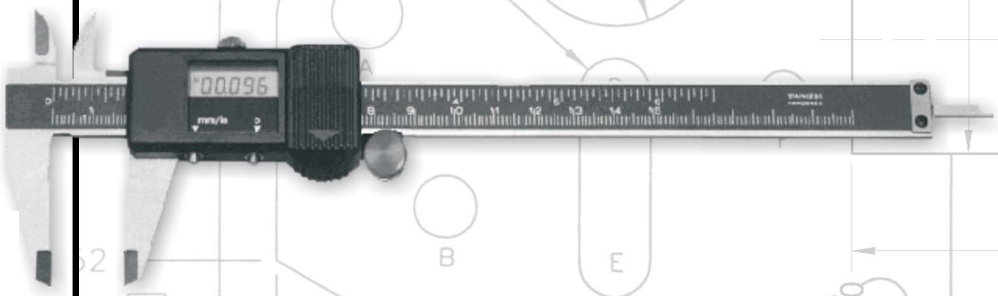
The CNC Classroom



DENFORD

E-learning

Denford partners with Tooling University to offer affordable online learning.

TOOLING University®

Tooling University® offers metalworking, manufacturing, and advanced technology training. Classes range from metalworking basics to advanced classes.

- Shop math
- Blueprint reading
- CNC part programming
- Tooling and locating
- Quality control
- Ferrous and non-ferrous materials
- Heat treating
- Metal cutting and metal forming machine operations

Fast – classes typically take only a few hours to complete.
Convenient – Students work at their own pace making learning stress-free and enjoyable.
Effective – Each class features in-depth information on the subject and is supported by illustrations, audio, and video. Many learning aids are available such as an interactive dictionary, an article archive, and forums to ensure a full understanding of the material presented.

For more information, visit www.denford.com, enter the American site, and click the *E-learning* button.

CNC Training

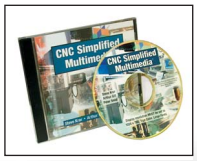
CNC Machining Level 1

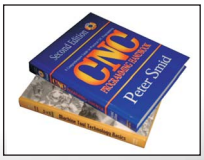
A vocational level curriculum covering the CNC portion of NIMS Machining Level 1 skills

Three separate modules (theory, mill project, & lathe project) totaling thirty hours of instruction time.

Theory – Five activities aimed at teaching the basic principles of machining and Computer Numerical Control.
Mill Project – Seven activities designed to teach the student about CNC programming and planning. Six CNC programs are written. A shape is machined on each side of a one inch cube.
Lathe Project – Six activities designed to teach the student about CNC programming and planning. Three CNC programs are written–the goal of this activity is to turn a part in three stages (facing, roughing, and finishing).

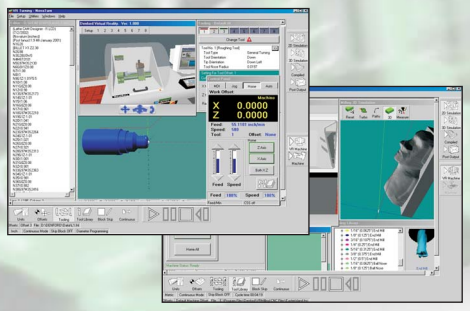
Textbooks & Multimedia Software





CNC Programming Software

The VR Milling and VR Turning software includes programming wizards, troubleshooting and measuring tools, and dynamic 2D and 3D program simulation. Virtual CNC machines are also available within the software–these virtual machines are fully operational providing a safe and easy way for students to learn how to use a CNC machine.



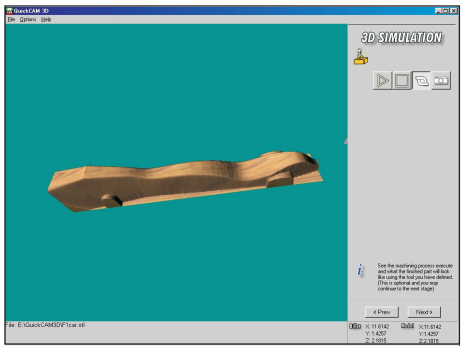
CNC Machines

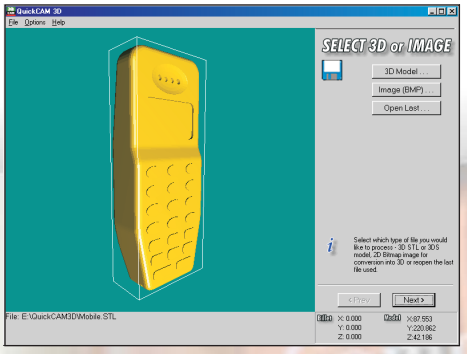
CAD/CAM Software

QuickCAM 3D

QuickCAM 3D is a software package used to create CNC machine tool paths from 3D models or 2D images. This is achieved by entering sizes, defining positions, and configuring tool and machine setup in a series of nine step-by-step stages.

- Import .STL, .3DS, .BMP, .JPG, .DIB, .ICO, .EMF, and .WMF files.
- Graphic safety features to help identify problem areas.
- Automatic roughing and finishing cycles.
- Automatic tool path contouring saves valuable machining time.
- Colored rendering of simulated files in realistic materials including timbers, plastics, metals, and foam. Scan and import your own image maps.





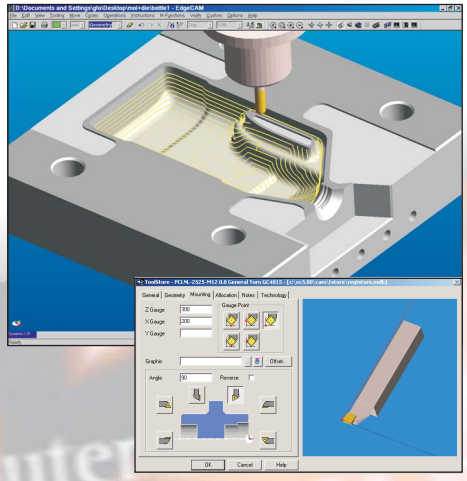
EdgeCAM

An affordable full industrial CAM package designed by Pathtrace. Offers intelligent manufacturing solutions for production milling, turning, and mold and die making.

edgeCAM® Intelligent Manufacturing

- Open CAD files from all major CAD systems including Solidworks®, Solid Edge®, Autodesk Inventor®, CATIA®, and AutoCAD®.
- Import IGES, DXF, VDA, Parasolid, and ACIS files.
- 2D and 3D CAD functionality to draw components from concept to completion, or allows modification of imported files.
- EdgeCAM Code Wizard produces NC code for any type of CNC machine tool.

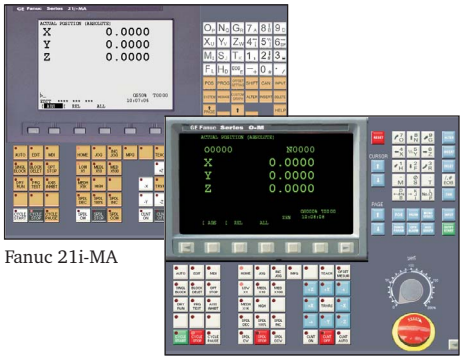
EdgeCAM does much more than generate NC code. Using the Productivity Toolbox, EdgeCAM develops machining strategies that optimizes tool paths, eliminate air cutting, maximizes tool life, reduces programming time, and increases overall productivity.



Advanced Training

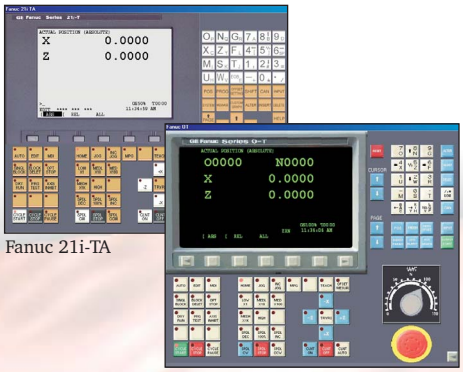
Fanuc Control

Denford's VR Milling and Turning software includes Fanuc on-screen operator panels used to emulate the look, feel, and functionality of industrial controls found in industry. Use the operator panels to create CNC programs, graphically simulate the CNC code, and operate a virtual or physical machine.



Fanuc 21i-MA

Fanuc 0-M

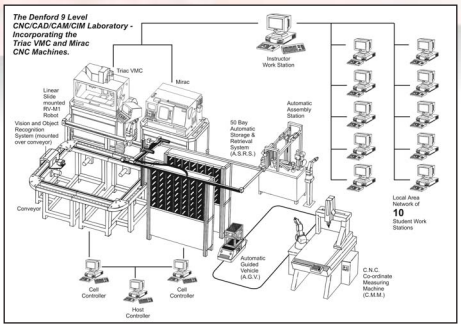


Fanuc 21i-TA

Fanuc 0-T

CIM/FMS

Denford's CIM/FMS systems are flexible, modular, expandable, and affordable. Systems may be created with a range of machines, automation devices and CAD/CAM software, offering the flexibility to create a CIM system tailored to individual requirements. Both hardware and software can be added over a period of time as funding becomes available, allowing a simple manufacturing cell to expand into a complete CIM system.



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