### WORKFORCE SOLUTIONS

WITH DUTCHESS COMMUNITY COLLEGE STAFF

## DCC MECHATRONICS LAB MANUFACTURES A STRONGER WORKFORCE

# The Center of Excellence for Inclustry & Innovation



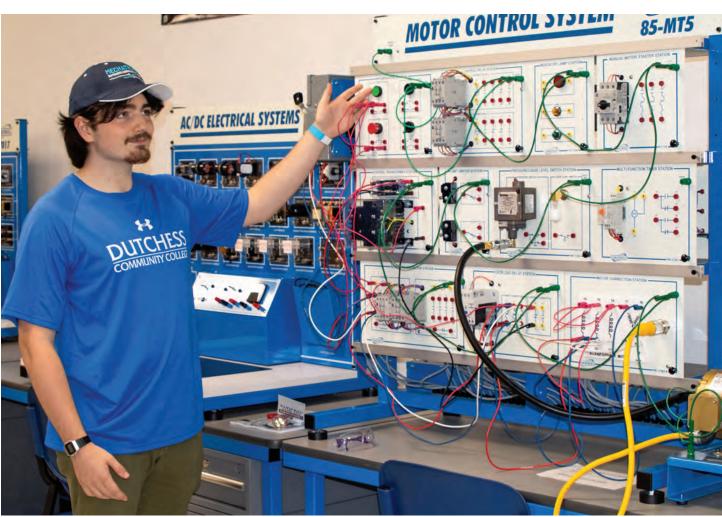








or years, industries across the Hudson Valley have operated at a disadvantage. They work hard to stay on top of the latest manufacturing trends and offer best-in-class capabilities — but to do so, they must send their employees out of the region for training. Realizing the costs associated with this — not to mention the risk of losing some of that talent to those regions — members of the Hudson Valley Council of Industry sought better answers. They didn't have to look far. As luck would have it, Dutchess Community College had the perfect opportunity. At the time, its new Fishkill location, designed to extend the College's southern reach, had some unexpected capacity.



Electrical Technology student Robert Bohl shows off the Motor Control panel during the October 6 ribbon-cutting. Robert introduced the First Lady at the event.

"When we designed [what was first known as] DCC @ Fishkill — just steps from the Interstate 84 and Route 9 interchange we thought people would be interested in attending traditional, in-person classes on their way home from work, due to its convenience," said Chief of Staff and Vice President for Institutional Effectiveness Dr. Susan Rogers. "However, the surge in online learning fueled by the pandemic changed that somewhat." Fortunately, DCC has a long-standing collaboration with the Council of Industry and various economic development entities across the county. They began conversations and quickly identified a win-win scenario.

"They were telling us they wanted more of the education and training that's required in today's advanced manufacturing world — sometimes referred to as Manufacturing 4.0," Dr. Rogers added. "So together, we're creating the talent pipeline and maintaining the workforce we need right here." Starting in fall 2023, the Center of Excellence for Industry and Innovation at Fishkill became home to the region's first mechatronics training facility. The Fishkill facility offers an array of programs designed to serve a broad student population. Those already in the field have the chance to gain new skills and credentials, often with flexible training hours, while students without prior experience can acquire the technical proficiency needed to launch their careers. Students can pursue DCC's certificate program in air conditioning/refrigeration and associate degree in electrical technology, in addition to shortterm, industry-recognized credentials in topics ranging from pneumatics to robotics. Mechatronics Programming Coordinator Freddy Santiago said, "Cultivating a talented and technically advanced workforce within our community ensures that DCC is committed to the growth and sustainability of automation and advanced manufacturing in the Mid-Hudson region." Santiago has been organizing tours and trainings for industry groups and students.

The curriculum side of the project is led by DCC's Electrical Technology Program Chair Dan Barbuto. The lab has three main

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Professor Dan Barbuto works with a student in the new Mechatronics Lab.

Another important feature of the new Mechatronics lab is the type of student it will attract. "At the individual level, one of the populations this is intended to serve is those coming out of high school who may not feel drawn to a traditional college pathway," Dr. Rogers said. "It will also appeal to slightly older students — say, 25 and up — who are re-evaluating their career paths." The program will provide individuals who aren't looking for a four-year liberal arts education right now with valuable options for credentials in industries that need skilled workers and will pay them a living wage — and much higher in just a few years.

"This can really help them advance in their careers or shift into something with far greater earning potential, personal satisfaction and longevity," Dr. Rogers added.

DCC will also offer credit and credit-free courses to area high schools and BOCES programs, following its cradle-to-career philosophy of serving the community. "We can't wait to show middle and high school students

technology focuses: mechanical; electrical and automation; and HVAC. "I've been here 20 years, and this is the biggest project I've tha been involved with," said Barbuto, who has trained Verizon, IBM

that this is a viable career path," Barbuto said.

and Phillips semiconductor technicians during his career. "The hiring in this area has been just tremendous. I've had more openings than I've had students." This demand is urgent, a point driven home by many area employers and economic development leaders. GlobalFoundries, which operated a microchip fabrication plant in Fishkill until the company was sold to OnSemi in 2022, was one of the biggest collaborators to provide input. Its leaders helped DCC identify the necessary equipment and skill sets, including an emphasis on multi-talented personnel and the need for flexible training hours that fit around students' work shifts. The New York State Department of Labor also helped inform the process, and the county stepped in with critical funding for the lab equipment.



VIP's tour the Lab following the October ribbon cutting. The Mechatronics Lab is quickly becoming a vital training resource for manufacturers across the Hudson Valley.

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First Lady Jill Biden, herself a community college educator, delivered the keynote and cut the ribbon to open the lab last Fall.

#### "We're creating the talent pipeline and maintaining the workforce we need right here."

As high as the anticipated demand is, DCC's leaders believe it will continue to grow as mechatronics becomes more widely known among the region's vernacular. Barbuto stated that the knowledge should be easier to share once the facility exists and people can see it firsthand. "One of the equipment pieces has seven stations and includes sensors, actuators and a robot," he added. "Each has its own logic controller, and each station completes a piece. It's essentially an assembly line."

In fall 2023, people did begin to see the mechatronics lab firsthand, followed by an official grand opening on October 6, with a very special guest in attendance. Dr. Jill Biden, our nation's First Lady and a longtime educator and advocate for community colleges, joined dozens of college and State University of New York (SUNY) officials, along with numerous business, government and community leaders at the ribbon-cutting ceremony at The Center of Excellence for Industry and Innovation in Fishkill.

"This will help students get the skills they need for the growing businesses here — preparing them for careers making everything from display screens to jet engines to semiconductors," said Dr. Biden, who was accompanied by U.S. Secretary of Education Miguel Cardona. "As a community college professor, I'm so excited to see how this work changes people's lives."

The mechatronics program checks numerous boxes that will strengthen the long-term health and viability of the College, county and community, roles which DCC leaders are thrilled to play.

"We learned from the pandemic that online learning is a wonderful complement, but it will never fully replace in-person learning, especially in some fields," Dr. Rogers asserted. "In the mechatronics fields, hands-on training is critical, and we're positioned perfectly to give these businesses the competitive advantage they seek."

But the October launch of the mechatronics lab was just the beginning of the industry partnerships that could be so beneficial to the Hudson Valley's workforce. DCC is now working on a significant expansion of the Center of Excellence for Industry and Innovation at Fishkill to include a training facility in HVAC and Building Technologies. To get this going, on February 15, 2024, DCC convened an advisory committee of local businesses including Central Hudson, as well as P-12 partners, labor unions, the Council of Industry, and members of the Dutchess County's Economic Development Advisory Council. This newly formed council will provide ongoing input and direction on curriculum, training equipment, and space needed for the expanded programming. They plan to meet every 4-6 weeks through the duration of the project. Funds have already been secured through SUNY for this project, and local industry partners are interested in contributing additional funds and equipment. DCC is excited to embark on this next phase in the full development of the Center of Excellence for Industry and Innovation!

To learn more about the Mechatronics Lab's programs and trainings, contact Freddy Santiago, DCC's Coordinator of Mechatronics Programming, at (845) 790-3645, or visit sunydutchess.edu/mechatronics.



Coordinator of Mechatronics Programming Freddy Santiago provides a tour for industry professionals.

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