



Northcentral Technical College

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Alphacam is the leading CAD/CAM solution for the wood industry, offering design and manufacturing functionality for simple routed parts up to complex 5-axis work. Alphacam Router is a fully-featured, easy-to-use CAM solution for manufacturers wanting fast, efficient toolpaths and the generation of reliable, machine ready CNC code.

Teaching the Tools of the Trade

Northcentral Technical College uses Alphacam to prepare future woodworkers for the workforce

Many college students ultimately find themselves in careers that bear little semblance to their chosen fields of study, let alone the jobs of their dreams.

For some, institutions like Northcentral Technical College — a Wisconsin-based school that offers associate degrees, certificates, and technical diplomas in a range of subjects — are the antidote for career disillusionment.

By offering practical solutions for solid career paths, vocational students like those in the Northcentral Technical College Wood Science Program are prepared for the workforce and likely to be hired quickly after, or even prior to, graduation.

“All of our students are interested in using their hands, and almost all classes have a lab component, which gives our students the hands-on opportunities they’re looking for,” says Travis Allen, a wood science instructor at Northcentral’s Antigo Campus who reports that his students are in high demand.

“We recently had 17 companies here trying to hire our graduates,” he says. “If we had 100 graduating students, they would all have multiple job offers. One of our students actually had eight job offers.”

Northcentral’s wood science program was established in 2011, when the company acquired CNC equipment and the Alphacam computer-aided-manufacturing (CAM) solution, by Vero Software.

“The reason that we use Alphacam is that we found it’s one of the most popular solutions used in this industry, at least in our region,” Allen says. “I recently talked to two companies, one in the flooring industry and one in the door industry, and they both use Alphacam. This shows us that using the software prepares our students well for industry.”

Allen’s students use the solution to program CNC routers, as well as to perform design work. While students are taught to use a computer-aided-design (CAD) solution and how to import CAD files into Alphacam, most of the design work takes place in Alphacam.

As the college attracts a large number of students recently out of high school, Allen believes that the growing and evolving technological aspects of manufacturing are a draw for future generations of manufacturers.

“We have very strong high-school woodshop programs and a lot of these high schools are getting CNC routers now, which has brought a lot of interest from students who have had exposure to it at the high school level,” Allen says. “I think that the technology aspect of it is actually drawing more students.”

Northcentral offers its students about 20 wood science courses and a 28,000 square-foot technical center that includes 15,000 square feet of manufacturing space. While not every wood science or wood technology student will become a CNC programmer, the school will help prepare those who wish to become production supervisors, salespeople, CNC router technicians, and more, for the workforce.



About The Company:

Name: Northcentral Technical College

Business: Vocational education

Website: ntc.edu

Benefits Achieved:

- Alphacam prepares students for the woodworking industry in general, and specifically for work at companies that use the solution
- Helps students learn how to see the “big picture” and to manage multiple aspects of production
- Aids in teaching students how to manage materials

Comments:

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Travis Allen, wood science instructor

In the Spring of 2017, there were 13 students in the wood science program, and the small class sizes help to ensure that each student receives individual instruction and guidance.

"They're not just designing boxes in the kitchen, but going through the process of designing the part, selecting tools, nesting, and managing every aspect of production."

Jason Swartz, a former wood science instructional assistant at Northcentral, is now an adjunct CNC router instructor at the college. Northcentral helped him to achieve his goal of establishing a new career in the woodworking industry.

Swartz had studied design in college and was working in heavy construction during the economic downturn of 2008. At that time, he was a woodworking hobbyist who'd grown wary of the travel and grind associated with his career path.

"A guy who lives a mile down the road came in here and wanted to learn more about the woodworking business," Allen says of his introduction to Swartz. "He eventually became a lab assistant, and now he teaches the CNC router class."

In addition to taking on duties at the college, Swartz expanded his home hobbyist woodshop into a bustling business. He now uses Alphacam as a teaching tool at the school and as a production tool in his own shop.

"My shop has expanded so much and is so busy," Swartz says, adding that, "seeing student success keeps me going."

When it comes to teaching students the tools of the trade, Swartz relies on the 3D simulation capabilities within Alphacam to help him impart the importance of managing each vital detail of a job.

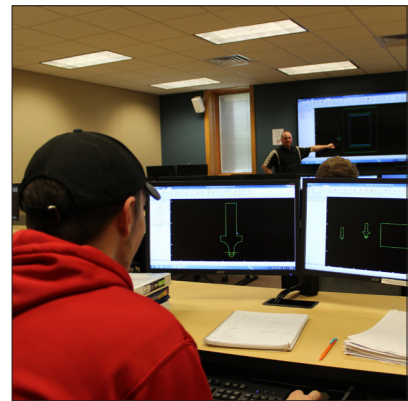
"For the students, the 3D simulation is extremely important, so they can see everything before it's cut," he explains. "I can show them mistakes on their screen before they go out and make mistakes in wood, and that helps them to really see and understand the big picture."

Swartz finds that Alphacam's nesting functions help to both save time and material when he's cutting parts for his business, and to help his students fully understand material management.

"The nesting software is very powerful in the classroom, and it teaches them to see how much plywood they actually need to make any particular project," he says. "This helps them to see that, when they're bidding a job, they'll have to have an accurate idea of how much material they'll really need."

Equipped with wisdom practical and philosophical, Swartz enjoys teaching students how to be employable just as much as he appreciates their triumphs in the trade.

"I tell them that the most important thing about being a worker in any field is attitude and performance — and attitude by far is more important than performance," he says. "You can get your degree and have the absolute best grades in performance, but if you go into that job with a bad attitude, no one will want to work with you."



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Travis Allen
Wood Science Instructor
Northcentral Technical College

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