

# COMPUTER NUMERICAL CONTROL (ZCNC)

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## ZCNC-1005 MasterCAM - Basic Mill 3.2 CEUs

CNC machinists, operators, and programmers who want to build their computer skills in 3D design, drawing, and CNC programming will want to take advantage of this course. Learn the skills needed to produce CNC part programs for three-axis machining centers using computer assisted manufacturing (CAM) software.

*Contact hours: 32*  
*Not financial aid eligible.*

## ZCNC-1006 CNC Fundamentals 3.2 CEUs

Computer Numerical Control (CNC) is the key technology driving today's manufacturing tools and processes. CNC machine tools have become critical for manufacturers wanting to improve productivity and quality. Form a firm foundation for your work with fundamental concepts of CNC, including machine layout, coordinate systems, basic tooling, offsets, speeds and feeds. You'll review basic shop math, metrology and blueprint reading.

*Contact hours: 32*  
*Not financial aid eligible.*

## ZCNC-1007 CNC Technologies 3.2 CEUs

Take a closer look at the tools and technology involved in CNC machining. Learn how drills, taps, reamers, end mills and carbide insert tools are used on CNC machines. Get the basics of the Pythagorean theorem and an introduction to trigonometry, which is essential in all CNC work. Basic CNC lathe and mill program formats are also covered.

*Contact hours: 32*  
*Not financial aid eligible.*

## ZCNC-1008 CNC Lathe - Advanced 3.2 CEUs

If you are ready to learn more about programming CNC lathes, this course is for you. Take an in-depth look at CNC lathes from process planning to basic programming. Learn how to program circular cuts, threads, chamfers and tapers. Canned cycles are also covered.

*Contact hours: 32*  
*Not financial aid eligible.*

## ZCNC-1009 CNC Mill - Advanced 3.2 CEUs

Take an in-depth look at CNC mills from process planning to basic programming. Learn how to program holes, slots, pockets, threads and periphery cuts. If you are ready to learn more about programming CNC mills, this course is for you.

*Contact hours: 32*  
*Not financial aid eligible.*

## ZCNC-1012 CNC Mill Lab 1 1.25 CEUs

Learn the basic setup and operational skills you will need as a CNC machining center operator, such as mounting tools on the machine, setting tool lengths, locating program zero, loading programs, running programs, editing programs and controlling part size with wear offsets. You will set up and run three part programs to create a part to take with you. Class size is limited to maximize hands-on time. Reserve your seat today!

*Contact hours: 12.5*  
*Not financial aid eligible.*

## ZCNC-1013 CNC Lathe Lab 1 1.25 CEUs

Learn the basic setup and operational skills you will need as a CNC lathe operator, such as mounting tools, setting tool geometry offsets, locating program zero, loading programs, running programs, editing programs and controlling part size with wear offsets. You will set up and machine three parts to take with you. Class size is limited to maximize hands-on time. Reserve your seat today!

*Contact hours: 12.5*  
*Not financial aid eligible.*

## ZCNC-1016 CNC Mill Lab 2 1.25 CEUs

Put your theory to work in this hands-on lab. Work as a member of a team by using a blueprint to program, set up and machine parts on a CNC mill. Learn the job tasks, and if you're already employed in the industry, you can put them into practice each day as your knowledge grows.

*Contact hours: 12.5*  
*Not financial aid eligible.*

## ZCNC-1017 CNC Lathe Lab 2 1.25 CEUs

To be a productive machinist, there is more to learn than the theory of the CNC control. In this hands-on lab, you will work as a member of a team putting theory to work. Each team will be given a blueprint to work from to program, set up, and machine parts on a CNC lathe. Learn the job tasks, and if you're already employed in the industry, you can put them into practice each day as your knowledge grows.

*Contact hours: 12.5*  
*Not financial aid eligible.*

## ZCNC-1038 MasterCAM - Basic Lathe 3.2 CEUs

Modern machine shops rely on Computer-Aided Manufacturing (CAM) software to generate part programs for their CNC machines. In this class, you will learn how to use MasterCAM software to create computer models of parts and generate tool paths to machine parts on a CNC Lathe. You will use 3D graphics to verify the machining process and generate a machine specific G & M code part program with a post processor.

*Contact hours: 32*  
*Not financial aid eligible.*

**ZCNC-1060 CNC Mill and Lathe Operations - Right Skills Now**

**50 CEUs**

Cohort-based training program covering setup and operations of CNC mills and lathes. Program includes a 320-hour internship at a local manufacturing company with an opportunity to earn NIMS CNC lathe or CNC mill operator credentials.

*Contact hours: 500*

*Not financial aid eligible.*

**ZCNC-1065 MasterCAM Basic Mill Lab**

**1.25 CEUs**

In this hands-on lab, students setup and machine the projects from the MasterCAM Basic Mill class.

*Contact hours: 12.5*

*Not financial aid eligible.*

**ZCNC-1067 MasterCAM Basic Lathe Lab**

**1.25 CEUs**

Hands-on lab in which students set up and machine the projects from MasterCAM Basic Lathe class.

*Contact hours: 12.5*

*Not financial aid eligible.*

**ZCNC-1100 On-Ramp**

**8 CEUs**

Cuyahoga Community College (Tri-C®) has partnered with Norman Noble Inc. (NNI), a medical device contract manufacturer, to create an on-ramp training program for new hires. Training begins in September at the College's Eastern Campus in Highland Hills. The fast-track training opportunity prepares individuals for rewarding careers in medical device manufacturing. Trainees will learn competencies such as operating a laser, electropolishing, documentation, quality and CNC machining in a clean environment, tailored to company needs.

*Contact hours: 80*

*Not financial aid eligible.*