FANUC

CNC | ROBOT | iRVISION
FANUC
CERTIFIED EDUCATION

CERTIFIED EDUCATION PROGRAMS
AUTOMATION & ADVANCED MACHINING

MANUFACTURING IS GROWING

80%
of Manufacturers Report Shortage of Skilled Workers

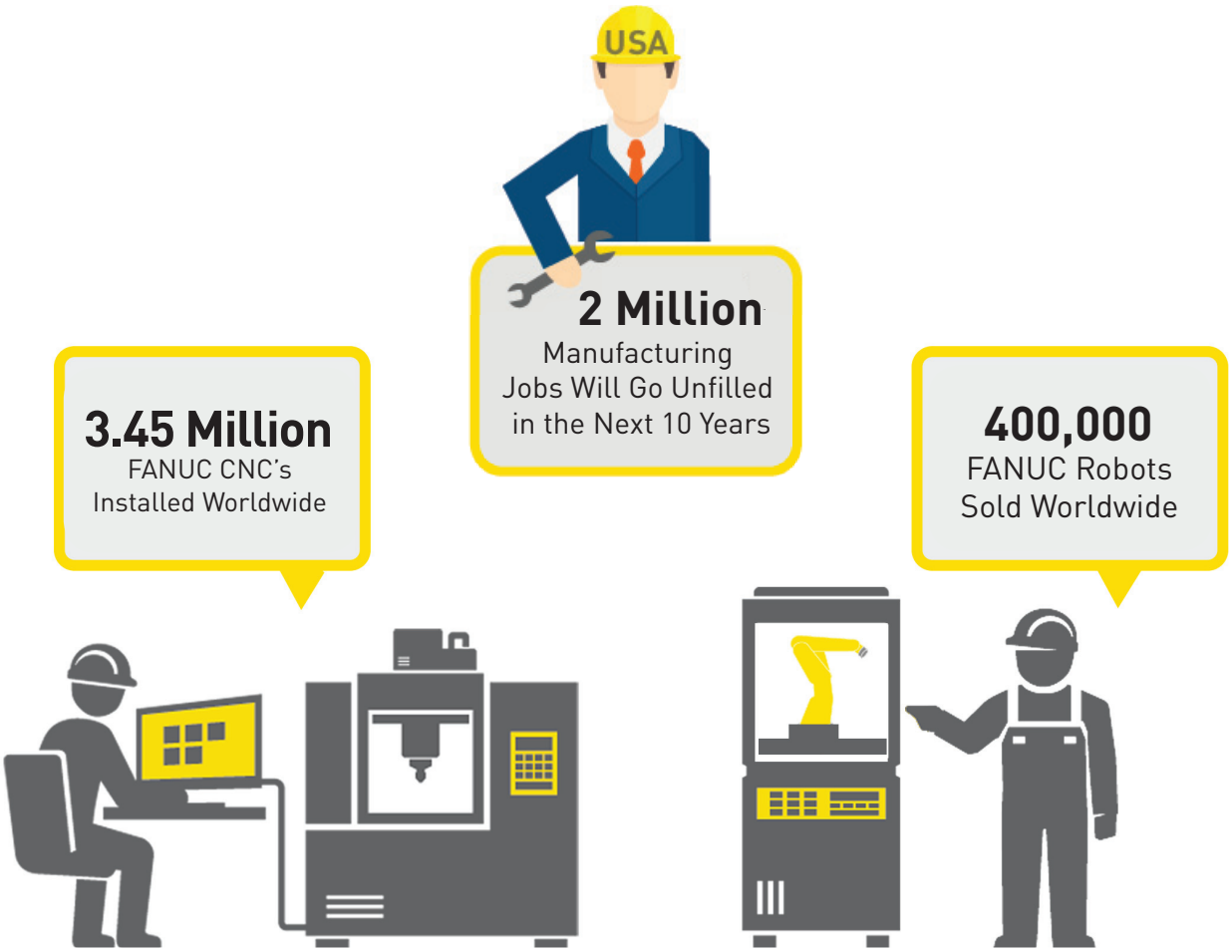
The need for skilled workers with automation training certifications is growing, too. According to The Manufacturing Institute, there are over 600,000 unfilled manufacturing positions in the US, but many applicants lack the skills and training to do the job. In the next ten years, this gap is expected to grow to as many as 2 million unfilled manufacturing jobs as the number of highly skilled manufacturing jobs continues to outpace the pool of trained candidates.

FANUC Certified Education Training

FANUC certified education programs provide industry-relevant training and competency-based skills development across the FANUC CNC and robotics product lines. FANUC collaborates with other industry technology leaders in automation, advanced manufacturing, the connected enterprise, and education to develop a certification program that addresses the needs of employers and aligns with secondary and post-secondary programs of study. FANUC is an authorized provider of Continuing Education Units. All FANUC educational programs meet the national ANSI/IACET standards.

Our programs provide manufacturers and educators with a STEM-based curriculum centered on CNC and robot programming and operation. With the majority of industry turning to FANUC robots and CNC systems, graduates who are familiar with FANUC equipment and systems have an advantage over their competitors in the job market.

With over 3.45 million CNCs, 16 million servo motors and 400,000 industrial robots installed worldwide, FANUC is the most common platform in manufacturing for both CNC systems and robots. When students enter the workforce, chances are they will be working on a FANUC CNC or robot. Students trained on FANUC equipment will be better equipped to hit the ground running and be productive from the start.



CNC Curriculum

FANUC offers a world-class CNC curriculum based on the needs of the machining industry, in line with the Key Concepts teaching approach. This approach explains both how tasks are completed using a FANUC CNC and the reasoning behind the processes. Each lesson builds on the information taught in the previous lesson and provides a logical "show-me" tutorial method of instruction. Upon completion of the course, students will understand how to get a machine set up and into production.

Two courses are taught in the CNC curriculum: One course focuses on machining centers (mills) and the other on turning centers (lathes). Each course covers ten key concepts; six on programming and four on set up and operation. If a student can understand these ten basic principles, they are well on their way to becoming a proficient CNC user.

Courses are available online or in a traditional classroom setting. The content is the same regardless of the delivery method with presentations, reading materials, exercises, tests and final evaluations. Students have access to projects and labs – which can be carried out using the FANUC CNC Simulator or NCGuide (FANUC CNC software running on a PC) – before transferring the programs to a certification cart or another FANUC-controlled machine to cut metal. Instructors leading courses in certified programs must meet defined education training standards established by FANUC. To become certified, instructors must participate in FANUC training on programming and operation of the latest FANUC equipment.

FANUC Tools

NCGuide Academic Package

The NCGuide Academic Package is FANUC CNC software running on a PC. NCGuide is ideal for dedicated training rooms or development teams, and is available with single or multi-seat licenses. NCGuide provides a realistic operation and part programming environment so students can write, test and optimize programs without taking a machine out of production. NCGuide supports both conventional G-code programming including canned-cycles and custom macros and FANUC's conversational programming, MANUAL GUIDE *i*.

NCGuide

CNC Simulator

The FANUC CNC Simulator brings the world's most popular controls to the classroom, providing students with exposure to FANUC CNCs without the need for a full machine. The FANUC CNC Simulator is based on the FANUC Series 0*i*-MODEL F platform, and can be operated in either milling or turning configurations. Students will experience the look, feel and layout of the control as they navigate and program a fully functioning CNC. Using ISO G-code programming or the FANUC MANUAL GUIDE *i* conversational programming interface, students can simulate wireframe toolpath or 3D solid modeling before transferring the program to a machine tool.

CNC Simulator

Features:

- Switchable mill and lathe (turning) system in one simulator
- 3-axis milling / 2-axis turning system plus one spindle
- MANUAL GUIDE *i* for conversational program creation and 3D simulation
- USB, Flash ATA and Ethernet connectivity
- Power: AC 100-240V

CNC Certification Carts

Tabletop CNC certification carts are portable machines with a FANUC CNC, so students can practice machine set up and operation, and bring their programs into reality by making parts. The certification carts can be easily moved from classroom to classroom through a standard doorway and require only a standard wall outlet for power. Carts are available in turning (lathe) configuration or machining (mill) configuration with optional tooling packages that correspond with the lab exercises in the FANUC education curriculum.

CNC Cert Cart

Robotics Curriculum

FANUC has a long history of providing world-class training programs on robotics, intelligent solutions, and advanced automation applications. The FANUC robotics training program features a world-class, skills-based training curriculum that develops a stackable set of skills and knowledge including safety, terminology, basic robot operations, setup procedures, programming and file manipulation. Each course of study consists of lectures, demonstrations, lab-based and project-based exercises, testing, and assessment. Students receive hands-on training with a FANUC robot as well as virtual training using FANUC HandlingPRO robotic simulation software.

Upon completion of the program, students receive an industry-recognized FANUC Level 1 Certificate.

FANUC Tools

ROBOGUIDE

ROBOGUIDE is the leading offline programming product on the market for FANUC robots. ROBOGUIDE software allows users to create, program and simulate a robotic workcell in 3D. Offline programming with ROBOGUIDE uses virtual robots and workcell models, enabling visualization of single and multi-robot workcell layouts. With ROBOGUIDE, educators and students use the same tools that application engineers use to import CAD models, create workcells complete with machines, part transfer devices and obstacles, and teach paths to simulate the operation and performance of a robot workcell. Reach verification, collision detection, accurate cycle time, robot trajectory and other system operations are provided in the ROBOGUIDE graphical virtual environment. Robot program Upload Download/Round Trip – ROBOGUIDE allows for seamless data transfer between real and virtual robots in either direction.

Physical *i*Pendant Support

With the *i*Pendant PC Conversion Kit, students and teachers can learn real teach pendant operations quickly with a physical *i*Pendant connection to ROBOGUIDE virtual robots. This cost-effective option allows more students to become familiar with using the *i*Pendant and with hands-on programming of a virtual robot.

ROBOGUIDE

Project Based Learning Packages

FANUC offers multiple Project Based Learning (PBL) packages designed to give students a practical application to increase their comprehension of FANUC's robot operations and programming and integrated *i*RVision. PBLs reinforce a student's skills and knowledge of problem solving, and develop efficient solutions by challenging their ability to focus on methods that help maximize quality and production uptime. PBLs are offered for shapes and motion programming, material handling and palletizing, error proofing with *i*RVision, 2D guidance with *i*RVision and more.

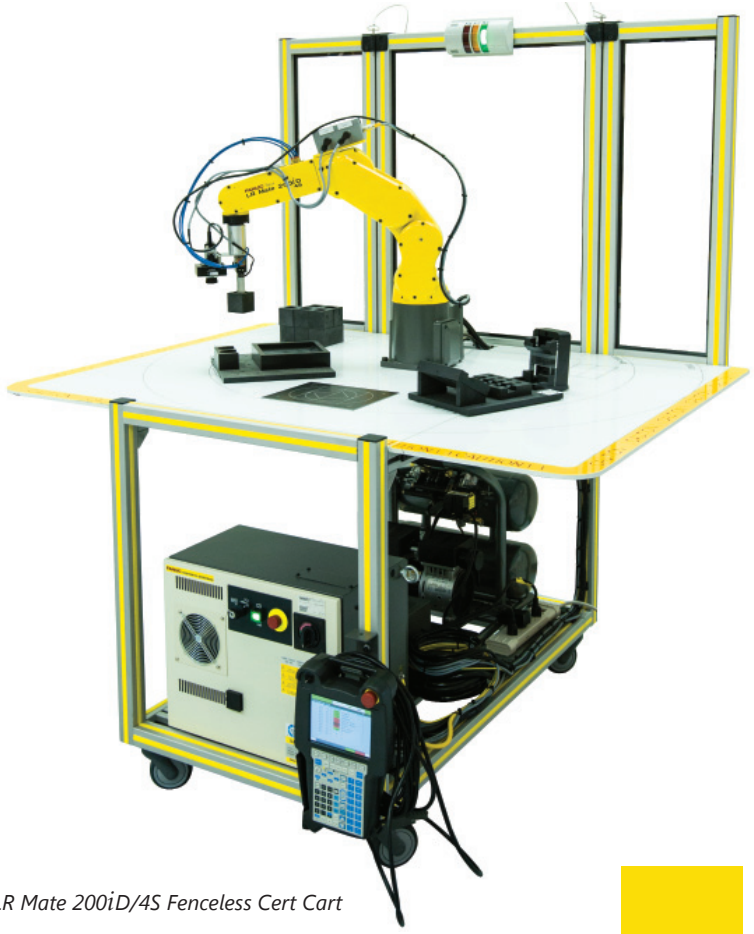
FANUC LR Mate 200*i*D/4S Fenceless Education Certification Cart

The FANUC LR Mate 200*i*D/4S Fenceless Certification Cart combines the FANUC DCS Speed and Position Check Software with an Allen Bradley SafeZone™ Mini Safety Laser Scanner. The result is the classroom-ready FANUC Fenceless Certification Cart – an ideal robotics training solution that can fit through a standard doorway and runs off of a standard 110V power outlet.

Features:

- LR Mate 200*i*D or LR Mate 200*i*D/4S compatible
- 180+ degree work envelope
- Worktable can fit three PBL kits
- Integrated safety stack light
- 4.6 gallon ultra-quiet air compressor
- Gripper fingers with embedded laser pointer comes standard

*i*Pendant



LR Mate 200iD/4S Fenceless Cert Cart

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