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Kenneth Wolfe was stuck in a factory job without a chance to get ahead.

Then he heard about a new program at Motlow State Community College in McMinnville, where students can learn skills in advanced manufacturing technology.

Now, after nearly two years in the program, the 30-year-old Wolfe has moved into a maintenance-technician job at the Oster tool plant in McMinnville, earning more money and making progress toward a better future.

“I thought I was all through with school until I found out about this program,” Wolfe said. Now, he’s close to earning an associate’s degree and is tackling such courses as college algebra and calculus. He already has certifications under his belt that qualify him to maintain the plant’s newer automated equipment.

As factories upgrade to high-tech, computerized manufacturing processes, Wolfe is among a wave of manufacturing workers seeking to move beyond the often low-paying jobs that come with just a high school diploma.

Those factory upgrades mean that many jobs will require workers with a much-higher level of training, skills and knowledge.

The Motlow State program teaches students such as Wolfe a combination of mechanics and electronics, with heavy doses of computer and robotics technology. The program, dubbed “Mechatronics,” trains workers for maintenance and troubleshooting jobs that industry officials say are in danger of going unfilled for lack of qualified applicants even as the state deals with 7.9 percent unemployment.

Such programs, coupled with improving national and state economies, have helped Tennessee add just more than 6,000 manufacturing jobs in the past year as the jobless rate has managed to improve from a rate of 9.4 percent in March 2011.
For companies such as Nashville-based tiremaker Bridgestone Americas, General Motors and Nissan North America, the payoff has been finding local candidates they see as more stable hires than workers recruited from out of state, who might job hop if a position were to open up back in their home states.

Skilled workers needed

“There are more than 600,000 skilled-manufacturing positions in the United States that are unfilled because of a shortage of qualified workers,” said Barry Owens, vice president of the Bridgestone Americas Manufacturing Group. “We’re trying to address that situation by helping establish training programs.”

Bridgestone helped get the Mechatronics program started in McMinnville and has given Motlow space at the La Vergne plant to expand the program there beginning this fall.

A similar program will start at the former Saturn Corp. headquarters in Spring Hill in August, as well, that one operated by Columbia State Community College.

“What the students will have when they finish our program is a career, not just a job,” said Fred Rascoe, director of the Motlow program, which includes a lab full of state-of-the-art equipment made by the same companies that furnish the gear for the automated assembly lines at modern manufacturing plants. That means making everything from Oster’s sheep shears to luxury automobiles.

GM has turned over the former Saturn headquarters, now called the Northfield Center, to house a mix of training courses. The new Columbia State program, called Advanced Integrated Industrial Technology, is similar to Motlow’s Mechatronics.

“We kept hearing from companies in our area that there was demand for workers with more-advanced skills for manufacturing,” said Jan McKeel, executive director of the South Central Tennessee Workforce Alliance in Columbia. “We got about 16 companies together and worked with Columbia State to develop this curriculum.

“The bulk of the students probably will end up with GM,” she said, “because of the sheer numbers they will be needing as their plant expands. But all the companies in our area will benefit.”

Grants to help pay for the training have come from the state Department of Labor and Workforce Development, using federal dollars from a program to aid workers who have been displaced as some manufacturers moved operations overseas.

Millions in grants used
In Spring Hill, where General Motors' plant is ramping back up again after being partially dark during the automaker's financial recovery, startup money is coming from an $8.4 million federal-state grant announced last year. The money has been targeted to help retrain laid-off autoworkers, McKeel said.

At Motlow, a $3.2 million grant from the same federal fund is being spent to expand Mechatronics to La Vergne.

Startup money for Motlow's McMinnville program, though, came mostly from local companies, local government and the college itself, said Motlow President MaryLou Apple.

"Local industry came up with $150,000 to help us buy the equipment," she said.

And it wasn't only local manufacturers that donated money; the school also got nearly $12,000 from Wal-Mart.

What all three sites — McMinnville, Spring Hill and La Vergne — will have in common is the chance for students to earn valuable certification in advanced Siemens Corp. technology that is used throughout industry.

"It's training for today's high-tech manufacturing," said Dearl Lampley, dean of science, technology and math at Columbia State. "Students begin with basic electricity, hydraulics and pneumatics; and as they advance, they get into programmable logic and robotics.

"The robots we're going to use are industrial grade and are made by the same manufacturer as the ones used in the GM plant."

Students at Motlow and Columbia State have a choice of earning just the special certifications needed for the equipment the manufacturers are using or they can continue through the entire program to earn a two-year college degree.

Volkswagen was instrumental in getting a similar program going at Chattanooga State Community College to help train workers for skilled positions at the automaker's plant there or with its suppliers.

For some students, the programs open a door to an unexpected career path.

That's the case with Jon Bryant, 22, who was already a student in general studies at Motlow in McMinnville when he heard about the Mechatronics program. He's working for a janitorial service to support himself as he completes his education, but he has begun to eye jobs paying from $18 to $24 an hour to take advantage of his new skills. That's triple what he makes now.

"This looked like it was more up my alley than just general education," he said. "It's definitely a career path. I just took the Siemens certification test and I'm looking for my first job. I'm going to a Nissan job fair on May 19, and I'm also applying at Bridgestone."

Bridgestone is happy to be involved because it has a pressing need for the skills that students are learning in the Mechatronics program, Owens said.

The Bridgestone Training Center, in a section of the company's La Vergne plant, opened in February to begin offering in-house training to employees. But opening it up to host Motlow's
Mechatronics program expansion should make it easier for Bridgestone to hire more skilled workers locally as needed.

"With all the expansions going on, not just in Tennessee but globally, everybody is searching for candidates," Owens said. "One of the advantages of finding local people to fill our jobs is that they are more likely to stay here than those recruited from outside the area."

**Assistance is available**

Money to pay for technology training will be one of the keys to expanding such programs even further in Middle Tennessee, and much of the funding is coming from the federal trade-adjustment assistance program, said Jeff Hentschel, spokesman for the state Department of Labor and Workforce Development.

"We just received an additional $2.8 million for training for companies affected by foreign trade," he said. "We're one of the highest-funded states in the nation under that program — we're in the top eight."

There also are federal workforce-development program dollars earmarked for retraining of furloughed workers, Hentschel said.

"When someone is laid off, they can apply for training to upgrade their skills at a community college or technology center," he said. "We tend to target programs of two years or less so people can get back to work more quickly."

And those dollars are targeted toward "demand occupations" where there is an established need for workers, Hentschel said.

Programs such as Columbia State's advanced manufacturing technology courses at Spring Hill are a direct response to a survey that showed plenty of jobs would be available for its graduates.

"We will have a mix of students right out of high school, folks coming from industry who want to upgrade their job positions and those from industries that have closed," Lampley said.

Among older workers trying to improve their skills is Eric Brown, 45, of Lynchburg, Tenn., who works for Motlow at its Fayetteville campus.

The skills he's learning can be applied to more than just manufacturing.

He's taking the Siemens international certification courses at the McMinnville campus, and the training already has "opened new avenues for me at my current job," Brown said. "I'm now a maintenance technician at Motlow.

"This training is a sure way to protect your future. If you're in a job that ends up going away, you'll have the skills you need to try something else."

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