

Principles of CNC eLearning | Hands-On, Interactive Multimedia

Principles of CNC - WXCN101-XX01XEN-E2

Objective 5: Describe the Layout of CNC Controls

CNC Control Layout

Programming and Screen Controls

Display Screen

Machine Operation Controls

Although the **layout** of the CNC control may vary depending on the particular brand, every CNC control can be broken into three basic areas:

- Display Screen
- Machine **Operation** Controls
- Programming and Screen Controls

The diagram shows a CNC control panel with three main sections. The top section is labeled 'Programming and Screen Controls' and contains two screens. The left screen is labeled 'Display Screen' and shows a graphical interface with various data points. The right screen is labeled 'Programming and Screen Controls' and shows a grid of buttons and controls. The bottom section is labeled 'Machine Operation Controls' and contains a large dial, several buttons, and a red emergency stop button.

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eLearning Course: MXCN101

Finding qualified CNC machine operators is a challenge for any manufacturing organization. How do you know someone can do the job? Delivering consistent product quality when multiple people are involved, often in different locations, is also a big challenge. Experience in operating a CNC machine does not equate to consistent skills or approaches, which often shows up in higher warranty and repair costs. When combined with the often larger issue of just not enough CNC machine operators to fill open jobs, business suffers.

CNC Machine Operators require skills in operating a CNC machine, but are not machinists. Through industry task analysis as well as strong involvement with our development partner, a large global manufacturer, Amatrol's [CNC Machine Operator Program](#) brings a highly-focused, streamlined set of skills to CNC Machine Operator (FANUC) training. Many training programs for CNC Machine Operators use training really designed for machinists, which incorporates a lot of theory not relevant to their real-world role. For example, CNC machine operators need to know how to run a CNC program - not how to design one.

What Does CNC Stand For?

What Does CNC Stand For? What Does a CNC Do?

CNC is an acronym for Computer Numerical Control. A CNC is a computer interface run by an operator. It reads instructions from a computer file about how to make a part, and then conveys that information to a machine. Programmers use computer software to create files that the CNC can understand. These files define and control the movement of each axis of travel on the machine. An axis of travel is a direction in which a machine component moves. CNC machines typically have two or more axes, depending on the type of machine and the product it makes.

What are the Advantages of a CNC?

The widespread adoption of CNC machines within manufacturing has resulted in an increase in product consistency and quality. There are numerous advantages the CNC provides industry:

- Faster set-up time
- Better quality control
- Capability to contour complex shapes
- Consistent cutting time
- Increased productivity
- Minimal strain on the operator
- Reduced parts inventory
- Improved accuracy and repeatability
- Reduced tool and fixture shortage and cost
- Simplified tooling and workholding
- Enhanced manufacturing control

CNC eLearning Features Multimedia Curriculum

Principles of CNC eLearning Features Multimedia Curriculum

Amatrol's unmatched multimedia utilizes text, audio, and stunning 3D animations that engage learners in theoretical knowledge and concepts. This thorough, exceptionally detailed curriculum is built to begin with the basics and steadily advance to more complex concepts. Through partnerships with key industry leaders and leading edge educators, Amatrol developed the right balance of knowledge needed to train learners to work in their chosen field.

Additional Info

Additional Requirements

- [Computer Requirements](#)

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