MCCC INTRODUCES NEW PRODUCT AND PROCESS TECHNOLOGY PROGRAM

Lab Outfitted with New Machinery for High-performance Manufacturing

MONROE, Mich. – The former manufacturing technology program at Monroe County Community College has been transformed into a brand new one: product and process technology.

The program’s name transmits its broad versatility, said the lead instructor, Bob Leonard. It is designed to prepare students for careers in the high-performance manufacturing of consumer goods.

And although the word “manufacturing” might carry a negative connotation after the recent downsizing of the automobile industry, Leonard says that the industry is again on the rise in Michigan and across the country.

“Everything that you can think of has to be manufactured,” he said. “People don’t realize we’re not just making cars and stamping out dies. This program is about the process and about the product.

“I’m getting calls now for CNC (computer numerical control) technicians. They need people that know the machines and the codes, and can actually program the ‘X, Y, and Z.’”

The new product and process technology program is the result of numerous major changes to the former program – things Leonard, whose official title is assistant professor of product and process technology, said were necessary for student success in the new era of manufacturing.

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“We needed more high-speed machining, less manual machines, more safety, more CAD/CAM, and to keep up with industry,” Leonard said.

CAD/CAM (computer-aided design/computer-aided manufacturing) uses geometric numbers to design a tool path that will direct a machine to shape an object exactly as it was drawn.

Similarly, the addition of more CNC course work is another big change.

The laboratory for the product and process technology program has been outfitted with several new machines to accommodate the new program, including a CNC high-speed machining center, a CNC wire EDM (electrical discharge machine) and a CNC turning center.

In addition to an associate degree in product and process technology, graduates of the program will earn a certificate in CNC and another in CAD/CAM.

Some of the jobs they will be qualified for include CAD tool engineer, CAD/CAM technician, CAM operator, CNC programmer, CNC set-up technician, designer, engineering technician, industrial engineer production team leader, machine technician, machinist, manufacturing technician, process planner lab technician, production control specialist, and sales and service engineer.

Tim Rodenbeck, a student in the new program, is happy to see the beginning of the revival of manufacturing in the U.S. after many years of heavy competition from overseas companies.

“It’s the greatest thing to happen,” he said. “They make it cheaper, but we make it better. We need to bring jobs back to America; that’s where they belong.”

Jacquelynn Saunders, a mechanical engineering technology major and president of the MCCC chapter of the Society of Manufacturing Engineers, said she is intrigued by the possibilities the program has to offer and appreciates the college’s investment in the future of manufacturing.
“It was a course requirement to take the MECH 103 (Machining Basics and CNC) class here [with Leonard], and upon taking that I got really interested in the manufacturing aspects of engineering,” she said.

Recently, MCCC students went to the International Machine Tool and Automation Show in Chicago and were introduced to forms of new machinery, including robotics and milling machines, Saunders said.

“All kinds of new things are still coming, and people need to know how to operate [them],” she said.

With the continuing release of new technology, the content of the product and process technology program will continue to evolve.

To accommodate for the growing medical manufacturing industry, Leonard said the program may acquire smaller tools, including ones that are hair-thin at the tip and “can trace George Washington’s face on a quarter.”

He added that he would like to add an art class in the future to reestablish what he calls a lost sense of design in the field of manufacturing.

“We’ve picked up some bad habits over the years and we’ve lost our feel for design,” he said.

According to Leonard, there are several reasons students should consider a career in product and process technology, including the versatility of the field, the atmosphere of teamwork, the satisfaction of seeing the finished products, and, of course, the $15-$25 per hour starting pay.

“They’re learning a really fun skill because they’re not only part of the design team, they’re part of the production team; they’re part of the whole process,” Leonard said.
Rodenbeck said that more students should consider enrolling in the program.

“People see the economy is down in this field so they try to avoid it, but it’s going to pick back up,” he said.

Saunders agrees that the future is bright for high-end manufacturing.

“A lot of people think manufacturing has gone out of the country, but it’s coming back,” she said.

For more information on the product and process technology program, contact Leonard at bleonard@monroeccc.edu or (734) 384-4114.

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