FANUC

CNC Certified Education Training

Qualifying students to be productive right out of the gate for industry leading jobs

RELIABILITY · INNOVATION · EXPERTISE
FANUC
ULTIMATE CONTROL

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FANUC
CERTIFIED EDUCATION CNC TRAINING

Certification for the world's leading CNC

CNC certified education training

With over 2.4 million systems installed, FANUC is the undeniable global leader in CNC. Reason being is that we provide our customers the most innovative, reliable and high-performance products, backed by world-class service and support.

We realize that it also takes qualified machinists, programmers and operators to maximize productivity. To meet this need, FANUC has developed the most robust CNC certified education training program in the industry.

The program ensures that students learn the skills that industry demands from FANUC certified instructors, using a FANUC approved curriculum on genuine FANUC equipment.

If you want to train students to be productive employees right out of the gate, upgrade your educational programs with FANUC Certified Education Training.

Learn to earn

If you ask your technical advisory board which CNCs they use in their shops, it is likely that a large proportion of their machine tools have FANUC CNCs. It follows then that they would prefer to hire employees that have FANUC CNC experience so they can hit the ground running from day one.

FANUC CNCs are used by the leading manufacturers in the aerospace, automotive, energy, medical and construction equipment industries. Qualify your students to be the best candidates for the industry leading machinist jobs by teaching them with genuine FANUC equipment.

Effective and affordable training

Manufacturers prefer quality training from a local resource. With our Certified Education Training program you can teach an approved CNC curriculum and issue a certificate just as if they came to one of FANUC's own training facilities.

Traditionally, schools train with the lowest cost solution to maximize the machine-to-student ratio. Now competitive products are available from FANUC and their machine tool builder partners at education friendly prices.

FANUC now offers NCGuide Academic Packages, FANUC's CNC software running on a PC. It provides 24/7 access to both of FANUC's most popular and most advanced CNCs. Supporting the complete CNC programming, setup and operation workflow, NCGuide provides students an opportunity for the most extensive hands-on experience.

The CNC certification cart from Levil Technology and sold through FANUC's Education Authorized Resellers brings new effectiveness to classroom training and new efficiencies to workshop machines. By bringing the CNC and machine tool into the classroom, students can be better prepared when they move into the workshop.

FANUC works with the world's leading machine tool builders and a variety of commodity machine tools that are ideal for education and are now available at education friendly prices.

The certification program at a glance

- Approved curriculum (FANUC can provide)
- Certified instructor
- Teach with FANUC CNCs and software
- Approved competency test for students

- Students graduate with FANUC certificate
- Students get better paying jobs
- Employers get more qualified employees
- Employers get better local training
- Schools get credit for all the above

NCGuide Academic

NCGuide Academic packages are FANUC CNC software running on a PC, providing a 100% authentic operation and part programming environment at a fraction of the cost of using a hardware simulator or a workshop machine tool. Comprehension and retention is enhanced as students perform repetitive hands-on exercises in an ergonomically friendly environment with 24/7 access. Students can practice common procedures, complete assignments and experiment safely with minimum supervision and without risks to people, tooling or machines.

More effective demonstrations

NCGuide Academic packages can be projected to a large classroom display just like any other PC-based program, providing an effective visual aid for demonstrating concepts and examples during lectures. All aspects of CNC operation and part programming can be demonstrated.

The instructor's screen can be shared with networked or remote students for interactive learning and for instructor-led, distance learning applications. Demonstrations can be easily recorded for online learning videos to enhance traditional classes or for flipping-the-classroom applications.

Productive hands-on experience

Students can perform operation and programming exercises at any location. Instructors can provide snapshots of specific machine configurations for exercises, with the CNC type, options, parameter settings, part programs, tool and work offsets and problem scenarios all pre-configured.

NCGuide's flexible network licensing is based on simultaneous users, so the software can be loaded onto any number of computers including classroom, library or student devices. Students get 24/7 access to world-class CNCs for classroom exercises, homework, elective study and experimentation.

Creating and editing part programs

Part programs can be created using the standard CNC part program G-code word editors or using MANUAL GUIDE *i* conversational programming screens. NCGuide supports both turning and milling controls.

MANUAL GUIDE *i* conversational programming simplifies part programming and focuses the student on the sequence of operations before they learn the actual G-code.

Loading and saving part programs

Part programs can be created externally using a PC-based editor or a CAD/CAM post processor. Programs created in NCGuide CNCs can be transferred to a real machine.

Programs, tool offsets and workpiece coordinate system offsets and other files can be input to and output from NCGuide CNCs using the standard I/O screens and a virtual memory card interface. The virtual memory card may be located on a USB memory stick for student convenience, or on any directory on the PC or on a remote network drive.

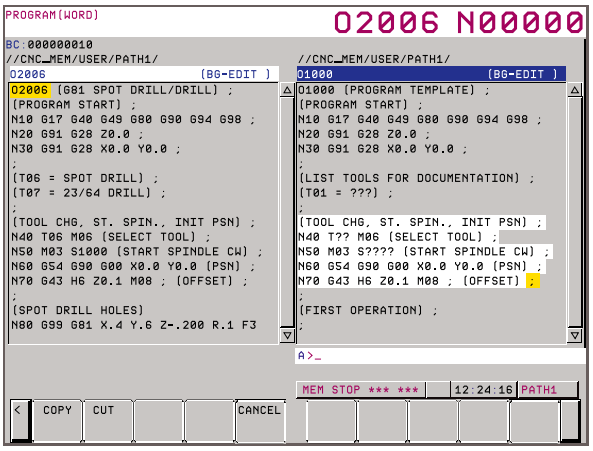
Graphical program verification

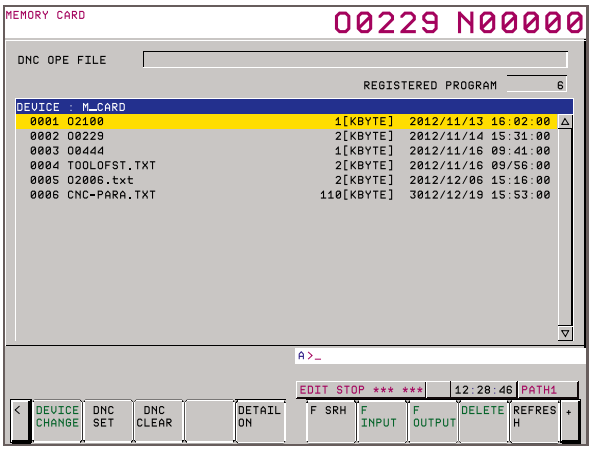
Before executing a part program on a machine tool, it is common to check it for syntax problems and ensure the correct order of operations. Verification is best achieved using a graphics display.

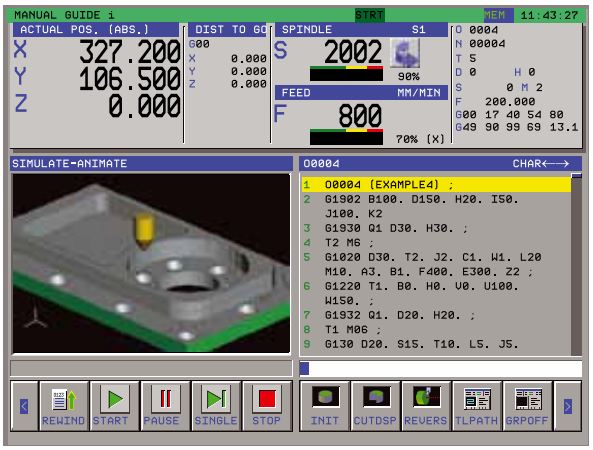
NCGuide supports both the standard GRAPH tool path plotting display and a 3D solid model machining simulation that are exactly the same as those on the real CNC.

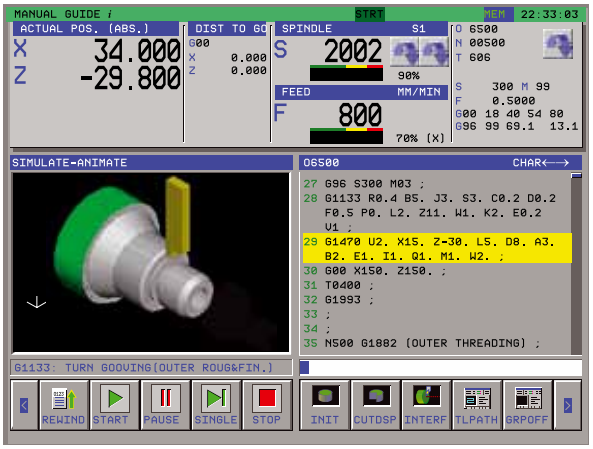
Tool and work offsets

NCGuide CNCs support tool geometry and tool wear offsets and workpiece coordinate system offsets for complete machine setup workflow exercises.









Industrial quality - classroom friendly

The CNC certification cart from Levil Technology is a real machine tool that is also ultra-portable for more effective classroom, onsite training and recruiting:

- Featuring a FANUC Series 0*i*-Mate MODEL D CNC
- Plugs into standard 110VAC receptacle
- Fits through standard doorways
- Easily lifted with a pallet jack or in an elevator
- 11 station automatic tool changer
- Available 4th-axis option

Increasing classroom effectiveness

The CNC certification cart takes classroom training to a new level by allowing students to experience the complete programming, setup and operational workflow right inside the classroom.

Students write, edit and verify programs using the editors and 3D solid model animation in NCGuide. They then setup tooling and workpiece offsets and make the part on a real machine while still in the classroom. When they move to the workshop, students are already experienced in setup and operation - so the equipment is utilized more effectively, potentially reducing the number of machines required.

Take it anywhere portability

The CNC certification cart has been designed to be ultra-portable so it can be used in any classroom at any location - including satellite campuses, industry shops for onsite training and recruiting events.

It runs on 110VAC using the standard connection that is available everywhere. It has a fold back control mount and a small footprint to fit through standard 36" doorways. It is light and is on wheels so it can be transported easily using standard pallet jacks and in elevators avoiding expensive rigging costs.

Industrial quality machine

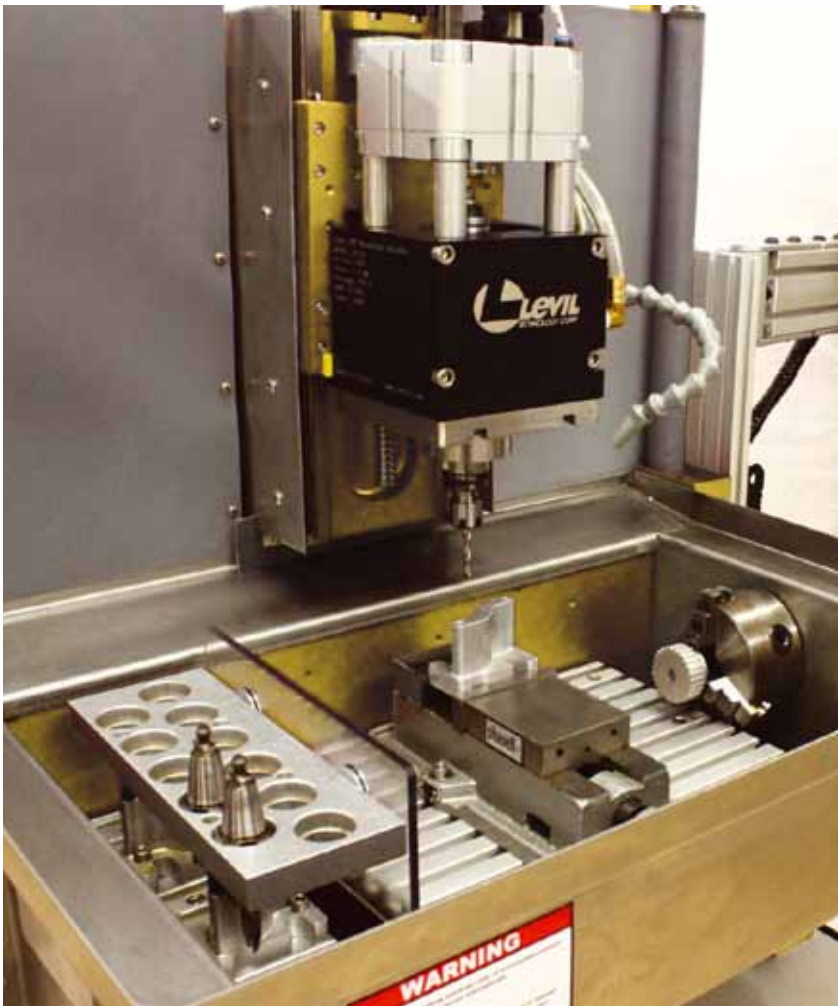
The certification cart machine is designed for 24/7 industrial production of small parts in a variety of materials including brass, aluminum and soft steel. It is not your typical education lab machine, rather it is an industrial quality machine. It features a high-speed 17,000 RPM, 2HP liquid cooled spindle, a surprisingly large axis motion range (16.5" X 8.5" x 7.5") and an integrated coolant system.

The eleven station automatic tool changer uses standard S20T tool holders that can accept a maximum tool size of 3/8". It is programmed with the usual Txx M06 G-code and delivers a chip-to-chip tool change time of 8-seconds. An economic tool length sensor and a touch probe are available options for training on automated setup.

FANUC 0*i*-Mate MODEL D CNC

The Series 0/0*i* is the world's most popular and FANUC's most economical CNC model, which makes it ideal for education. The package includes over 200 standard features:

- Wrong operation prevention function
- USB port and Ethernet connectivity
- Canned cycles for drilling
- 512K part program memory
- Cutter radius and tool length compensation (400 sets)
- G54~G59 and 48 additional workpiece coordinate offsets
- Integrated help function
- Graphic display for visual part program verification
- Handwheel feed (MPG)
- Custom Macro



Series 0*i*-MODEL D – powerful and versatile

The world's most popular CNC

With over 700,000 systems installed, the Series 0/0i from FANUC is the world's most popular CNC model. It is available on many of the world's most popular commodity production machines and includes over 200 standard features and functions - making it ideal for educational machines.

Series 0*i*-MODEL D

The 0*i*-MD for milling supports up to 4 axes simultaneous interpolation and 8 axes in total. The 0*i*-TD supports dual turret, multiple path turning and C-axis positioning. They are available with either a 8.4" or 10.4" color LCD screen.

Series 0*i* Mate-MODEL D

The 0*i* Mate-MD can control up to 3 axes simultaneously and the 0*i* Mate-TD supports single turret, single path turning. With an integrated 8.4" color LCD screen they are ideal for standard machine tools.

USB port and Ethernet

The USB port and embbed Ethernet are factory options on both the Series 0*i*-MODEL D and the Series 0*i* Mate-MODEL D. Specify these options so that the student can easily transfer their part programs from the classroom to the machine.

Series 30*i*/31*i*/32*i*-MODEL B – high-performance

First choice for the most demanding applications

The Series 30*i*/31*i*/32*i*-MODEL B is available on today's most complex, high-performance machines with a large number of axes, multiple part program paths and high-speed auxiliary machine functions. It is the ideal choice for educators that are ready to move their program beyond basic CNC machining.

5-axis machining

The Series 31*i*-MODEL B5 is a high-performance CNC that produces precision parts, with faster cycle times and improved surfaces finishes. It is ideal for teaching the modern 5-axis workflow, with simplified part programming, setup and operation - eliminating the round trip to the CAM system for changes in tooling, setup or machine.

Mill-turn and 5/6-sided machining

The Series 31*i*/32*i*-MODEL B supports multiple axes, spindles and programmed paths required for mill-turn and 5/6-sided machining - reducing setup and cycle time. Path can be designated to handle milling or turning.

USB port and Ethernet

A USB port and Ethernet communications are standard features on all Series 30*i*/31*i*/32*i*-MODEL B CNCs, providing convenient options for students to transfer their programs from NCGuide or a CAD/CAM system to the machine.

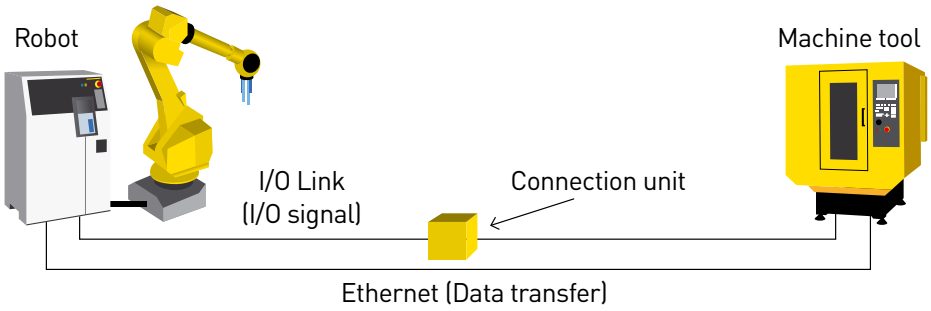
Advanced robot integration

CNC robot interface

CNC machine tools and robots are essential partners in global competitiveness. Whether teaching advanced manufacturing or mechatronics, FANUC CNCs, robots and Certified Education Training programs are a perfect fit.

A standard Ethernet or I/O Link interface between the CNC and robot significantly reduces both integration time and cost. Robot operation and monitoring can be performed through CNC screens without entering the robot safety zone.

FANUC Robotics
CERTIFIED EDUCATION ROBOT TRAINING



Process-oriented conversational programming

For a student advancing to a smaller job shop or toolroom, user-friendly MANUAL GUIDE *i* conversational programming simplifies and enhances their productivity. This innovative part programming operation environment focuses the student on machine operations rather than G-code, allowing a job to be completed in the shortest time possible.

Integrated programming and operation

A single integrated screen provides for routine machining operations including part program creation and editing, animated simulation-based program verification, production machining, MDI operation and manual operations.

Simple part program generation

Simple menu-driven conversational programming screens guide the operator through a series of frequently used machining operations. These high-level cycles eliminate the tedium and error-prone process of generating the same multiple blocks of G-code for common machining operations.

Realistic 3D solid model simulation

Machining programs can be checked effectively using a solid model animated simulation for all operations. It realistically shows the material surface being removed with a specific type of tool tip as if the real workpiece is being machined.

Advanced set-up guidance

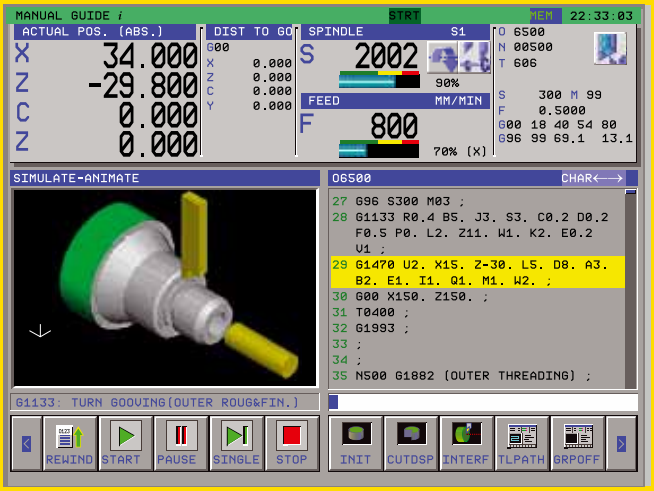
Machine setup is simplified using MANUAL GUIDE *i* set-up guidance functions. All measurements are supported, from tool and work coordinate offsets through to the measurement of the finished workpiece.

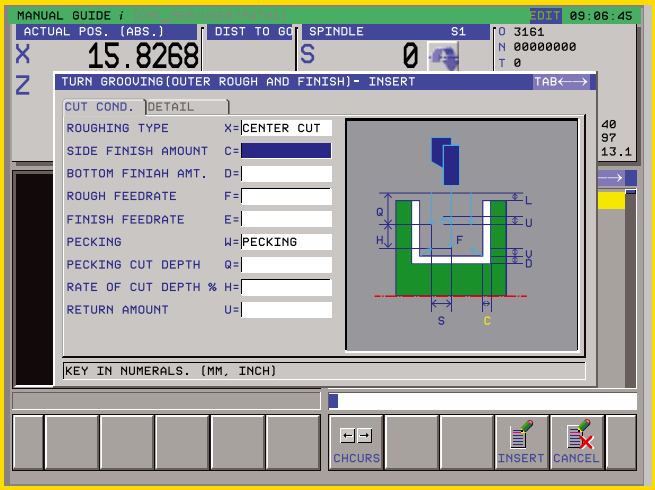
Offline programming

MANUAL GUIDE *i* is supported by NCGuide, FANUC's CNC software running on a PC. Programs can be created on the PC and then transferred to the machine after verification. Programs can be exported to standard G-code so they can run on a wide range of FANUC CNCs.

Affinity with CAD/CAM systems

Standard machining programs created using CAD/CAM or other offline programming systems can be visualized and verified using the 3D solid model simulation by simply adding the block that defines the material blank size.





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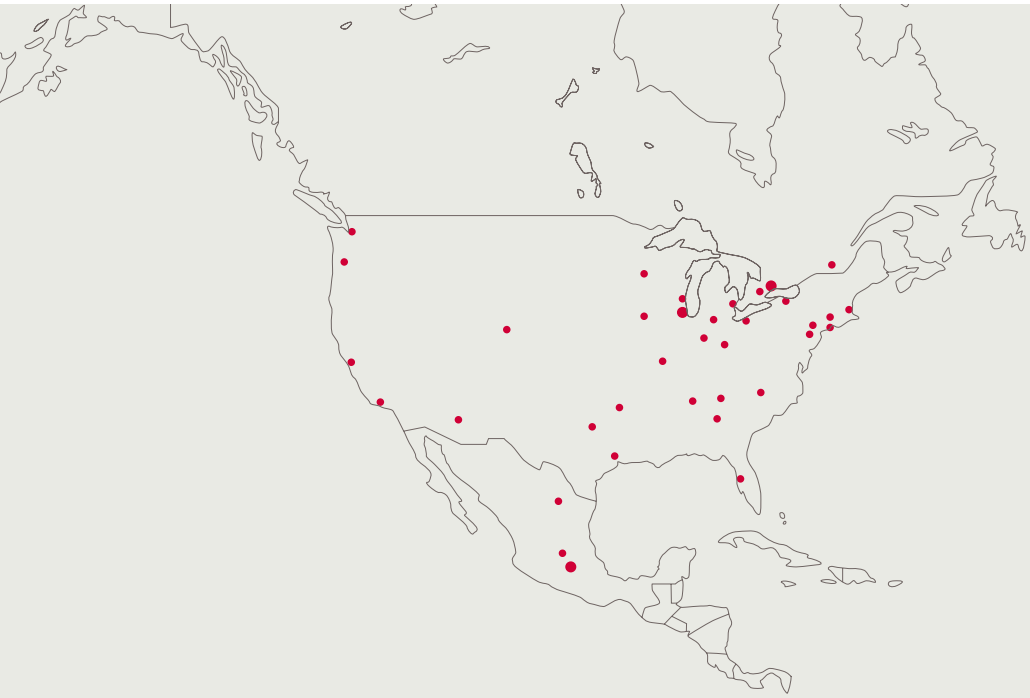

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