CONNECTED
Connecting Higher Education to Business in Ohio

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What sculpture is to a block of marble, education is to the human soul.

JOSEPH ADDISON
Fall may be the quintessential season for higher education. New students arrive on campus for their first year, while upperclassmen return and reunite with friends and faculty. Plus, you have homecoming, football games, and our beautiful campuses become even more so as the leaves turn.

But fall is also a time for strengthening the connection between higher education and business, and this edition of ConnectED highlights examples from every corner of the state. In Akron, a new facility enhances the tie between the University of Akron and the local business community. The University of Toledo is connecting employers with students through its co-op program and Career Expo. And the University of Cincinnati has created the NEXT Apprenticeship Program to develop robust, flexible pathways to careers in informatics and computing fields.

In Columbus, Ohio State University opened the new Artificially Intelligent Manufacturing Systems Lab (AIMS), a first-of-its-kind test site for industry and academia. The Workforce Development program at Washington State Community College is changing the way employers train incumbent workers by allowing businesses to work directly with the college to design custom training programs.

Emerging partnerships are being established all over Ohio, including public-private collaborations such as those between Owens Community College and the University of Findlay (Oiler Express) and Owens and Lourdes University (Gray Wolf Express). Students may simultaneously enroll at Owens and these independent universities with the eventual goal of entering the workforce with an associate and university degree.

From Toledo to Marietta and everywhere in between, higher education is engaging industry, connecting research to the needs of business, and preparing students for successful careers. It’s a great time to be ConnectED.
BUSINESS, INDUSTRY LOOK TO CUSTOMIZED WORKFORCE DEVELOPMENT TRAINING SOLUTIONS

MICHAEL KELLY, MARIETTA TIMES
The Washington State Community College (WSCC) Workforce Development program is changing the way employers train incumbent workers. Businesses can now work directly with the college to design a tailor-made training program that develops worker competencies specific to their industry.

The changing landscape of business and industry means that turnkey training is no longer the best fit. Issues with specialized training in advanced manufacturing were among key discussions at a meeting of the Appalachian Ohio Manufacturers’ Coalition earlier this year. Jesse Roush, meeting attendee and executive director of workforce development and corporate partnerships at WSCC, said these leaders expressed the need for not only highly skilled workers, but also the need for specific skillsets unique to their processes and technology.

WSCC is working with area businesses to advance the skills of incumbent workers by providing highly customized training programs, including apprenticeships, which bolster skillsets relevant to each client’s specific requirements.

“‘It starts with understanding your needs as an employer. We work with you closely to craft the perfect training components so both employer and employee derive value from the creative solutions we develop,” Roush said.

He said traditional incumbent worker training often takes a “multi-craft” approach. While it provides a solid foundation, manufacturers require specialized skills.

“What we are offering is different from other local programs (that) feature traditional multi-craft delivery models. Our custom-developed training is often designed to meet very specific needs,” Roush said. “Developing specialized delivery models is where we stand out from other training programs. If you want to develop a training program specific to a technical occupation at your business, that’s what we specialize in doing here at WSCC.”

The college is working with several local manufacturing facilities, including Solvay and Magnum Magnetics. Most recently, maintenance mechanics from Solvay participated in a four-week customized troubleshooting course and a customized short course in drawings & prints, as well as an OSHA 30 – General Industry course.

Magnum Magnetics
mechanics are taking a customized eight-week course in advanced programmable logic controller (PLC) troubleshooting that incorporates multiple brands of PLC equipment. All of these courses are delivered in a format that meets a variety of employer needs.

The training provided by Washington State is designed to develop specific competencies that achieve the necessary outcomes required by their employers.

“These mechanics don’t need the same type of training a recent high school graduate might need. We work with the employer to identify the right training modules for each course, and then we tailor the entire program specifically to what’s expected of their employees,” Roush said.

“Our Maintenance Supervisors and Training/Compliance team worked with WSCC to develop the program based on specific needs and determined the courses, lab, and on-the-job training that meets the outcomes we seek,” said Sherri Becker, training and development coordinator at Solvay Specialty Polymers, LLC. in Marietta. “For Solvay, the short-term benefits include immediate entry into training that impacts and supports performance. Long-term benefits will include a strong workforce knowledge base with a shared vision toward the importance of advancing core skills into complex workplace demands.”

Becker said the value of this program is vast in its reach, providing service to a multitude of industries and ultimately benefiting the entire Mid-Ohio Valley.

“A major impact this program brings to the region is preparation of the workforce to support the demands of the shale gas development opportunities related to job skills and industry growth,” she said.

While WSCC continues to develop more tailored training programs for area business, the college will offer a free general-industry training course at the beginning of next year. Through the Ohio Department of Higher Education’s short-term certificate grant, businesses can enroll their incumbent employees in the OSHA 30 – General Industry credentialing class. While the class is provided at no charge, Roush said there are a limited number of seats available.
UC uses $12 million grant to create apprenticeship program

MATTHEW A. KOESTERS, UNIVERSITY OF CINCINNATI

Using a $12 million grant awarded by the U.S. Department of Labor in July, the University of Cincinnati’s Division of Experience-Based Learning and Career Education has created the NEXT Apprenticeship Program.

The innovative program will create robust, flexible pathways to well-paying, high-skill careers in informatics and computing fields by meeting students where they are and offering a thoughtful combination of industry-recognized credentials and varying degree options coupled with industry experience. With more than 200 faculty across eight colleges and divisions engaged in informatics and computing, UC is uniquely positioned to serve students.

“UC is the birthplace of cooperative education, but we continue to lead in the space because we are constantly exploring new and better approaches to career preparation,” said Gigi Escoe, vice provost for undergraduate studies and interim dean of Career Education. “Because of its inclusive focus, this model benefits not only the learner and the employer, but the informatics sector as a whole.”

The program aims to expand opportunities for populations that are underrepresented in the informatics sector — underrepresented minorities, women, veterans, military spouses, transitioning service members, and unemployed and underemployed workers — to fill middle- and high-skilled, high-paying jobs in the informatics and computing fields.

The NEXT Apprenticeship Program directly aligns with UC’s Innovation Agenda as put forth in its strategic direction, Next Lives Here. Cooperative education was born at UC in 1906, and UC now seeks to activate inclusive excellence while pioneering Co-op 2.0.

Created in response to a widening talent gap in the informatics and computing fields, NEXT draws inspiration from UC’s leadership in cooperative education. The program will prepare candidates by offering flexible, paid educational and work-integrated learning opportunities.

That includes bringing the jobs to the students. The NEXT program will be launching a remote work and employer learning center that will allow students and employers to virtually connect.

NEXT provides funds to support related technical instruction, on-the-job training, supportive services for participants, and wage subsidy for small employers. In addition to two-year and four-year degree and graduate certificates, NEXT also incorporates nationally portable, industry-recognized credentials, which are critical for advancement in the industry. The program aims to serve more than 5,000 participants during the four-year life of the grant.

“There is no trade-off for employers,” said Helen Chen, associate provost and executive director of Career Education. “The industry partners we’re working with see the value of immersing students in their culture and their methods.”
UToledo Engineering Career Fair drives job placements at major companies

CHRISTINE BILLAU, THE UNIVERSITY OF TOLEDO

Maggie Buchele, left, fourth-year mechanical engineering student, posed for a photo with Brian Knipper, operations technician at Marathon Petroleum Corp., in Findlay, Ohio. After two co-ops at Marathon, Buchele was offered a full-time job, which she will start after she graduates.
Maggie Buchele still had a few months before graduating from the University of Toledo College of Engineering when she secured a full-time job as a project engineer with Marathon Petroleum Corp.

The mechanical engineering major traced her success back to the college’s career expo two years ago, when she first met representatives from the company that is ranked No. 31 on the Fortune 500 list.

“I chose UToledo because of the College of Engineering’s mandatory co-op program, which gives you amazing work experience as a student,” said Buchele, who completed two co-ops working at Marathon in Findlay, Ohio. “Companies are getting more specific on who they will hire, and UToledo’s co-op program gives them a perfect opportunity to see if you will be a good fit as a permanent employee.”

In 2018, the College of Engineering placed 1,745 students into co-ops with companies that paid students an average wage of $17.54 an hour.

More than 700 UToledo engineering students and alumni once again connected with employers from more than 170 companies across the U.S. at the fall 2019 Engineering Career Expo in September.

The networking event is part of a yearlong celebration of a milestone for the UToledo Shah Center for Engineering Career Development: 20 years of placing more than 20,000 engineering co-ops.


Buchele completed co-ops at two other companies in addition to Marathon.

“After my co-ops, I knew Marathon was the right fit for me. After my second co-op with them, they offered me a permanent position starting February 2020,” said Buchele, who accepted the position. “I would never have received a job offer from Marathon at another university.”
A new lab at The Ohio State University will tap into the power of artificial intelligence to transform the future of manufacturing.

Ohio State’s Center for Design and Manufacturing Excellence (CDME) opened the new Artificially Intelligent Manufacturing Systems Lab (AIMS) with the help of Lt. Gov. Jon Husted on September 24.

At the heart of the 1,500-square-foot lab space on the university’s west campus are three Yaskawa robot arms that stretch from floor to ceiling. Husted used the programmed robots to cut a ceremonial red ribbon to open the new lab.

The AIMS lab was developed with input from industry, national defense, and energy laboratories and university experts. It’s a first-of-its-kind test site for industry and academia to study and develop manufacturing systems that work with, and are controlled by, different types of artificial intelligence.

“The AIMS lab aims, pun intended, to be the bridge to these two communities and provide each of them an environment that would be difficult to create on their own,” said Michael Groeber, associate professor in the Department of Integrated Systems Engineering.

Groeber and Walt Hansen, senior lead engineer for student programs within CDME, jointly manage the lab. The two have developed a testbed to engage engineering, business, and social science departments from across Ohio State’s campus.

“What is happening here with Ohio State and the College of Engineering is exactly what needs to happen here in Ohio – collaborating with industry partners, working to build the talent of the future, innovating and trying to find ways to be competitive and serve their customers,” Lt. Gov. Husted said.

Senior Vice President for Research Morley Stone said the lab will help bring industry and research together to make sure Ohio State is educating the next generation of students the right way.

“As an educational institution, that is just an amazing call we have. How do we begin to change and think about the workforce of the future?” Stone said. “I think this [lab] has the great benefit of showing that we can adapt and drive that future for the state.”

The new lab fits into CDME’s core mission of working with industry partners in applied research and supporting undergraduate student development during that research. The center helps industry partners work with university labs and equipment, in turn helping students become familiar with their products.
Ismael Shalash, a fourth-year aerospace engineering major, said working in the new lab is preparing him well for his career path.

“The engineering and manufacturing industry is all moving towards robotics, and implementing artificial intelligence with robotics is definitely the next step in the industry,” Shalash said.
Northeast Ohio business community supports student development

CRISTINE BOYD, UNIVERSITY OF AKRON

This September, the University of Akron opened its newest building on campus – the 11,850-square-foot Anthony J. Alexander Professional Development Center that will serve as a one-stop training spot for students in the College of Business Administration (CBA). The building has a singular focus that is highly supported by the Northeast Ohio business community – developing business students into confident young professionals and future star employees.

The business community believes so strongly in the delivery of student professional development that 280 donors provided funding for the $5.45 million building. The Center and its initiatives are in response to advice from the College of Business Advancement Council and departmental advisory boards consisting of more than 270 business executives from throughout the region.

“The support from our donors for this construction is a real statement of confidence in what we are doing,” said Susan Hanlon, Ph.D., interim dean of the CBA. “These relationships with the business community and the support we receive from them are what helps to make our business programs so successful.”

Career Ready and Connected

The success of which Hanlon speaks is demonstrated through the CBA students.
Approximately 80% of students in the College of Business Administration participate in internships, and more than 96% receive jobs within six months of graduation. The Center will become the hub of activity that contributes to CBA graduates becoming “Career Ready and Connected,” helping foster future success by housing CBA professional development resources in one location and encouraging collaboration and robust connections between students, faculty, and professionals. Ultimately, this gives UA students an even stronger competitive edge.

That competitive edge is developed through “the EDGE” program (Exploring Degree Goals and Experiences), a professional development series designed to help CBA students focus on events and experiences that lead to career readiness.

“Participating in the EDGE program is not required of students, yet it has become a valued part of our culture,” said Hanlon. “Students participate in our programs on their own time because they understand how important it is to their future. Local businesses participate in and endorse our professional development events because they see the results in our students.”

Focus on career development

The Professional Development Center, named after Anthony J. Alexander (a UA graduate and former executive at FirstEnergy Corp.), will allow students and area professionals to interact in professional settings that are often found in business environments such as a formal board room, corporate classrooms, professional meeting rooms (that can be used for internship and job interviews), and a communications lab.

The Center also contains a business analytics lab and a practice presentation room where students can record themselves and receive presentation skills coaching. Also included are offices for professional development staff, student learning and technology commons, and offices for the Institute for Leadership Advancement. The new facilities align well with the EDGE program, helping students to receive academic preparation, personal leadership training, business communication training, networking opportunities, internships, and global experiences.

“We are truly thankful to the many donors who have shown confidence in our programs and in the university,” said Kim Cole, vice president of advancement and executive director of the UA Foundation.

“ Akron is a wonderfully supportive community and we value the relationships we have with the businesses and the professionals who call it home.”
Thank you for reading ConnectED. We appreciate any suggestions or ideas to improve this newsletter.

We welcome story ideas, links to articles of interest, and news releases.

Please send story ideas to Jeff Robinson at jrobinson@highered.ohio.gov.

A special thank you to all of those who contributed stories and articles:

Business, industry look to customized workforce development training solutions
Jesse Roush  
Executive Director of Workforce Development & Corporate Partnerships  
Washington State Community College

Michael Kelly  
Marietta Times

UC uses $12 million grant to create apprenticeship program
Matthew A. Koesters  
University of Cincinnati

UTeach Engineering Career Fair drives job placements at major companies
Christine Billau  
The University of Toledo

New Ohio State lab taps artificial intelligence to improve manufacturing
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