking the best programming methods observed over 25 years of industry practice. The HMI interface and PLC code and structure focus on simple core programming methods that make operating, maintaining, and troubleshooting easy to perform. Our hope is that this focus on ease of use and simple programming gets distributed through all students that learn on our equipment.

Our design allows for students and instructors to have fully functional industrial grade safety systems that allow the system to run at greater speeds than typical education system should be allowed to run. The safety systems also allow for students and instructors to work closely with the equipment and remain safe. Our fanceless versions of equipment allow personnel to approach the equipment and the equipment will slow down or stop accordingly and then resume once it is safe.

The Connected Smart Manufacturing System (CSM), the most advanced controls training system on the market, incorporates:

- RFID
- IO Link
- Wireless Ethernet
- Smart Sensor / Device Technology
- Explicit and implicit messaging between equipment
- Enhanced Diagnostics
- Part traceability
- And many other control components and integration pieces.

AN IN-DEPTH LOOK AT THE OPERATOR INTERFACE

The HMI is broken into 5 color coded tabs with enhanced diagnostics on the system. 3D graphics are put on the different screens just as we would in the industry.

SYSTEM - These screens are used for general machine setup. A majority of the functions available on the systems require security requirements to access them. Several functions on the System HMI screens include: VFD frequency setup; Recipe Management System, Inspection Limits, I/O Link Setup, Login, and System Security Settings.

OPERATIONS - These screens are used for general machine operation and functionality. 3D model images are used to aid with the intuitiveness and ease of use. Status Indicators, Mode Control, and Manual Operations, along with Operational and Fault Messages are displayed on these screens.

ROBOT - This screen displays all communication and I/O interface between the system PLC and robot. Users may also manually control the functions of the robot and call a specific robot program to run from this screen.

I/O - On this screen users can see all I/O within the system, its present status on/off to run diagnostics and aid in troubleshooting.

PRODUCTION - From these screens the user can view and capture production data to be used for business analytics. Recipe management and the production scheduler allow the users to edit the parameters and schedule all products the system can run.
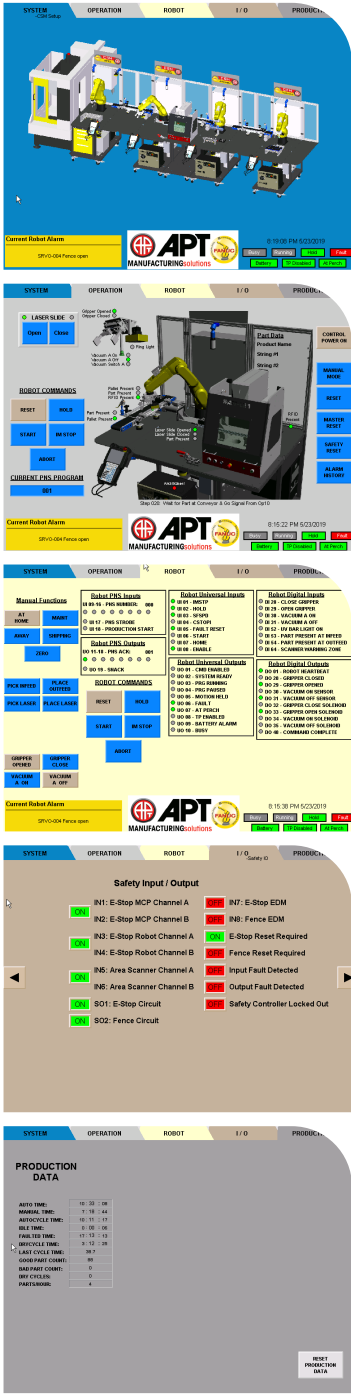
PLC/HMI TRAINER

Rockwell Automation (Allen Bradley) CompactLogix control panel electrical project kit

Featuring Rockwell's latest Products and Technology

- Rockwell CompactLogix 5380 controller with Integrated Motion (5069-L306ERM) with 16 24VDC digital inputs & 16 24VDC digital outputs
- Rockwell AB 10" PanelView 5000 Graphic Terminal (PanelView 5310)
- 5 Port Stratix Ethernet Switch
- Dual Ethernet Access Ports and Cable Glands for external device connections
- Pre-loaded with structured program template
- Also sold in kit form along with Rockwell curriculum
- Endless possibilities - can connect to almost any device!
- PLC robot integration program template installed

Includes Rockwell software and e-learn subscription

PLC/HMI Trainer ready to use as standalone OR integrate to any FANUC robot

Interface with a FANUC CERT cart, MTEC CERT, or MTEC-SIM CERT Cart

Ready to interface with your FANUC CERT robot over Ethernet IP protocol or optional discrete I/O

Ask about your custom needs. Prices may vary.

INCLUDES:
- NEMA 12 steel industrial enclosure
- 120V, 24 VCD power supply
- 120V 10' power cord
- 5 port ethernet switch
- Wireless ethernet bolt
- 4 pushbuttons
- 1 selector switch

PLC: Compact Logix 5000 Series
- 32 task
- Dual IP mode (2 diff network connections)
- DLR, start and linear topologies supported
- 16 ethernet node connections max
- 32 socket connections max
- 2 CIP drive axis connections (position loop/servo control)
- Ladder structured text, function block diagram
- Sequential function chart programming interfaces
- 0.6 MB user memory
- 8 local I/O Modules max

HMI: Panelview 5000
- 10.4" SVGA TFT color touch display
- 4:3 aspect ratio
- 800 x 600 pixel resolution
- 1GB RAM / 1 GB user memory

OPTIONS:
» Student build kit
» Discrete I/O kit to FANUC LR Mate peripheral I/O board for robots without ethernet
» Mobile workbench - adjustable height with power
» Replenishment parts kit
» Panel rebuild master kit

INDUSTRIAL MATERIAL HANDLING TRAINER

AM-CERT - Advanced Manufacturing Cert Cell

Train on Industrial Equipment for Advanced Manufacturing
Take your training to the next level!

Fully integrated Rockwell PLC with FANUC robot for advanced material handling
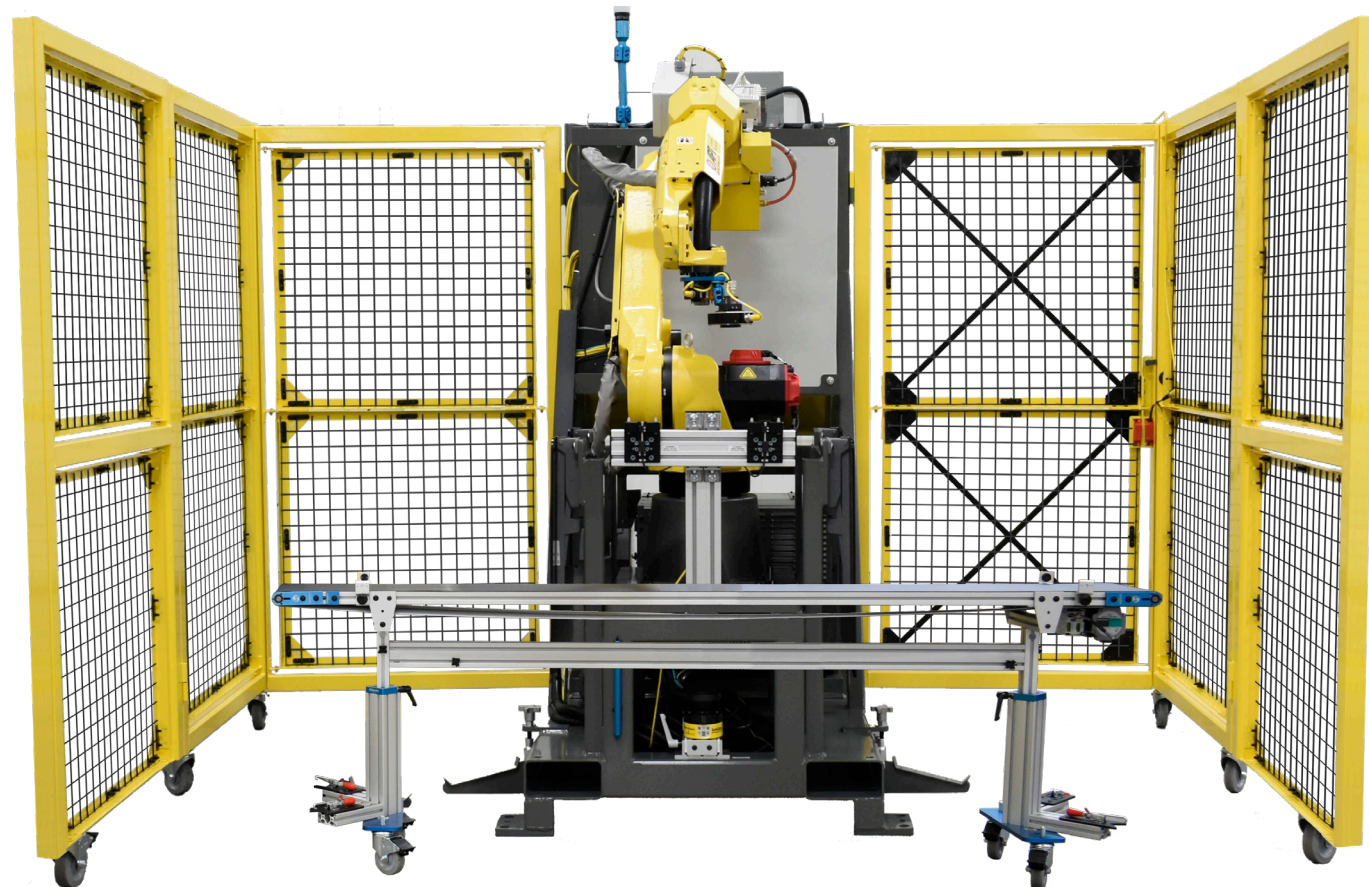
Product Dimensions:

Open: 10' deep x 10' wide x 88" high

Folded: 72" deep x 54" Wide x 88" high

Rockwell PLC • FANUC Robot • FANUC *i*RVision • Swivellink® Conveyor

Robotics • PLC • Safety • Pneumatics • I/O • Vision

APT MANUFACTURINGsolutions

- Folding perimeter fencing
- Access panel for conveyor through the perimeter fence
- Slide out programming laptop desk with 110 VAC power supply
- Fold down pick and place tables
- SMC pneumatics, filter/regulator
- SMC valve bank wired to robot I/O
- SMC two-jaw robot gripper with open/close sensors and Piab vacuum with vacuum switch
- Available ATI automatic tool change with separate gripper and vacuum tool
- Portable with pallet jack or forklift

FANUC

- FANUC M10*i*D or M20*i*A 6-axis robot
- FANUC R30*i*B Plus robot controller
- 2D *i*RVision

FANUC's new R30*i*B Plus robot controllers feature the new *i*Pendant with enhanced screen resolution and processing capability.

The new user interface, *i*HMI, can display guides for setup and programming, as well as tutorials from the main home page which is a design common to FANUC CNCs, enabling easier use of robots.

Rockwell Automation

- Safety interlocked entry door
- 16 remote accessible configurable I/O points
- PLC control panel with viewing window, main power disconnect, program access port on outside of panel
- Rockwell CompactLogix™ or Compact GuardLogix® PLC cell control
- Rockwell PanelView™ 10" touch screen interface with cell function screens
- Light curtain or area scan safety for robot work area
- Main power choice of 208 VAC 3 phase, 220 VAC 3 phase, or 480 VAC 3 phase

Shown collapsed

Product Options:

AM-CERT-10	Material Handling CERT Cell with M10 Robot
AM-CERT-20	Material Handling CERT Cell with M20 Robot
Option 1	Swivellink® Conveyor
Option 2	Area Scanner 270° Protection
Option 3	Automatic Tool Change
Option 4	Safety PLC Option
Option 5	Transformer 208V, 220V, or 240V 3-Phase Power

SMART MANUFACTURING TRAINING SYSTEM

CSM™ - Connected Smart Manufacturing

OP10	OP20		OP30	OP40
ROBODRILL MTEC	Laser Etching		Assembly	Packaging
MTEC-SIM	Serialization			
CUSTOMIZABLE CONFIGURATIONS				

BUY INDIVIDUALLY OR AS A COMPLETE SYSTEM

FANUC

CONNECT4.0 CERTIFIED EDUCATION

RA Rockwell Automation

APT MANUFACTURINGsolutions

CSM™ - Connected Smart Manufacturing Features

APT MANUFACTURING solutions
Integration

This system is truly like no other Industrial System for Education Institutions.

Your students will use FANUC/Rockwell products on a factory system to understand a fully integrated line. Each cart can also be detached for individual learning.

Integration from:

FANUC CNC Machine Making Product

OP-10 Machine Tending the CNC

OP-20 Laser Marking the product

OP-30 Assembly of the product

OP-40 Packaging the product in boxes

FANUC
Robotics

- FANUC 30iB Robot Controller
- FANUC LR Mate 200iD 4S 6 axis robot
- 2D iRVision Optional

FANUC's new R-30iB Plus Robot Controllers feature the new iPendant with enhanced screen resolution and processing capability. The new user interface, iHMI, can display guides for setup and programming, as well as tutorials from the main home page which has a design common to FANUC CNCs, enabling easier use of robots.

Using the programming guide, even first-time robot users can create a program for a simple handling task and execute it in just 30 minutes! Easier usage also improves efficiency by facilitating system setup and maintenance

FANUC
ROBODRILL - CNC

CONNECTING SMART MANUFACTURING

High-Performance Vertical Machining Center

α-D14MiB(5) / α-D21MiB(5)

The ultimate all-round vertical machining center

Model M, perfect for milling and drilling tasks requiring maximum precision, versatility and reliability.

- Optimal acceleration and deceleration control
- Rigid Design
- Easy maintenance and operation
- Extremely Fast .9 second tool change
- High Precision Control
- Designed for easy automation

Rockwell Automation
Controls

- Rockwell CompactLogix or GuardLogix PLC cell control
- Rockwell PanelView 10" touch screen interface with cell function screens
- Safety interlocked entry door
- 16 remote accessible configurable I/O points
- 3 color beacon light
- Main power disconnects
- Program access port on outside of panel
- Area scan safety for robot work area

ROBOT ACCESSORIES

Mobile Cart

Pictured with optional accessories

• 27 1/2" wide x 47 1/4" long

• Optional wings fold to fit through standard 36" door

• Out-of-the box solution for robots and COBOTS

*Add wings to expand work area to 57" wide x 47 1/4" long*

Mobile Base

• Heavy duty welded steel construction
• Standard gray powder coated finish
• Total locking swivel and wheel brakes
• Industrial swivel leveling feet for stability
• Non-slip pads on each leveling foot
• Accommodates all Swivellink COBOT pedestals
• Mounting hardware included
• Large footprint for stability
• Base can be locked in 30º increments

Mobile Base shown with COBOT pedestal and anchor, both sold separately

Mobile Cart Optional Add-ons
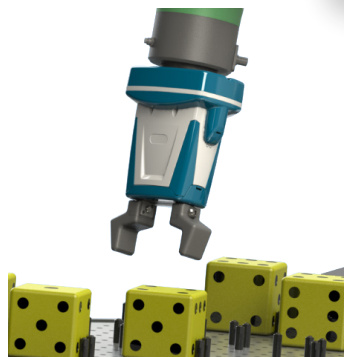
Robot End-of-Arm Tool
• Schunk CoAct collaborative EOAT
• Parallel gripper kit with 2 jaws for 3" blocks
• Ready to connect to FANUC CRX

Parts Presentation Kit with 3" Foam Dice Blocks

• Fixed grid, 12 location diamond template with six (6) 3" foam dice cubes

• Pegboard reconfigurable template with 50 locator pegs and six(6) 3" foam dice cubes

Pedestals

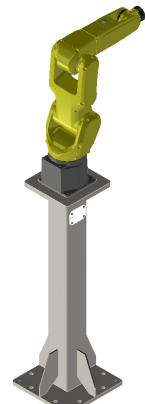We have built and stocked many sizes of COBOT and robot pedestals for your classroom needs.

• Range from 24" to 48" tall in 6" increments
• Holes for leveling and anchoring
• Steel welded construction
• Powder coat finish

When mounting these robots we recommend guarding (see next page).

Always be safe when operating a robot.

COBOT

Robot

FANUC

CONNECT4.0 CERTIFIED EDUCATION

Swivellink® INTELLIGENTLY DESIGNED

APT MANUFACTURINGsolutions

ACCESSORIES

Swivellink® 4-1/2"W X 36"L Variable Speed Conveyor

- Swivellink® belt conveyor with variable speed capability (conveyor mounted speed control)
- 4-1/2" wide bed, 4-1/4" wide belt, 36" overall length conveyor
- Hard stop each end of conveyor
- Optical sensor at idle end of conveyor on adjustable mount
- Optical sensor at drive end of conveyor on adjustable mount
- Sensor cables and motor control forward / reverse terminated in small junction box
- 120 VAC Power cable

Free Standing Conveyor

- Free standing conveyor base with adjustable height stands
- Locking swivel casters for portability
- Adjustable side rails
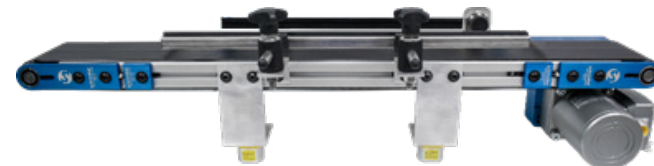
Magnetically Mounted Tabletop Conveyor

- Conveyor base with switchable magnetic mounts
- Side rails, one side fixed, opposite side adjustable

Ask about your custom needs. Prices may vary.

Safety Fencing

Create a "Lab Environment Work Cell" for Robots

This is industrial guarding "STRONGUARD ®" used in industry for perimeter guarding around robot cells. We offer this to education for students to safely run the robot and additional students see over the top of the guarding for instructional purposes. All the standard guarding is 53" tall for visibility, we offer a few kits that we feel would be best used for these robots:

- 5' x 5' for SCARA or FANUC LR Mate
- 7' x 7' for FANUC M10
- 10' x 10' for FANUC M20

The safety mesh is 2" x 2" black coated, the post and frames are made of steel and are powder coated Safety Yellow. We offer several safety options that include:

- Gated entry with latch and interlock switch.
- Light curtain, three-sided guarding with one open side.
- Area scanner kit with narrower side panels.

FANUC

CONNECT 4.0

Swivellink® INTELLIGENTLY DESIGNED

APT MANUFACTURINGsolutions
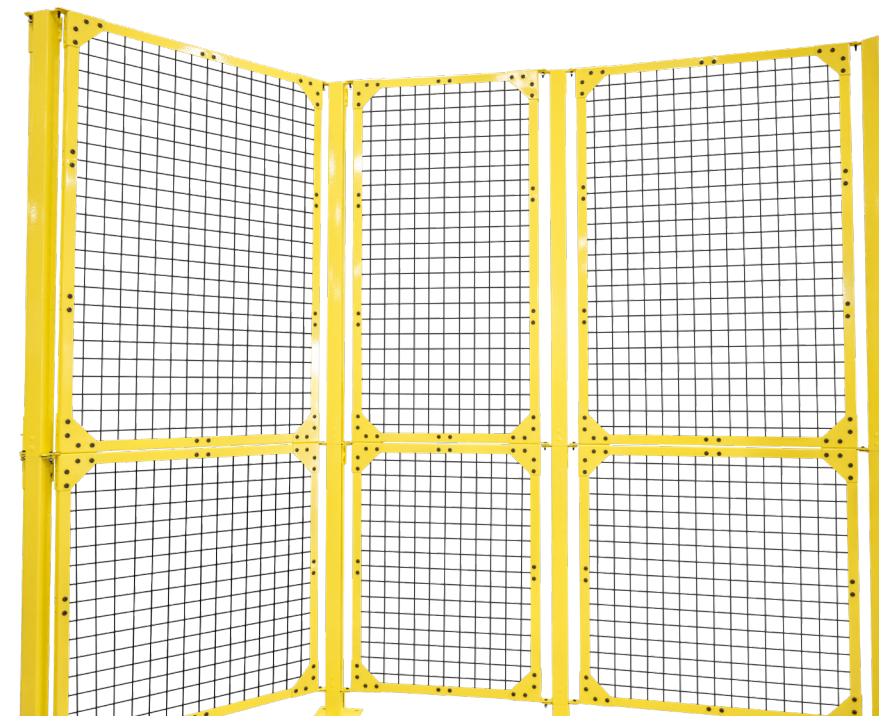
CLASSROOM DESIGN SERVICES

**Let us design your classroom
with industry-recognized equipment and curriculum**

*APT's Design Team is comprised of field experts with years of experience.
Engineering • Automation • Management • Material Handling • Mechanical • Design*

Our design team will talk to you to get an understanding of your initiatives and goals.

We will then design a classroom with automation and robotics equipment and curriculum to make your students a valuable candidate to employers.

We will align education solutions with your budget requirements, with consideration for local industry relatability, software licensing requirements and maintenance costs.

Considerations

- *Long-term plan*
- *Variety of learning options*
- *Environmental and lighting requirements*
- *Utility requirements and locations*
- *Enough space for equipment and collaboration*
- *Plan for future growth*
- *Understanding local industry needs*
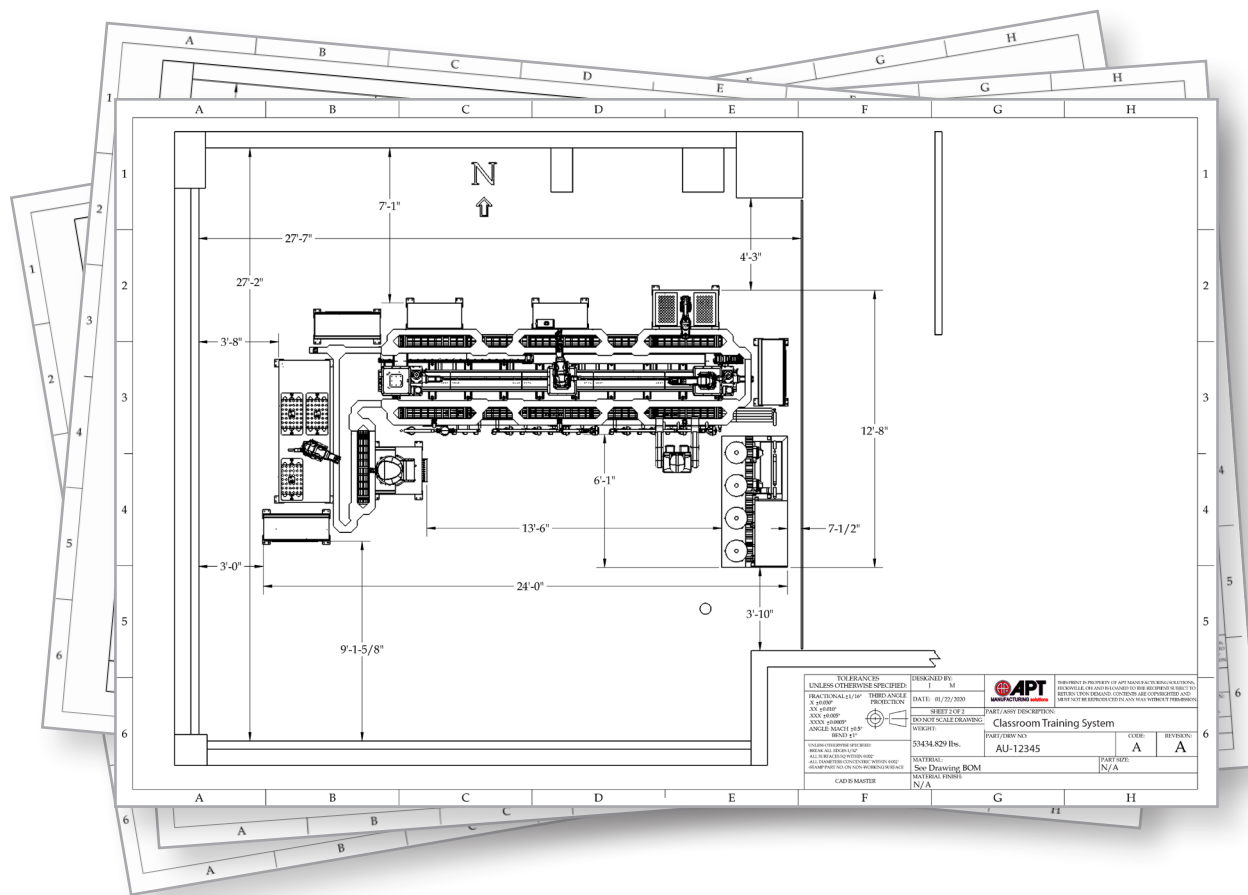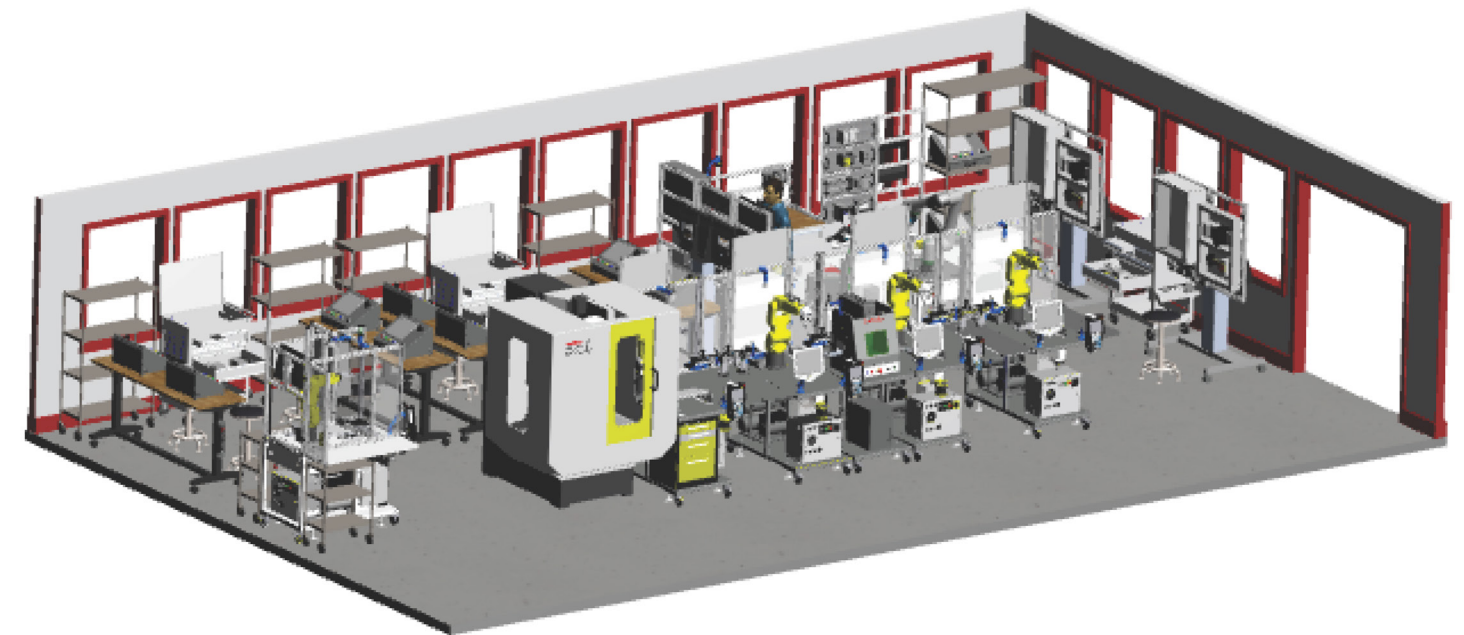
Contact your authorized FANUC educational reseller for more information

fanucamerica.com/education

aptmfg.com/education